

REPUBLIC OF KENYA



MINISTRY OF AGRICULTURE

**DRAFT NATIONAL URBAN AND
PERI-URBAN AGRICULTURE AND
LIVESTOCK POLICY**

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FOREWORD

Agricultural growth and development is crucial for Kenya's overall economic and social development. Agriculture directly contributes 24% to GDP and 60% of the export earnings. The sector has experienced growth from 2002 after a decade long decline. Government has outlined, in its Vision 2030 policy paper, the key role the Agriculture sector will play under the economic pillar and the Agricultural Sector Development Strategy (ASDS) 2009-2020, both of which aim at improving the standard of living of Kenyans by substantially reducing the number of people affected by hunger, famine and starvation. These measures are also in line with the Millennium Development Goal No.1 of halving extreme poverty and hunger by the year 2015.

In Kenya, urban areas are not only increasing but experiencing an upsurge of the people out for better livelihoods as a result of rural-urban migration. However, urbanization is increasing without an equivalent improvement in infrastructure and services, or poverty driven land use responses and general lack of adequate shelter. Therefore, the question of organized urban land uses will be critical and this includes Urban and Peri-Urban Agriculture and Livestock (UPAL) activities.

The challenges that face the UPAL sub sector include; land use, crop and livestock production, technology development, markets and marketing, safety of UPAL practice and products, environmental pollution and provision of support services. The dissemination of new technologies is poor, and there is no supportive legal and regulatory framework to govern the sub sector. These shortcomings have resulted in underdevelopment of the sub sector.

The Urban and Peri-urban Agriculture and Livestock (UPAL) Policy is the Sector's outline of policy interventions to be pursued in order to address current constraints and to improve the sub sector's growth and development. Thus, the policy aims at giving clear direction for sustainable development of the UPAL and underscores the importance of public-private sector partnerships in accelerating growth in the sub sector.

All the changes proposed in this policy paper will need to be supported by an appropriate legal framework and will require the support of all stakeholders for its successful implementation.

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PREFACE

One of the strategic objectives of the Ministry is to create an enabling environment for agricultural development through the review of the current policy and legal framework that would accelerate agricultural production on a sustainable basis, thereby contributing to rural incomes, employment and more importantly food security. In the recent past, urban agriculture which is the cultivation of crops and the raising of animals in the urban areas, used to be regarded as an insignificant cultural practice adopted from rural life and was therefore ignored by policy makers. However, the complexity of urban life combined with high poverty levels has led to increased agricultural activities in the urban and peri-urban areas, and it is now seen as livelihood strategy. Urban and Peri-urban Agriculture and Livestock farming thus plays a crucial role towards improved livelihoods of the urban poor, since farmers cultivate a wide range of crops and rear large number of livestock with substantial yields.

The link between hunger, malnutrition and HIV-AIDS in both adults and children is established, and the pivotal role urban agriculture can play to alleviate this, as survival strategy for the urban poor, the urban unemployed and those unable to engage in other useful income generating activities. The extensive processing and handling associated with the sector underpins its importance in influencing employment creation and income generation. Urban and Peri-urban Agriculture and Livestock farming has a great potential in contributing to economic development of this country, hence the need for a Policy to guide the sector. However, the major challenges facing urban farming are environmental pollution and lack of a policy and regulatory framework to govern the sector among others. This Policy therefore addresses the key challenges in the sector to ensure that, in future Urban and Peri-urban Agriculture and Livestock farming finds its proper place in our country's development agenda.

Let me take this opportunity to thank everyone who was involved in the production of this Policy document including government officials, private sector players, civil society representatives and our development partners.

I hope that this Urban and Peri-urban Agriculture and Livestock Policy contributes significantly to food security and poverty alleviation in Kenya.

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ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
ASCU	Agriculture Sector Coordinating Unit
CBOs	Community Based Organizations
CGIAR	Consultative Group on International Agriculture Research
CIP	International Potato Center
DFID	UK Department for International Development
DVS	Director of Veterinary Services
ERS	Economic Recovery Strategy
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FBOs	Faith Based Originations
FPEAK	Fresh Produce Exporters Association of Kenya
GEF	Global Environment Facility
GTZ	German Technical Cooperation(<i>Deutsche Gesellschaft für Technische zusamme</i>)
HCDA	Horticultural Crops and Development Authority
ICRAF	International Center for Research in Agro Forestry
IDRC	International Development Research Centre
ILRI	International Livestock Research Institute
JICA	Japan International Cooperation Agency
KACE	Kenya Agricultural Commodity Exchange
KARI	Kenya Agricultural Research Institute
KCN	Kenya Consumer Network
KDB	Kenya Dairy Board
KEBS	Kenya Bureau of Standard
KEFRI	Kenya Forestry Research Institute
KEMRI	Kenya Medical Research Institute
KENFAP	Kenya National Federation of Agricultural Producers
KEPHIS	Kenya Plant Health Inspectorate Services
KEPHIS	Kenya Plant Health Inspectorate Services
KEPSA	Kenya Private Sector Alliance

