



GENDER MAINSTREAMING GUIDELINES

FOR CLIMATE SMART AGRICULTURE AND CLIMATE CHANGE ADAPTATION

LAIKIPIA COUNTY

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ACRONYMS

CCA: Climate Change Adaptation

CIDP: County Integrated Development Plan

CSA: Climate Smart Agriculture

GHG: Greenhouse Gas

**UNFC-
CC:** UN Framework Convention on Climate Change

**EAC-
CCP:** East African Community Climate Change Policy

MTP: Medium Term Plan

FGD: Focus Group Discussion

ICT: Information Communication Technologies

PWDs: People Living with Disabilities

UNEP: United Nations Environment Programme

NEMA: National Environment Management Authority of Kenya

KEPC: Kitui Enterprise Promotion Company

ASAL: Arid and Semi-Arid Lands

KCSAS: Kenya Climate Smart Agriculture Strategy 2017-2026

ATC: Agricultural Training Centre

SACCO: Savings and Credit Cooperative Society

FAO: Food and Agricultural Organization

UNW: United Nations Women

LCDP: Laikipia County Integrated Development Plan



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ABOUT GROOTS KENYA

In response to the inadequate visibility of grassroots women in development and decision-making platforms that directly impacts them, Grassroots Organizations Operating Together in Sisterhood in Kenya (GROOTS Kenya), was conceived with a mission to facilitate effective participation of grassroots women in the development of their communities. Inspired by the 1995 Fourth UN Conference on women held in Beijing China, it therefore became a national movement in Kenya. GROOTS Kenya is composed of grassroots women organized in 3,500 community-based organizations. Its membership is drawn from more than 18 different Kenyan counties, among them: Tana River, Kiambu, Nairobi, Laikipia, Kilifi, Kwale Busia, Kakamega, Homa bay, Baringo, Migori, Kitui, Murang'a, Nanyuki, Murang`a, Isiolo, Marsabit and Nakuru.



1.0 INTRODUCTION

For sustainable food supply and enhanced livelihoods to be guaranteed, particularly among communities living in arid and semi-arid regions characterized with unpredictable and extreme weather conditions, transitioning to Climate-Smart Agriculture (CSA) practices and technologies remains non-negotiable. Climate-Smart Agriculture, a new heuristic approach to agriculture and food systems that aims to provide and increase sustainable food production, improve farming systems' resilience and adaptive capacity, and mitigate the effects of climate change, has become a part of the global development agenda among local communities living in harsh climate conditions.

Globally the Government of Kenya has been actively participating in discussions on how to incorporate climate change into agriculture policies, strategies, and activities. Kenya is a signatory to the UN Conventions on Climate Change, Combating Desertification, and the Conservation of Biodiversity (UNCBD). Consequently, the Government of Kenya has filed two national communications to

the UN Framework Convention on Climate Change (*UNFCCC*) committing itself to addressing global warming and climate change through enacting relevant policies, strategies, and operational plans. At regional level, The Government of Kenya is adopting the East African Community Climate Change Policy (EACCCP) and the Comprehensive Africa Agriculture Development Programme (CAADP) Framework (2010). The emphasis of these two frameworks is on sustainable land and water management for improved agricultural productivity through research, technology adoption and dissemination, and agricultural GHG emissions reduction. Nationally, Kenya has a number of state-of-the-art platforms that offer opportunities for increased agricultural production, systemic adaptability, and climate change mitigation. The Kenya Climate-Smart Agriculture Programme (2015-2030) in particular is essential for coordinating regional and global CSA activities. The transfer of responsibility for agricultural decision-making to county governments benefits farmers by speeding up the implementation of CSA adoption-incentive policies, directing investments in rural infrastructure, and providing timely information to farmers through systems like early warning systems and agricultural extension



services, etc. In order to mainstream CSA, a thorough mapping of successfully completed, on-going practices, prospective institutional, and accessible financial possibilities, is required. Particularly gender mainstreaming in relevant climate change mitigation and adaptation strategies and action remains key since evidence now clearly points to the links between effective, global climate action and gender empowerment and to be more specific empowerment of women.

According to the study findings, women Laikipia County emerged the most affected and bear the weight of the unrewarding agricultural enterprises. However, the empirical evidence of the impact on women is limited. However, the empirical evidence base on women's adaption of CSA policies and practices, on the other hand, has not been consistently compiled. This has made the move from the CSA concept to specific policy design and execution more difficult. Thus, there is need to support strategies, programs, plans, and related incentives for CSA implementation and scaling up.

In Laikipia County, there is evidence, though limited, of implementation of CSA technologies and practices, hence the need for scaling up. This can be accomplished by making significant investments in expanding the knowledge base and implementing appropriate technologies and methods. Necessary steps needs to be taken to identify, pilot and scale-up best CSA practices, increase institutional capacities and provide experiences that can assist stakeholders in making informed decisions about adopting climate-smart farming practices. The CSA guideline will allow for the sharing of techniques and strategies.