KFS	Kenya Forestry Services
KIRDI	Kenya Industrial Research Development Institute
KMC	Kenya Meat Commissions
MCAL	Municipal and Town Councils Agriculture and Livestock Committees
MoA	Ministry of Agriculture
MoCD&M	Ministry of Cooperative Development& Marketing
MoEMR	Ministry of Environment and Mineral Resources
MoFD	Ministry of Fisheries Development
MoL	Ministry of Lands
MoLD	Ministry of Livestock Development
MoLG	Ministry of Local Government and Local Authorities
MoNMD	Ministry of Nairobi Metropolitan Development
MoPHS	Ministries of Public Health and Sanitation/Health
MoPND	Ministry of Planning and National Development
MOT	Ministry of Trade
MoWI	Ministry of Water and Irrigation
MoYA	Ministry of Youth Affairs
NCC	Nairobi City Council
NEMA	National Environment Management Authority
NGOs	Non - Governmental Organizations
NUSC	National UPAL Steering Committee
OoP	Office of the President
PCPB	Pest Control Product Board
PHSB	Public Health Standards Board
RELMA	Regional Land Management Unit
SIDA	Swedish International Development Cooperation Agency
UNEP	United Nations Environment Programme
UPAL	Urban and Peri urban Agriculture and Livestock
USAID	United States Agency for International Development
WAC	World Agro Forestry Centre

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EXECUTIVE SUMMARY

The world is rapidly urbanizing and it is estimated that by 2010 52% of the world's population will be living in urban areas. In developing countries, urbanization has had the negative consequence of inequitable economic growth, food insecurity and increased urban poverty. Over 70% of African population draws their livelihood from land-based activities. Kenya like many other African countries continues to experience increased rural-urban migration as people seeks better livelihood sources in urban areas. Urbanization continues to present challenges in infrastructure development, services provision and food requirements to meet the needs of increasing urban populations. The effect of urbanization has been the encroachment by Local Authorities on land hitherto used for agricultural purposes thereby limiting urban and peri-urban smallholder capacity to continue engaging in agricultural production, which is a major source of their livelihood. In addition, many laws are not supportive of agricultural production once Local Authorities have declared areas as town, municipal or city councils.

The overall objective of Urban and Peri-urban policy (UPAL) is to promote and regulate sustainable UPAL development to improve incomes, food security, create employment and reduce poverty to enhance living standards; with focus on land use, public health and environment. This will entail addressing the following areas: coordination and reviewing of policy and legislation affecting UPAL with the aim of developing concerted sub-sector improvement; strengthening and enforcing legislation to support UPAL development in liaison with the Ministries of Local Government, Public Health and other industry players; enhancing and strengthening of collaboration and linkages between institutions, players and other agencies dealing with UPAL development activities; developing and strengthening institutional capacities to handle UPAL; formulating, developing and promoting appropriate technologies for sustainable UPAL development ;promoting conservation of the environment by management of waste and other pollutants from the UPAL sub-sector and promote and coordinate marketing of UPAL products through improved markets, transport and information exchange.

This policy document looks at the constraints to the development of UPAL with regard to policy, legal and regulatory framework; environmental pollution; crop and livestock production; technology development and dissemination; markets and marketing; safety of agricultural produce and products and land use. For each of these constraints the policy assesses and discusses associated causes of these limitations and outlines specific

intervention measures the Government will undertake in order to achieve the outlined policy objectives.

The policy explores and proposes an institutional framework for engaging the key players in the industry critical to the achievement of the policy objectives. These key stakeholders include the Ministries of Agriculture, Livestock Development, Local Government, Public Health and Sanitation Office of the President, and Provincial Administration, research institutions. Finally, the policy proposes an implementation framework with timelines and a monitoring and evaluation framework for review of policy implementation.

1.0 INTRODUCTION

1.1 Background

The world is rapidly urbanizing with an average global increase of 160,000 people per day, mostly occurring in developing countries. In the year 2000 approximately 49% of the world was urbanized and it is expected to be 52% by 2010 and 60% by 2020. In the region urbanization levels vary with that of Zambia at 70% urbanized while Kenya stands at 22%. With increased population growth rates in the cities there is continued rise in food demand and environmental burdens. The rapid urbanization in many developing countries has been accompanied by inequitable economic growth resulting in increased urban poverty with many low income households suffering from limited alternative livelihood options, food insecurity, limited access to clean water and inadequate waste collection. Over 70% of African population draws their livelihood from agrarian land uses and it is important to focus on this sector. The agrarian sector is currently undergoing a land availability crisis and increasing degradation because of population pressure.

An estimated 800 million people are engaged in Urban and Peri-urban Agriculture and Livestock (UPAL)¹ activities worldwide (*Smith et al, 1996*). In Accra Ghana for example, 14% of the households practice UPAL (Amar-Klemesu and Maxwell, 2000) and 30 % in Kampala, Uganda (FAO 2005) despite absence of policy. In Cape Town, South Africa, there is a policy on Urban Agriculture. The policy supports and promotes urban agriculture within the context that it will not degrade the quality of life of citizens by imparting negatively on public health. The practice in Cape Town is a reality but development is hampered by the lack of strategic guidance and cooperation. The City does understand that urban Agriculture is not the sole solution to poverty alleviation and

¹This is the cultivation of crops and the raising of animals, processing and marketing for food and other uses within urban areas (intra-urban agriculture) and in the fringes of urban areas (peri-urban agriculture), in response to the daily demands of consumers within the town, city or metropolis; on land and using water found in these areas, applying intensive production methods, using and recycling natural resources and urban waste, to yield a diversity of crops and livestock products.

economic development, but rather as part of the cumulative impact of a wider range of development programs.

The agricultural sector has an annual production of about Ksh. 178,856.6 million and provides the equivalent of 0.7 million formal full-time jobs and 3.7 million small and medium enterprise sector jobs. It is estimated that 75% of the Kenyan population is gainfully employed in food and feed production. Exports of agricultural and food, which account for 67% of all exports products earned the country Ksh. 129 billion in foreign exchange. [Economic Survey, 2009]. In Kenya, urban areas are not only on the increase but are experiencing an upsurge of the people out for the better livelihoods as a result of rural –urban migration. Urbanization is increasing without an equivalent improvement in infrastructure and services, or poverty driven land use responses and general lack of adequate shelters, then the question of organized urban land uses will become critical.

In Nairobi, the urban poor populations in the informal settlements are the major actors in the sub sector. Vulnerable groups such as female–headed households, children, retired people, widows, and people with limited formal education are particularly involved in urban agriculture. Studies carried at Dagoretti Division in Nairobi on Characterization of Benefits and Health Risks in Urban Smallholder Dairy Production (Kangethe *et al*, 2008).has brought to light that urban dairy production has potential to increase availability of food and income for the households. Farmers use manure to grow crops like maize, beans and vegetables and they are able to increase their yields and there is significant income from keeping dairy animals.

In Kisumu urban and peri-urban farming practices largely include small–scale rainfed mixed farming, small scale river irrigation, wetland farming, fish farming and free range livestock keeping. The most intensive agriculture in the larger Kisumu district peri-urban is still characterized by mainly small-scale subsistence plots consisting commonly of maize, groundnuts, beans and sorghum. Cultivation of crops such as kales, tomato and local vegetables for the urban market is reported to be on the increase (Kangethe *et al*, 2008).

1.2 Current Status

1.2.1. Policy, Legal and Regulatory Framework

Urban and peri-urban farming is on the increase, currently despite lack of policy guiding the practice. However, some Acts of Parliament have provisions for urban and peri-urban Agriculture upon compliance with certain requirements. Some of the available acts of parliament that support or hinder urban and peri-urban agriculture are as follows:

- (i) The Local Government Act (Cap. 265): Local authorities in Kenya have the power to lease, transfer or allocate land for temporary use (Section 144). They also have the power (Section 201) to make by-laws necessary to: Maintain residents' health, safety and wellbeing; maintain good rule and government; prevent and suppress nuisance; control, regulate, prohibit or compel any act they are empowered to perform. Nairobi City Council has used these powers to enact by-laws that prohibit cultivation on public streets and keeping livestock that create nuisance. Section 144 (c) of the Local Government Act also prohibits cultivation by unauthorized persons on land that is not occupied or enclosed, or land belonging to private persons, government and local authorities. Section 155 (b) of the same act, however, allows for agricultural and livestock undertakings and provision of services to them. In doing this, it refers to the Animal Diseases Act regarding prevention of outbreak and spread of diseases. Section 155 (c) also provides for the planting of famine relief crops by persons to support themselves in any part of the country where there is likely to be shortage of foodstuffs.
- (ii) The Public Health Act (Cap 242) in section 157 (1) empowers the Minister for Health to prohibit cultivation or irrigation within and around townships.
- (iii) The Land Control Act (Cap 302) provides for controlling transaction of agricultural land. However, the minimum agricultural land that can be transacted is about 1 acre. This is unsupportive of UPAL since smaller land parcels than these exist where intensive UPAL activities are practiced. In addition, the Act directs that any agricultural land in municipalities or

townships must be so declared by the Minister for Lands in the Kenya Gazette. In the Land Control Acts, there are many disjointed pieces of legislations regulating land matters some, which do not support urban agriculture. For example, Land Control Act Cap 302 provides for controlling of transaction of agricultural land

- (iv) Agricultural Act (Cap 318): This law provides for conservation, management and development of natural resources for agricultural growth and development. However, this is particular for rural and not urban agriculture. Currently, agro processing and value addition activities are not provided for. The current challenge to UPAL is that of striking a balance between production and post-production and marketing activities. Efforts to link production, agro- processing and value addition awareness and skills are largely lacking and there is need for institutionalization of these, as well as rural-urban linkages.