The purpose of this study was to develop guidelines for the alignment of the County Integrated Development Plans (CIDPs) with the Climate Smart Agriculture (CSA) and Climate Change Adaptation (CCA) policies, regulations and strategies for CSA gender mainstreaming, for the Economic Empowerment of Women through Climate Smart Agriculture Programme. Laikipia was selected from among counties in the ASAL region of Kenya in focus.



METHODOLOGY

This assignment established twenty five (25) CSA Gender mainstreaming guidelines that are outlined under nine (9) thematic areas. They were developed based on multi-stakeholder consultations, documentary reviews, and analysis of empirical data. Questionnaires and Focus Group Discussions (FGDs) were administered among selected farmers. Additionally, Key Informant Interviews carried out among county officials and representatives from non-state agencies. A total of 100 farmers were administered semi-structured questionnaires, 5 FGDs were conducted which was the minimum number required as per study design with an additional 5 key informant interviews. The information collected was mainly on farming enterprises. The county manifested decreased crop yields over the years, relatively poor agronomic practices, worsening soil fertility, and dire food insecurity. It is important to acknowledge that government and non-governmental agencies as are already investing in climate change adaptation initiatives but investments in such efforts will need to be escalated and expanded following a well thought out policies and strategies.

CONTEXTUAL REVIEW

In Laikipia County, agriculture and livestock are the main sources of livelihood (Ministry of Agriculture, Livestock and Fisheries, 2015). They contribute more than 75% of household incomes and employ more than 60% of the county's population. About 43% of the population are in absolute poverty while 27.2% rely on food aid during food shortages.

Report from the Ministry of Agriculture, Livestock and Fisheries (2015) indicates that farmers in Laikipia County rely on rain fed agriculture and this makes them more vulnerable to climate variability especially during drought periods. The report goes on to indicate that irrigation infrastructure is expensive and knowledge on diversification is inadequate. Rainwater harvesting through rooftops, water pans and dams can provide reprieve and go a long way in providing water during dry spells for domestic, livestock and irrigation purposes.



The United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) signed a joint program with the Food and Agricultural Organization of the United Nations (FAO) on 12th November 2020 under the funding of the Government of the Republic of Korea through the Korea International Corporation Agency (KOICA). This is a four-year program that seeks to strengthen women's capacity to meaningfully engage in Climate Smart Agriculture (CSA) in three arid and semi-arid lands (ASAL) in the Counties of Laikipia, West Pokot and Kitui (FAO, 2020).

The program was launched on 20th January 2021 by the Cabinet Secretary in the Ministry of Public Service and Gender Professor Margaret Kobia who lauded the program as having the potential to advance women empowerment and gender equality program already in place and contribute to overall economic growth in Kenya.

The climate in Kenya's ASAL is changing, as prolonged droughts reduce the region's agriculture and livestock production. Climate smart adaptations to farming aims at building women's resilience to climate shocks in Laikipia county, a precursor for protecting food security, water security and livelihoods. By the end of its four-year period, the program is expected to increase the technical know-how

of farmers on CSA approaches, unlock market driven value-chains for women and improve their capacity to participate in productive land and water management, as well as increase the women in agribusiness' access to finance in Laikipia county.

In Kenya, women account for 75% of the labour force in smallholder agriculture, manage 40% of small farms, and play a major role in food preparation and storage (United Nations Women Kenya, 2021). However, women already face multiple structural challenges despite them being the main producers of food. Women in agriculture own fewer assets and have access to less land, fewer inputs, and fewer financial and extension services than men, limiting their rights, potential, and well-being, as well as their capacities to build climate resilience. Women in Laikipia county and generally in Kenya are disproportionately affected by overlapping challenges of poverty and food insecurity caused by floods, droughts, locusts and now Covid-19 pandemic. According to Kenya's National Drought Management Authority, Laikipia is one of the 23 counties in Kenya considered prone to drought. Its ASAL makes up over 80 per cent of the country's land mass, equating to over 2 million severely food-insecure people in 2021.



Data from Laikipia County Integrated Development Plan (LCDP) 2018-2022 indicates that Laikipia 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 areas bordering 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 Laikipia plateau receives about 500mm of rain annually, while Mukogodo Forest receives an average rainfall of about 706mm annually.

LCPD data also shows that the settlement patterns in Laikipia county are uneven as they are influenced by varying land potential, livelihood zones, infrastructure access, land use system and availability of social amenities. Laikipia North constituency is arid and semi-arid in nature and therefore the least populated arising from wild life ranches and pastoral livelihood patterns. Further, the data indicates that the main crops grown include those that short periods of time to mature such as maize, beans, wheat, potatoes and vegetables. Maize takes about 51 per cent of the total planted

area. Crop farming is mainly undertaken in the South-western parts of the county due to favourable weather conditions.

Majority of the farming households in Laikipia county are small-scale holders whose average farmland size is two acres that serve mainly for food production. The farm size for large-scale holder on average is 20 acres used mainly for wheat and maize production (LCPD, 2018). In terms of labour force, the total number of those within the bracket of labour force (15 – 64 years) stood at 214,981 persons in 2009 (comprising of 105,734 males and 109,247 females) representing 53.8 percent of the county population with projections of increase to 264,899, 277,480 and 290,659 in 2018, 2020 and 2022 respectively. The county labour force recorded 41,450 households being active economically in 2009 (LCPD, 2018).

LCPD report further indicates that Agricultural production remains the main source of income for Laikipia county residents. Just like in the rest of Kenya, women in Laikipia county account for higher percentage of labour force in the agricultural sector. At household levels, granaries are used for storage of produce of farm produce.



However, there is an increased risk of pest attack in Laikipia county especially in the rural areas where about 20% of harvested cereals are lost through pests mainly because of poor storage practices. The increased risk of crop and livestock production failure, associated with increased frequency of extreme climate events, poses a major threat to food security and poverty reduction.

Adaptation of the agricultural sector to the adverse effects of climate change can be viewed as an important priority that seeks to protect and improve the livelihoods of the poor and to ensure food security.

According to United Nations Women (2022), with little resilience to climatic changes, economic and social shocks, smallholder farmers in ASAL counties have become extremely vulnerable to food insecurity. In addition, climate change increases the uncertainty as most of the households are unaware of the effects brought about by the environment that is fast changing.

2.0 CLIMATE SMART AGRICULTURE TECHNOLOGIES AND PRACTICES GUIDELINES

Based on the information acquired from the baseline survey, expert knowledge and a literature review, appropriate CSA techniques and technologies guidelines are recommended (under thematic areas) as follows:

THEMATIC AREA 1: PUBLIC PARTICIPATION

GUIDELINE NO. 1: Ensure meaningful involvement and participation of women in environmental management.

- This study showed that women bear the greatest brunt of climate change. Women generally remain more vulnerable to climate change, since they have limited livelihood assets to allow them to adapt although they remain key actors in uptake of climate-smart agricultural practices. Women had the biggest responsibility to provide food for their families.



Women are also the caregivers mainly of the elderly, sick and the children and hence when shocks such as drought occur they have to travel long distances to look for water despite their reproductive, productive and community burden. Women are also the custodians of household food and nutrition security hence in case of climate change, they are left with the huge burden of how to provide for the families. Girls and boys are also affected since girls join the women in looking for water while the boys take off from home to look for off farm employment which leaves labour burden to the family and especially the women.

- Thus, interventions that would help empower women's bargaining and decision-making power on environmental management are recommended. Actually, women in the focus groups expressed the desire for direct public participation, through their leadership, in the decision making structures.
- There is also the need to involve more women farmers in the formulation of environmental management policies such as the Climate Change Act, County gender policy on agriculture

as specific strategic objectives in the CIDP3.

- Strategies aimed at strengthening women participation tree nurseries – for their homes and for sale to other farmers are also preferred.
- Reference: CAP 318 Agricultural Act, Environmental Management and Coordination No 8 of 1999 as well as Lakipia Range-land Management Policy.
- Champion Departments: Environment, Agriculture, Youth, Economic Planning and infrastructure as well as NGOs and Development partners.

GUIDELINE NO. 2: Guideline No. 2: Ensure meaningful participation of women in the formulation and reform of agricultural policies

- Women in this study opined that they were isolated in the arena of policy making. They indicated that men are mostly engaged in providing policy suggestions on issues affecting agriculture. This is largely because these conversations are usually held in the urban areas where mostly men gather.



Women therefore do not get equal or adequate opportunity to participate in influencing the decisions that shape eventual policies that affect them.

- It is therefore imperative for the county governments to devise methods where voices of women farmers including women with disabilities are heard and considered in the formulation and reform of agricultural policies.
- This could be done by engaging existing women group caucuses in regular structured deliberations on ways to improve agriculture into a more valuable, productive and desirable enterprise. It is preferred that such engagements be held in close proximity with local communities.
- Reference: Article 196 of the Constitutions of Kenya 2010 on public participation in public affairs as well Laikipia County Participation Act of 2014, Laikipia County Community Engagement and Resilience Act of 2022.
- Champions: Youth and Gender, Agriculture, Public Administration and ICT as well as the County Assembly.

THEMATIC AREA 2: MARKET AND LINKAGES

GUIDELINE NO. 3: Guideline No. 3: Establish measures to Link farmers with ready markets for their farm produce.

- The study established that brokers had significant influence on pricing of farm produce. They tend to manipulate the prices of farm products to the lowest prices possible while enjoying exorbitant profits.
- Thus, the county need to explore ways and means of linking farmers with ready local and international markets. Consequently, farming will become more rewarding and sustainable and even attract the youth who currently do not see economic value in engaging in farming.
- More initiatives may include capacity building of farmers on quality assurance and means of increasing yields that meet market requirements and continuity;



- Development of quality standards and on weight and measures; as well as promotion of value addition and contract farming.
- Reference: Dairy Industry Act Cap 336 and Laikipia County Cooperative Act 2017.
- Champions: Trade and Cooperative, Agriculture Youth and Gender.