1.2.2 Environmental Pollution

In urban areas, local authorities are mandated to manage water and solid wastes within their areas of jurisdictions while for the peri-urban areas, individual farmers take responsibility for the management of agricultural wastes. Various forms of pollution brought about by urban and peri-urban farming activities include:

- (i) Land pollution brought about by farmers dumping manure and crop residues on the roadside or in an unhygienic manner within the compound due to limitation of space, excessive use and unsanitary disposal of pesticides and their packages, use of raw sewage containing industrial effluents, heavy metals and microbes.
- (ii) Water pollution is as resulting from of pesticides and fertilizers percolating to the underground water or through runoff, slurry discharge and manure from livestock to unprotected wells and rivers, vandalization of sewer pipes and diversion of raw sewage.
- (iii) Noise and air pollution in form of odor and noise from livestock and pesticides sprays that cannot easily be controlled due to limited space in urban set ups. Poor initial land use planning makes it complex.

- (iv) Breeding sites resulting from farming practice in general, predisposing establishment for the breeding of rodents and insect vectors. Rodents and other insect vectors of public health importance are attracted by foodstuffs, accumulation of slurry, manure and the wastewater.

1.2.4 Crop and Livestock Production

Most of the UPAL farmers practice mixed farming. This is carried out in the following areas: - private household plots, public/private institutional land and non-constructed municipal or state owned land destined for public use or for future industrial or housing development. In addition, protected land areas that cannot be built up and treatment of solid and liquid waste sites are also used for UPAL activities.

Urban farming is faced with a wide range of challenges including over-utilization of the limited land leading to soil exhaustion and low soil fertility. Livestock is kept close to human increasing the incidences of zoonotic diseases. Farmers rely on rain-fed agriculture which is not sufficient and supplement with water sourced from municipal water system, boreholes, rivers and raw sewage. Crops grown along the roadsides or next to waste treatment plants and those irrigated using raw sewage are exposed to contamination by heavy metals and other pollutants posing health risk to consumers and practitioners.

There is shortage of animal feed forcing farmers to source feeds from industrial and market wastes, residues and other commercial feeds. Some of these feeds are substandard likely to be contaminated and are unsafe.

Animals roaming and free range graze, scavenge on contaminated garbage heaps posing health risks to consumers and danger to road users. Occasionally there are pastoralists invasion from adjacent rural setups in search of pastures and organic wastes in the cities and towns.

1.2.5 Technology Development and Dissemination

Currently much of the research leading to technology development being carried out is broadly on the general agriculture perspective and to a lesser extent UPAL. The research is mainly donor driven for academic purposes or even for other donor vested

interests. Characterization of the various UPAL farming systems has not been done. Consequently, inadequate UPAL technologies have been developed limiting crop choices and adaptation of production technologies. There is insufficient technical capacity to keep abreast with changing trends in technology and awareness creation of the same is also an impediment to improved productivity in UPAL farming.

1.2.6 Markets and Marketing

The main products resulting from UPAL activities include vegetables, fruits, cut-flowers, poultry, eggs, milk, dairy animals, pigs and honey. The bulk of these products traded in urban centres come from peri-urban areas. Most of the marketing is through middlemen for both crop and livestock products. However, for those farms that are highly commercialized, the produce is marketed directly to the processors or exporters.

In most areas, the market infrastructure is poorly developed and lack modern facilities like cold storage, water, electricity, banks and social amenities like toilets. Whereas all crop produce markets belong to Local Authorities, most markets for slaughter of live animals, especially in the smaller urban areas, are privately owned. For chicken all slaughter is done privately though the farmers and traders still pay for inspection and council charges. Most of the marketing is done by the producers on individual basis since there are few and weak marketing organizations.

1.2.7 Safety of Agricultural Produce and Products

There are various health risks predisposing factors associated with the UPAL activities. The risks factors include use of untreated sewage for irrigation purposes, contact with livestock, and excessive use of agro chemicals coupled with inadequate use of protective gear by the producers. These leads to environmental pollution, food and feed contamination and health risks to the producers and consumers. Contamination of food may occur at any stage along the value chain including during post harvest handling as some of the traders wash their produce with contaminated waste water and unhygienic display of produce for sale.

1.2.8 Land use

Most of the urban land is meant for housing and infrastructure development. These include markets, roads, commercial and residential buildings. UPAL farming is mainly practiced in open spaces, along sewer lines, river banks and on individual farms. The current laws, which include the Local Government Act Cap 265, the Physical Planning Act Cap 286 and the Public Health Act Cap 242, are not supportive of UPAL activities. Subsequently, UPAL is practiced on limited land that is increasingly being encroached by urban expansion. In most urban areas the predominant tenure system are individual leasehold. Where owners have freehold titles such land parcels are converted to leaseholds upon sub-division. In addition once urban areas are extended all land within such jurisdiction are subject to laws that limit access and user rights.