GUIDELINE NO. 4: Guideline No. 4: Include ways to improve the chances of farmers to access credit (Climate Change Financing):

- Credit facilities are a critical element in the commercialization of rural economies and a means towards improved livelihoods. Access to credit among farmers does not only remove their financial constraints, but also improve their ability to experiment with newer climate smart technologies.
- Initiatives that would help improve credit access among crop and livestock producers will enable them fully exploit the potential of crop and livestock production.

- The county may also consider providing farmers with linkages to financial service providers, whereby they county may negotiate for farmers to access credits at subsidized interest rates.
- The County may also plan for regular sensitization forums that create awareness on affirmative funds, financial literacy, financial risk and management.
-
- Enactment of the County Climate Change Fund can go a long way in supporting farmers with financial reliefs when they experiment with farming initiatives that are lower on carbon emissions.
- Reference: Cooperative Revolving Fund, Laikipia County Enterprise Fund Act 2017, Economic Stimulus Fund and Laikipia County Climate Change Bill, 2021
- Champions: Trade and Cooperative, Agriculture Youth and Gender



THEMATIC AREA 3: ENHANCEMENT OF SPECIFIC FARMING ENTERPRISES

GUIDELINE NO. 5: Guideline No. 5: Support the establishment of non-traditional farming enterprises like fish farming and bee keeping:

- Findings from this study indicated that only a few farmers, estimated at 5% in Laikipia County engaged in bee keeping; while no farmer indicated to be involved in fish farming in Laikipia County. In Laikipia County for example, the CIDP captures fish farming as one of the enterprises that is targeted for promotion, although this is yet to be actualized. Results from a KIPPRA Discussion Paper No. 181 indicate that Lamu and Nakuru Counties are the most efficient counties in fish farming.
- Thus, it is recommended for Laikipia County to benchmark with Nakuru County in order to boost their potential and supplement their livelihoods. Exploration and experimentation with these non-traditional farming

enterprises, like fish farming, bee keeping, rabbit rearing, fodder farming, hold immense unexplored potential.

- Reference: Rangeland Management Policy , NEMA, Food Safety Bill and Laikipia County Water Services Bill 2021
- Champions: Trade and Cooperative, Agriculture, Water, Youth and Gender

GUIDELINE NO. 6: Guideline No. 6: Support farmers to grow feeds for own and commercial purpose:

- The quantity and quality of animal feed available, as well as market access for farmers in the study areas remain a major challenge. Indigenous pasture farming remains a novel technique for bridging the 'livestock feed gap,' particularly during periods of drought. Pasture production helps reduce overgrazing and land restoration is aided by reseeding the pasture. However, up-scaling of the grazing value chain in Laikipia is hampered by a lack of market access and organization. It was determined that pasture farming is a novel notion for many farmers especially in ASAL areas, but



the practice is yet to be widely embraced.

- Thus initiatives that will help the farmers to embrace pasture farming will help exploit its enormous potential. The commercial case for pasture farming with value addition especially in the making of hay will help improve the profitability of livestock production since it will yield higher profits when compared to depending on conventional pasture for livestock production. Areas like North Marmanet and Mukogodo forest which receive rainfall over 900mm and 706 mm respectively can embrace pasture farming. The county can facilitate the farmers to establish their farming potential for productivity. This can be infused into CIDP3.
- It will be critical for the county to enact effective laws that limit overgrazing by farmers from outside the county. If grazing lands are more controlled, local farmers become the greatest beneficiaries since they can exploit the common resources for the greatest good.
- Reference: ongoing Rangeland Management Policy.
- It is imperative that stakeholder engagement be enlisted

such as KARLO, Azma feeds, Hand-in-hand, Millers, Laikipia Enterprise and Innovation

GUIDELINE NO. 7: Guideline no. 7: Support and promote women Initiatives in fruit and vegetable farming

- This study established women were more preoccupied in the farming of vegetables as compared to large livestock like cattle. On average, cabbage was planted on an average of 0.70 acres, indigenous vegetables covering 0.63 and tomatoes and pumpkin covering a land size of 0.46 acres and 0.44 acres respectively. Vegetables planted were mainly for both commercial and subsistence purposes. Across all the vegetables, female farmers tended to the vegetable farm. However, the proceeds from sales of vegetables were controlled jointly by both male adults and female adults of the household.
- Vegetable and fruit farming remain a potential source of family income and nutrition. Investments in augmenting women's capacity to sell high-value vegetable crops especially chillies, capsicum and French beans and fruits



such as dragon fruit will help improve their income levels and household food and nutrition security.

- Thus, capacity building women farmers on growing high value yielding fruits and vegetables have potential to improve nutrition within their communities and increase production.
- Reference: National Horticulture Policy of 2012,
- Champions: Horticultural Crops Development Authority.

GUIDELINE NO. 8: Guideline no. 8: Devise Strategies to promote post-harvest storage, packaging, and processing.

- The findings indicate that value addition activities were not a common venture in the study sites, with only 1.5% of the farmers participating in value addition activities. However, almost 20% of farmers have received some training on value addition activities offered by Agricultural Extension Officers at the county level and NGOs. The value addition training that the respondents have acquired is on the crop (packaging of vegetables) and livestock products (i.e. sour

milk) only. Few indicated that they have received the training from NGOs and government extension officers (county and national officers) on value addition but haven't put the knowledge to practice yet. Thus, it is important for the county to consider training farmers on "value chain technologies" in partnership with universities and other research institutions.

- Interventions to reduce vulnerabilities in the post-harvest and processing stages, especially improved storage and packaging, should be considered in the study areas, as they can help preserve food and improve the resilience of farmers and food value chain actors by reducing their vulnerability to market fluctuations and climate change impacts.
- Women in the FGDs also noted that once they grow new products, they always face challenges of marketing the improved versions. Many customers are hesitant to adopt new products due to lack of proper sensitization. Therefore, the need to link farmers with platforms, including with media channels, where they can market and create awareness of their new products is proposed.



- It is therefore critically important to capacity build women farmers on value addition like packaging, branding, storage, and marketing. This will strengthen existing women farmer groups to venture into aggregation and value addition.
- Reference: Warehouse Receipt System Act 2019 and National Horticulture Policy of 2012, and the IGAD Regional Postharvest Loss Management Strategy (IGAD-PHLMS).
- Champions: Trade and Cooperative, Agriculture, Youth and Gender

THEMATIC AREA 4: GROUP MOBILIZATION

GUIDELINE NO. 9: Guideline No. 9: Devise strategies to organize farmers into groups in order to enhance their collective advantage.

- It was noted in this study that farmers who had actively organized themselves in groups had an advantage toward climate change adaptation. They were quick to access

and share information on best farming practices. When groups are organized, they have better chances to access opportunities such as technical extension services, funding, and establishment of market linkages. Additionally, they have higher chances of accessing nearer markets for their farm produce such as local schools and hospitals. Group based approaches are also important when testing and evaluating climate-smart agriculture practices.

- Thus, there is need for scaling up group-based approaches for marketing and buying inputs purposes.
- When groups are well formed, they can further be supported to establish a form of table banking with potential to develop into SACCOs. In these types of arrangements, loans can be accessed at lower interest rates from micro credit institutions. They also have chances to be trained and receive support in a wide range of cross cutting issues.
- Reference: The Community Registration Bill
- Champions: Agriculture, Social Services , Youth and Gender



GUIDELINE NO. 10: Guideline No. 10: Suggest ways to mobilize youthful farmers to join and engage in farmer groups

- Recruitment of the current project revealed that groups were predominantly a preserve of the older generation, averaging at least 50 years of age in Laikipia county. This could be explained by the fact that the young generation do not see the economic value in engaging in agriculture, and prefer more off-farm enterprises. There is also the notion among youth that farming is for the elderly or senior citizens as they are referred.
- This presents the county government with the opportunity to conduct media awareness campaigns with tailor-made slogans such as “ukulima sio ushamba”, meaning, “Farming is not primitivity”. Nodes along the value chain that attract youths into agriculture, e.g. linking farming to IT in e-marketing, establish youth hubs at various centers, revive 4K clubs have a significant promise.
- Thus, they lack the opportunity to benefit from programs targeting farmer groups from government and non-governmental organizations.
- It is therefore imperative for the county to design ways in which the younger generation (40s and below) can be mobilized to join and engage in farmer groups.
- In order to be more attractive, is recommended to provide options for advocating for specific fund targeting youth and women farmers in the CIDP.
- Reference: Laikipia County Enterprise Fund Act 2018
- Champions: Agriculture, Trade ,Innovation and Youth and Gender



THEMATIC AREA 5: ENABLING ENVIRONMENT AND STRUCTURES

GUIDELINE NO. 11: Guideline No. 11: Establish comprehensive strategies for sustainable water collection and supply methods beyond rain fed agriculture.

- Laikipia County under this study is located along the arid and semi-arid belt (ASAL) of Kenya. Trends show that the bigger part of an ordinary year remains dry. Yet, farmers in the County rely on rain as its major source of water supply. Up to 62% of respondents in Laikipia North for example, and 49% in Laikipia East indicated that they incurred water costs for their livestock and domestic use in ordinary times, and these figures often rise with extension of drought. Households also buy water at exorbitant prices, at a cost of up to 30 Kenya shillings for a 25 litre jerrican.
- This has posed as a major challenge amid the incessant calls for experimentation with climate smart agricultural

practices. Therefore, it is critically important for the county to support initiatives for diversification of water supply and harvesting methods.