2.0 OBJECTIVE OF THE POLICY

2.1 Broad Policy Objective

The objective of the policy is to promote and regulate sustainable UPAL development to improve incomes, food security, create employment, enhance living standards and reduce poverty; while focusing on land use, public health and the environmental management.

2.2 Specific Objectives

1. Coordinate, review policy and legislation touching on UPAL development to support the sub-sector.
2. Strengthen and enforce legislation to support UPAL development.
3. Enhance and strengthen collaboration and linkages between institutions, players and other agencies dealing with UPAL development activities.
4. Develop and strengthen institutional capacities to handle UPAL activities.
5. Formulate, develop and promote appropriate technologies for sustainable UPAL development.
6. Promote conservation of the environment by management of waste and other pollutants from the UPAL sub-sector.
7. Promote and coordinate marketing of UPAL products through improved markets, transport and information exchange.

3.0 CONSTRAINTS AND POLICY INTERVENTIONS

3.1 Policy, Legal and Regulatory Framework

3.2.1 Constraints

There is lack of specific policy geared towards addressing the development this important sub-sector. However, various legislations refer individually to the sub-sector. Some of these legislations indirectly support or hinder the growth and development of the sub-

sector. Review of the current legislations has not kept pace with the development of UPAL activities leading to insufficient coordination and support within the sub-sector.

3.2.2 Policy Intervention Measures

The existence and implementation of a supportive policy and regulatory framework on UPAL farming is necessary for ensuring coordinated growth and development of this sub-sector to realize its potential. Consequently, the following measures will be implemented to address constraints associated with policy and regulatory framework:-

- (i) Review, develop and implement a regulatory framework that is supportive of UPAL farming by relevant public and private institutions.
- (ii) Enforce existing legislations that relate to matters of the sub-sector.
- (iii) Coordinate and build partnerships among the enforcing agencies in order to maximize synergies.
- (iv) Enforce laws on pesticide, fertilizer and animal feeds quality and disposal of industrial chemicals.

3.2 Land Use

3.2.1 Constraints

One of the major challenges to UPAL is the non availability of adequate land. Areas that have been gazetted as town/municipal councils have been converted to commercial plots encroaching into agricultural land. This is worsened by legislations which are not supportive to UPAL farming giving other developments an upper hand.

The following are the specific constraints to land use planning:

- (i) Competition between agriculture and construction of buildings for commercial purposes is on the increase due to rapid urbanization. Agricultural land is slowly diminishing and the resultant effect is less production. Urban land use planning and development does not take into consideration of agricultural activities while

the exploitation of open spaces has not been assessed to determine their potentiality.

- (ii) Space for disposal of waste from UPAL activities.
- (iii) Access and use of available spaces in urban areas.

3.2.2 Intervention Measures

Since land is critical to agriculture and livestock production, local and central planning needs to incorporate UPAL activities. The following will be implemented:

- (i) Set aside land for municipal waste management while capacity building farmers on refuse utilization.
- (ii) Integration of UPAL activities as a component of urban land planning by the Local Authorities and central Government. Land should be zoned so that irrigation activities can take place next to treatment plants to allow use of treated sewage.
- (iii) Development of a framework for improving access and use by farmers to idle and unutilized land for agricultural production.
- (iv) Intensify land use to increase production per unit area.

3.3 Crop and Livestock Production

3.3.1 Constraints

The major constraints faced in Urban and Peri-Urban Agriculture and Livestock is the limited available land for farming, inadequacy of clean water for irrigation and agricultural and livestock waste management and disposal. These limitations have resulted to unsustainable land use, use of waste water for irrigation and poor produce handling leading to land degradation, low quality and contaminated animal feeds, poor animal and crop husbandry, contamination of produce and spread of zoonotic and other diseases. Additionally, the presence of unconfined animals in urban and peri-urban areas has led to increased inconveniences to residents.

3.3.2 Intervention Measures

Availability of safe water, land intensive technologies and effective management of agricultural waste are critical to viable and sustainable UPAL activities. The Government will implement the following measures to address constraints to UPAL growth and development:

- (i) Partner with other stakeholders to develop, disseminate and promote adoption of appropriate technologies to address constraints associated with limited land holdings, unavailability of clean water for irrigation and poor waste management in addition to promoting the adoption of high value crop and livestock enterprises e.g. horticulture and small stock.
- (ii) Strengthen diseases surveillance, control and regulate livestock movement within and without urban and peri-urban areas.

3.4 Technology Development and Dissemination

3.4.1 Constraints

Research and technological development on agriculture and livestock is carried out by public, private and international institutions, while the Ministries of Agriculture and Livestock Development are the main extension service providers. Other service providers include agro-chemical companies, animal feed processors, NGO's and CBO's. There are inadequate linkages and networking between researchers with stakeholders coupled with unavailability of resources for research have led to poor prioritization and response to research needs of Urban and Peri-Urban Agriculture and Livestock sub-sectors. Technology development, dissemination and adoption in UPAL are hindered by the following factors:

- (i) Inadequate linkages and linkage mechanisms between researchers with regulatory agencies, extension service providers and other stakeholders.
- (ii) Limited resources for investment in research and technology dissemination leading to inadequate generation of appropriate technologies and provision of extension services for UPAL activities.