- This can be done through initiatives such as sinking of boreholes, expanding piped water supply projects, as well as digging of water reservoirs such as dams to collect rain water during rainy seasons.
- Women in this study noted that despite the drilling of boreholes, available water was generally contaminated and not fit for human or livestock consumption. In several occasions, this has led to cases of diarrhoea and other infectious diseases especially among children. Thus, efforts to provide usable and clean water should also be prioritized. This has an opportunity to enhance healthy communities and sustainable farming enterprises.
- Above all, it is recommended to design and have a strategic implementation plan for water management in the county.
- Reference: Laikipia Climate Change Act 2021, Laikipia County Disaster Risk Management Act 2021 and the



Laikipia County Water Services Management Bill 2021

- Champions: Agriculture, Water and Environment Departments

GUIDELINE NO. 12: Guideline no. 12: Improve road infrastructure to facilitate transportation in farming related activities

- Road infrastructure is considered as the backbone of many rural farm transport systems. Rural transport provides assurance for the supply of the agricultural inputs and facilitates the delivery of the farm outputs to the markets. In rural areas, among other strategies to stimulate agricultural sector development is to improve rural accessibility through the provision of rural road infrastructure and improved transport services.
- This study approximated that farmers in Laikipia County cover a distance of an average of 9.6 kilometres to buy and sell their farm inputs and outputs respectively. Further observations indicated that majority of these roads that link the main roads to the farms remain in a poor state and are

difficult to access by use of motorized means of transport, particularly during rainy seasons. In fact, up to 42% of the respondents indicated that they walk to the markets as the only option.

- Generally, it was observed that farmers who have an easier access to the bigger markets through better roads, on average, tend to commercialize their farming enterprise than those in far flung areas. In order to develop the agricultural sector therefore, the improvement of rural road infrastructure and transport service should be linked to the roads going to the bigger markets; otherwise, the impact on agricultural sector will be low.
- It is critically important therefore for the county government to generate comprehensive plans to expand its investments in road construction, repair and maintenance.
- Key strategic decision in this sector will include promotion of construction of rural roads in the infrastructure bond, formulation of county road design manual, and caveats placed on subdivision of agricultural demarcated lands.



- Reference: Kenya National Infrastructural Policy , County Spatial Plan and the Infrastructural Bond
- Champions: Roads , Economic Planning, Land and Housing

GUIDELINE NO. 13: Guideline no. 13: Provide for the establishment of sustainable energy supply and generation accessible to farmers

- Energy use in agriculture in Kenya is very critical in achieving food security, largely energy in the form of electricity, biogas, woodfuel and solar energy is used for crop drying, processing and preservation, cold storage, heating and lighting in modern farming. Energy supply is key in water pumping (Hybridization or Solarization of water sources) for irrigated agriculture and for animal rearing too. Thus, the role of energy in Climate Smart Agriculture (CSA) cannot be underestimated.
- This study showed that lack of sustainable energy supply remains a significant hindrance to an effective and efficient farming enterprise. Majority farmers interviewed indicated they were out of the electricity grid supplied

by the government. The few who had connection to the same decried that the cost of electricity was so high and observation showed that there was low uptake of energy in farming activities.

- Thus, there is great need and opportunity to introduce farmers to alternative sources of energy beyond connecting them to the national grid. Thus, it will be critical for the county government to invest in energy training and incubation centres. The focus may be on renewable energy, solar technology, biogas, and briquettes production. The government may have a special package for women and youth in order to promote their participation and uptake of energy technology. This can be achieved through seeking funding from partnership organizations such as UN Women, Ministry of Energy, Ministry of Environment and NGOs working in the county such as Hand in Hand International.
- Reference: National Energy Policy 2018 and the Laikipia County Climate Change Bill of 2012



- Champions: Environment, Water and Environment, Youth and Gender

THEMATIC AREA 6: CAPACITY BUILDING

GUIDELINE NO. 14: Guideline No. 14: Establish capacity building support programs for extension officers.

- It emerged that the agricultural extension officers lack advanced knowledge and skills that have potential to match the harsh climatic changes.
- It is critically important therefore for the County to provide for training programs of existing officers in a bid to orient them to the latest CSA technologies and practices for climate change adaptation.
- Reference: The National Agricultural Sector 2017
- Champions: Departments of Innovation, Water and Environment.

GUIDELINE NO. 15: Guideline No. 15: Design on-going training programs for small scale farmers to boost their adoption of CSA technologies and practices.

- The study established that the level of education among farmers is generally low. It revealed that majority of farmers in Laikipia County had only primary education, with only 3% of the respondents from each county reporting to have attained university education.
- In order to enhance farmers' knowledge and skills, it will be paramount for the county to plan for regular training programs among farmers in a bid to enhance the adoption of the latest technologies and practices. These spaces will provide farmers with useful climate adaptation strategies that are customized to suit their respective conditions.
- Importantly, it is recommended for the County to develop regular capacity needs assessments in order to identify the training gaps and mount courses to fill the identified gaps.
- Reference: Laikipia Climate Change Bill 2021 and The National Climate Change Act 2016



- Champions: Departments of Education Youth and Sports and Culture and Social Services

GUIDELINE NO. 16: Guideline No. 16: Suggest plans to enhance the recruitment of more agricultural extension officers.