- (iii) Uncoordinated, donor driven and academic oriented research.
- (iv) Weak collaboration and partnerships in the planning, coordination and implementation of UPAL activities.
- (v) Shortage of extension workers and insecurity experienced by the farmers, traders and extension agents in the UPAL areas.

3.4.2 Policy Interventions

Strong research and extension institutions are key to enhancing competitiveness in the UPAL sub-sector. For growth and development of the UPAL sub-sector there is need to develop and disseminate appropriate technologies for adoption by farmers and other stakeholders. This can be achieved by strengthening of partnerships, collaboration, linkages and networking amongst the various agencies providing research and extension in this sub-sector. To realize these objectives the government will undertake the following intervention measures:

- (i) Promote public-private partnership to commercialize developed technologies.
- (ii) Promote collaboration between research and extension service providers to develop appropriate technological packages that are demand driven and beneficiary led.
- (iii) Enhance budgetary support for research and extension for UPAL activities.
- (iv) Invest in capacity building for extension service providers, research and extension clientele.
- (v) Promote and strengthen linkages and networking between research institutions, extension service providers and other stakeholders.
- (vi) Promote use of appropriate agricultural technologies that are suitable for reduced land for agriculture e.g. use of hydroponics, high value and land intensive crops and livestock enterprises.

- (vii) Develop a standard code of practice on value addition in support of agro-processing sub-sector as well as promotion of Good Agricultural Practices specific to UPAL.

3.5 Markets and Marketing

3.5.1 Constraints

Markets and marketing of UPAL products just like other agricultural products are faced by many challenges. The following are the specific challenges identified in this sub-sector:

- (i) Inadequate market information and lack of transparency by cartels/middlemen reduce profits that accrue to farmers.
- (ii) Few Weak and producer organizations and lack of adequate market information that limit access to niche markets and benefits from economies of scale.
- (iii) Limited market scope and product acceptability as a result of poor enforcement and lack of market standards.
- (iv) Aging market infrastructure without the necessary facilities like cold storage, water and electricity.
- (v) Slaughtered-on-site local chicken and goats in undesignated markets and the associated health risks.
- (vi) Marketing of adulterated and contaminated UPAL products.
- (vii) Consumer organizations are few and weak.
- (viii) Price distortions associated with cartels, supply, distribution and transaction costs.
- (ix) There is poor post harvest handling of produce/products, especially fresh and perishable products, due to inadequate storage and handling, transport and cargo space.

3.5.2 Intervention Measures

An efficient and properly organized marketing system is necessary for ensuring a viable and sustainable UPAL sub-sector. In order to address the inefficiencies associated with the current marketing arrangements, the following intervention measures will be undertaken:-

- (i) Strengthen existing and promote formation of new commodity based producer organizations.
- (ii) Establish and improve market information exchange systems.
- (iii) Develop mechanisms for coordinated enforcement of product and market standards by stakeholders.
- (iv) Promote product differentiation to meet market needs.
- (v) Establish modern wholesale satellite markets at strategic locations.
- (vi) Modernize existing and built additional retail and wholesale markets to meet rising market needs.
- (vii) Increase designated slaughter facilities for small stock and game.
- (viii) Enforce regulations to harmonize informal marketing and slaughter of small stock.
- (ix) Discourage informal marketing of UPAL products through establishment of designated food courts, cottage industries and mainstreaming them into formal marketing.

3.6 Safety of the UPAL Practice and Products

3.6.1 Constraints

The health of the people revolves around food products they consume, among other things. In addition, exposure of the farmers and consumers to risks associated with use of agro-chemicals and untreated sewage is a matter of concern. The products resulting from UPAL farming occasionally may not be safe for human consumption. Safety of UPAL practice and products along the value chain is constrained by the following factors:

- (i) Use of untreated waste water during production and handling of the products at various points of distribution.
- (ii) Unsafe use of agrochemicals in crops and veterinary drugs and vaccines in animals.
- (iii) Discharge of industrial effluent into the open posing great hazard to the crops, livestock and human.
- (iv) Over reliance on off-farm fodder, commercial feeds and manure whose source and safety may not be guaranteed.
- (v) Inadequate awareness by producers, traders and consumers on best practices in the production processes and product quality.
- (vi) Inadequate enforcement of existing laws on produce and food/feed safety measures.
- (vii) Traceability of crop and animal products.

3.6.2 Policy Interventions

Consumers in most urban and peri-urban areas in Kenya rely on urban markets for their food needs. Due to the rapid increase in the urban and peri-urban population in relation to the rate of food supply, demand is very high. As a result of this phenomenon, products from UPAL areas find ready market which in most cases is not regulated and monitoring of safety along the value chain is weak.