- Access to extension services provides an important link for farmers to get information on CSA technologies and practices. Extension services are also useful when it comes to practical knowledge especially through training. Thus, interventions that would help improve access to extension services are recommended
- Strengthening programmes such as breeding and veterinary services will help not only at lowering the cost of managing the livestock enterprise, but it will have an effect on elevating the potential to attract especially the youth to venture more in livestock farming activities.
- Results from the field showed that only few agricultural extension officers are available for huge farmer populations

in each county. This study showed that farmers seek these services for between 6 and 9 kilometres away. The county should therefore roll out plans to recruit more as a way of enhancing effective outreach and support to farmers. This could mean that the county introduces in the CIDP the extension staff/farmer ratio.

- It was also noted that the positions of extension officers are male dominated. To this end, the county should devise strategies to recruit more women in these roles.
- Reference: Laikipia County Community Engagement and Resilience Act 2022
- Champions: Departments of Agriculture and Administration

GUIDELINE NO. 17: Guideline No. 17: Establish County Gender Commission to respond to Gender Based Violence.

- In the FGDs, women noted that cases of gender based violence related to the ownership, access, and control of



land and proceeds from the sale of farm outputs remain persistent. Male spouses tend to be violent regardless of the investments they have in the farming enterprise.

- It is recommended therefore for the establishment of County Gender Commission, as an inter-ministerial network, with non-state actors such as FIDA, CREAW and COVAW and members of the community be co-opted to respond to cases of GBV in a timely and effective manner ensuring inclusion of PWDs.
- There is need for the County to cascade the National Gender Policy to the county level
- The International , regional and national legal frameworks and policies should be domesticated to address GBV
- Reference: Sexual Offenses Act 2006, Children's Act 2001, Female Genital Mutilation Act 2011 and the National Policy on Prevention and Response to GBV
- Champions: Departments of Education, Youth, Gender, Culture and Social Services

THEMATIC AREA 7: INFORMATION AND EVIDENCE DRIVEN POLICY

GUIDELINE NO. 18: Guideline No. 18: Research and Innovation.

- Evidence indicates that research and innovations organized by the county government is minimal and uncoordinated. If the county is to advance its agricultural enterprises, the need to create an environment where policy decisions guided and based on empirical evidence cannot be overemphasized.
- Organizing expos and holding conferences on agricultural innovations by farmers, researchers and practitioners has the potential to collect and experiment with some of the best farming methods and innovations, tailored to withstand harsh climatic conditions. Such events can be designed to include participants from other counties and internationally with best practices.



- Reference: National Commission for Science, Technology (NACOSTI) Act 2014
- Champions: Departments of Innovation and Education

GUIDELINE NO. 19: Guideline No. 19: Use of Social Media and ICT as Platforms for Information Technologies.

- The study revealed that the farmers who had access to extension services were more likely to adopt more CSA practices than those farmers who had no access to the extension services. Access to extension services provides an important link for farmers to get information on CSA technologies and practices. Extension services are also useful when it comes to practical knowledge especially through training. However, it was also noted that extension officers are expected to cover a large area, of approximately 10 kilometres radius.
- In order to facilitate regular flow of information, it is recommended that government take advantage of social media and other ICT platforms as channels for information

sharing. Such initiatives will indeed help improve access to extension services and provide a space for sharing of technical information. Women groups can therefore be mobilized and encouraged to engage in such online groups where they can access timely and relevant information.

- Farmers in these spaces have a chance to not only receive technical information from the government extension officers, but also have an opportunity to share and compare lessons, challenges and experiences among themselves while seeking common solutions. A common registry for Laikipia farmers may be established and their ICT needs established.
- Further, there is need to provide for an articulate farmer communication infrastructure. This may include the establishment of ICT structures with an aim of modelling market surveys which would then provide farmers with timely and relevant information relating to the appropriate timing when they can sell their produce.
- The study also revealed that the county has no policy Social



Media and ITC. It is that Laikipia County need to develop this policy to provide guidance on Social media to advance innovations in Smart Agriculture

- Reference: Kenya Information and Communication Amendment) Bill 2019
- Champions: Departments of Innovation and Education

GUIDELINE NO. 20: Guideline no. 20: Develop Early Warning and Response Mechanisms

- This study showed that in Laikipia County, farmers were not adequately prepared to manage shocks due to unexpected weather and climatic conditions. It will therefore be critical for the county to partner with farmers in the development and implementation of strategies for early warning and response, and ensure preparedness for extreme weather events.
- This involves employment of integrated communication systems to develop effective early warning systems, producing and disseminating of down-scaled weather

information on extreme weather events, and the preparation of contingency plans to end drought emergencies.

- Reference: Kenya Information and Communication Amendment) Bill 2019, Laikipia Climate Change Bill 2021 and The National Climate Change Act 2016
- .Champions: Departments of Agriculture and Administration, Innovation, Education.