To ensure safety of UPAL practice and produce the government will undertake the following intervention measures:

- (i) Promote and build capacity on good agricultural and livestock production practices and enhance quality control in feed formulation and safe use of agrochemicals.
- (ii) Develop mechanisms for coordinated enforcement of product safety, traceability and standards.
- (iii) Put in place measures to curtail use of waste water for crop and livestock production while encouraging use of treated waste water.
- (iv) Establish mechanisms to ensure regular and effective inspection and control the use of agrochemicals and veterinary drugs.
- (v) Enforcement of Industrial and Public Health Acts to curb discharge of industrial effluent into the open and to ensure food safety.
- (vi) Strengthen surveillance to ensure feeds are sourced from credible sources.
- (vii) Advocacy and sensitization of consumers to make informed choice about food safety.

3.7 Environmental Pollution

3.7.1 Constraints

The increased urbanization and the consequent rise in demand for food by the urban population, has lead to growth in UPAL activities with attendant environmental pollution. The rise in pollution has been due to the following constraints:

- (i) Rampant use of raw sewage obtained from vandalized sewer lines for cleaning of produce and irrigation purposes.
- (ii) Exposure and susceptibility to diseases from use of raw sewage.

- (iii) Sanitary disposal of agricultural waste like manure and crop residues from individual farm holdings and industrial waste from agro based industries like slaughter houses, hides and skin; and fruit processing plants.
- (iv) Disposal of pesticides wastes due to limited space leads to land, water and air pollution.
- (v) Noise and air pollution from UPAL activities.
- (vi) Conservation of biodiversity due increased environmental degradation.

3.7.2 Intervention Measures

The UPAL potential will be exploited with minimal adverse effect on the environment. Mitigating the adverse effects on the environment will be done by undertaking the following intervention measures:

- (i) Mobilize the UPAL stakeholders to deal with dangers and risks associated with environmental pollution.
- (ii) Review and develop new regulations to bridge existing gaps and enhance coordinated enforcement of existing laws on environmental conservation.
- (iii) Build capacity of lead agencies and improve partnership and networking for dealing with environmental concerns.
- (iv) Explore opportunities and promote investments in agricultural waste management through public-private sector players.
- (v) Promote improve public awareness on good agricultural practices through increased extension and advocacy by implementing agencies.

3.8 Provision of Support Services

3.8.1 Constraints

The success of UPAL will be dependent upon quality and timely support services like farm input supply, market information, veterinary services, livestock breeding, cargo services, infrastructural services, credit and banking services. There are various constraints associated with the provision of support services for UPAL development which include:

- (i) Shortage of qualified veterinary service providers and increased number of non-professional personnel who offer poor quality services to farmers.
- (ii) Inadequate networking among the extension service providers and support service providers.
- (iii) There are limited breeding services for different livestock enterprises.
- (iv) Access to credit, microfinance and insurance is poor for UPAL farmers.
- (v) High cost of the farm inputs and sale of substandard farm inputs by unscrupulous traders.

3.8.2 Policy Interventions

Support services are essential for ensuring efficient functioning of the industry in order to realize its potential. The government will therefore address issues on service provisions by focusing on address infrastructure improvement, disease surveillance, capacity building of key players and breeding services. Specifically the following intervention measures will be undertaken:

- (i) Form and strengthen producer organizations for UPAL activities to enhance access to credit, markets and other support services.
- (ii) Prevail upon relevant Government agents and investors to improve access roads, light railways, knacker's yards, poultry slaughter houses and cold stores.

- (iii) Improve crop and livestock diseases surveillance and enforce existing legislation related to disease control.
- (iv) Build the capacity of various support service providers and beneficiaries including advocacy and sensitization to the farmers on the benefits of e-commerce.
- (v) Provide incentives to more players in provision of breeding services thereby making such services readily available and affordable.

3.9 Cutting Issues

3.9.1 GENDER

Current situation and challenges

Gender relations are influenced by ethnic origin, age, religion, marital status, traditions, ideologies, societal perceptions as well as cultural and economic conditions. Gender gap is manifest in various facets of life. In urban farming this includes among others, access to and control of tangible and intangible resources as well as division of labour at the household level and among farming activities.

Often women in women headed households tend to own resources of poorer quality that consequently result in low production. Women in female-headed households are disadvantaged in a number of ways. They tend to limit their labour time in farm activities due to heavy commitment to domestic chores, have poor access to educational opportunities and therefore fewer opportunities for employment in off-farm labour market.

Over 70 per cent of agricultural related activities are carried out by women. In Urban and peri urban areas the role of women in marketing of primary agricultural produce is even more pronounced. While Kenya has made significant steps in law to ensure gender equity, traditions and practices still undermine the role of women in favour of men in benefiting from the agriculture sector in general and urban and peri-urban agriculture in general.