THEMATIC AREA 8: PRICE REGULATIONS AND QUALITY CONTROL

GUIDELINE NO. 21: Guideline No. 21: Design Strategies for Providing Price Subsidies on Farm Inputs:

- This study established that the cost of farm inputs has become increasingly high. This remains a key deterrent for many farmers, especially the young generation to engage in the farming enterprise. For instance, farmers reported to spend an average of KES. 1482, KES. 1909 and KES. 1324 on veterinary treatment, breeding and veterinary



- consultancy costs respectively. As a broader element of policy reform, the county will need to take deliberate actions to provide subsidies for farm inputs as a way of cushioning farmers from unstable market prices.
- Farmers indicated that they had received training through the county agricultural extension officers on how to venture into new livestock breed and crop varieties. The major concern among them is that they are unable to secure markets and right prices for their improved farm outputs. Women farmers particularly expressed the frustrations of being exploited by brokers who take advantage of their desperation and buy these products at throw away prices. Thus, the need to link farmers with ways and strategies to secure appropriate markets, both locally and internationally is recommended.
 - There is also the need to include ways to create awareness among farmers on the kinds of subsidized farm inputs. It is therefore important for the county to regularly provide subsidies on critical farm inputs such as fertilizers and seeds. This should be prioritized in CIDP3
- Reference: Fertilizers and Animal Food Stuff (Fertilizers) Regulations, 2022 and the Draft Food Safety Policy, 2021.
 - Champions: Departments of Agriculture and Economic Planning

GUIDELINE NO. 22: Guideline No. 22: Design strategies for the elimination of counterfeit farm inputs sold in local markets

- The field study revealed that cases of counterfeit farm products are on the rise. Fertilizers, pesticides, herbicides and other products have been faked so much that when applied, do not produce intended effects on the farming enterprise, leading to significant losses.
- Thus, regular and ad hoc field visits and monitoring should therefore be designed in order to ascertain the quality of farm inputs sold in local markets.
- It will also be critical to provide for the Inclusion of ways to create awareness on counterfeit farm inputs as well as



provide for quality assurance through statutory bodies like KEBS.

- Reference: the regulations and policies under the Kenya Bureau of Standards
- Champions: Department of Agriculture and Education

THEMATIC AREA 9: OWNERSHIP AND CONTROL OF LAND AND STOCKS AMONG WOMEN

GUIDELINE NO. 23: Guideline No. 23: Design measures that facilitate ownership and control of land among women:

- Land ownership is particularly important since it is a pre-requisite for CSA adoption. It presents a significant potential for the enhancement of user rights and access to financing for adoption of CSA innovations and technologies.
- Results in this study indicated that male farmers owned

larger land sizes than their female counterparts. Similarly, the land size under crop production was higher among male farmers than female farmers.

- Therefore, there will be a need to customize county policy focusing on women land ownership. This intervention will guarantee improved land rights and ownership of other assets especially among women will help improve the adoption of CSA technologies and practices.
- Reference: National Lands Act 2016, Matrimonial Property Act 2013
- Champions: Departments of Gender, Youth, Culture and Social Services, and Agriculture

GUIDELINE NO. 24: Guideline no. 24: Create and expand chances for women to own and control proceeds from Livestock

- Results in this study showed that in Laikipia County, women were more likely to own small stock such as goats, sheep and poultry whereas males are more likely to own large



stock such as cattle. It was also established that it was commonplace for women to obtain ownership to livestock assets through inheritance, markets, or collective action methods than it is to acquire land or other physical assets or control other financial assets.

- Thus, the county government should provide for domestication of national and international laws that promote women property ownership. This will include design of measures that are geared toward boosting asset ownership among women, including large and high value livestock. This will include measures that have the potential to shield women from dispossession of their assets. This has a huge potential toward bridging the gender asset gap in the households, and could help women move along a pathway out of poverty.
- Reference: International Instruments such as CEDAW 1979, African Union Agenda 2063, Kenya Constitution 2010, Matrimonial Property Act 2013, the National Policy on Gender and Development 2019.

- Champions: FIDA, Laikipia County Departments of Gender Youth Culture and Social Services and Agriculture

GUIDELINE NO. 25: Guideline no. 25: Establish a gender mainstreaming steering implementation committee for the CSA guidelines

- These guidelines are characterised by complexity and interconnectedness of critical issues pertinent to the alignment of CSA/CCA gender mainstreaming in the drafting of CIDP III 2022/2027. To this effect, the establishment of a special steering committee for the purpose of providing guidance toward the implementation of the third generation CIDP is highly recommended. The Committee will ensure the design, planning, implementation, budgeting, monitoring and evaluation of the gender mainstreaming CSA policies within the 5-year period. It will guarantee coordination of relevant departments within the county, national government agencies, development partners, members of the public, and all other stakeholders and interested parties.



Thus, members in this proposed team will be required to undertake the customization of these guidelines to suit specific gender dynamics, social-cultural context, as well as ecological zones.









GROOTS Kenya contacts:

Divyam Apartments, Cedar Road, Off Lantana Road, Westlands

P.O. Box 10320-00100, Nairobi Kenya

Cell Phones: +254 720 898222 +254 734 365566

Email: grootsk@grootskenya.org