Proposed intervention

The Ministry, in line with government policy on gender and in conjunction with institutions involved in promoting gender equity and welfare in societies, will incorporate gender concerns in UPAL related development programmes; and will

in particular develop and implement innovative programmes that enhance equity between men and women in UPAL production and marketing.

3.9.2 HIV/AIDS

Current Situation and Challenges

The rapid spread of these diseases and the corresponding deaths have resulted in the loss of productive agricultural personnel and base for sustained farming labour and diversion of investment resources to the treatment of the diseases. In informal settlements and areas where urban and peri-urban agriculture is a significant source of livelihood, and where, due to lack of skills the relatively poor have agriculture as a primary source of employment the HIV scourge has had and will continue to have a significant effect on the standards of living of the urban poor.

Proposed intervention

- i) The implementing Ministries will work in liaison with stakeholder to put in place measures and structures to fight the HIV and AIDS pandemic based on the Government policy on HIV and AIDS. In this regard, the Ministry will continue to strengthen the capacity of the Aids Control Unit (ACU) and develop awareness programmes for prevention and management. Additionally, the implementing Ministries will strengthen links with the National Aids Control Council (NACC) and ensure the integration of HIV/AIDS awareness in the UPAL programmes programs.
- ii) Since governance is the process of decision making and the process by which decisions are implemented, an analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decision. Government is one of the actors in governance. Other actors involved in governance vary depending on the level of government that is under discussion. In rural areas, for example, other actors may include influential land lords, associations of peasant farmers, cooperatives, NGOs, research

4.0 INSTITUTIONAL FRAMEWORK

4.1 Institutions Currently Involved in UPAL Activities

There are various institutions either directly or indirectly involved in the UPAL sub-sector. These range from public and private institutions, to donor agencies. A number of the public institutions are charged with the legal mandate to control and regulate certain aspects of UPAL activities under various legislations. Private institutions are involved in supporting farmers in agricultural activities, empowerment and advocacy. Mostly, these institutions operate individually within their legal mandates leading to uncoordinated approach to matters relating to regulation and promotion of UPAL activities.

Some of the key institutions whose roles touch on UPAL activities include:

4.1.1 Government Ministries

These are institutions charged with responsibility of formulating, implementing, monitoring and evaluation of government policies. They have budgetary resources, personnel, equipments and transport for provision of services; and they are custodians of current and historical information necessary for planning purposes. Most ministries are represented in all parts of the country and have political support in their operations.

The Ministry of Agriculture (MoA), Ministry of Livestock Development (MoLD), Ministry of Fisheries Development, (MoFD) and Ministry of Cooperative Development & Marketing (MoCD&M) are agriculture sector ministries whose core mandates includes provision of extension services. They have an institutional coordinating structure in form of Agriculture Sector Coordinating Unit (ASCU). They have grass root extension networks and work in collaboration with a wide range of stakeholders in the agricultural and support services.

MoLG is responsible for overseeing the overall management of the Local Authorities. Local Authorities are devolved governments structures that have jurisdictions over

regions of the country which include municipal, county and town councils. Local authorities are involved in the development of markets and market infrastructure for produce in their respective areas of jurisdiction, collection and disposal of solid and liquid waste, provision of sanitary facilities and land allocation for marketing facilities.

MPH&S is mandated to offer primary health care services, promote food safety and licensing; and abatement of nuisances and regulatory services. MoYA is involved in mobilization of resources, undertakes capacity building, identifies projects; overseeing the implementation of projects for the youth development programmes.

Office of the President/Provincial Administration is involved in community mobilization, coordinate and monitoring of development programmes; and maintenance of law and order. It is the main entry point for many development programmes.

4.1.2 Government Parastatals

These are semi-autonomous institutions within government ministries charged with specific mandates. Some of the Parastatals with mandates on UPAL activities include the Kenya Agricultural Research Institute (KARI) Kenya Forestry Research Institute (KEFRI), Kenya Industrial Research Development Institute (KIRDI), Kenya Medical Research Institute (KEMRI) and the Universities. All these conduct research on various aspects that include UPAL.

In addition to research institutions, there are others that offer standards and quality control, regulatory and financial services. These include KEBS, KEPHIS, HCDA, PCPB, NEMA, KDB etc. KEBS primary function is to promote standardization in commerce and industry through development of standards, quality control, certification and metrology. It has the mandate of establishing and enforcing quality standards of all products on the Kenyan market whether locally produced or imported. KEBS will continue to develop, review and enforce appropriate crop and animal product standards in liaison with relevant stakeholders.

KEPHIS is mandated to coordinate and regulate all matters related to quality control of agricultural inputs and produce. In undertaking this, KEPHIS oversees among

others, quality and levels of toxic residue in plants; administration of plant breeder's Rights; seed certification, regulation of importation of seeds, plants and plant material and phyto-sanitary services.

HCDA is charged with responsibility of regulation and development of horticultural industry while PCPB is mandated to register and regulate use of pesticides.

The National Environment Management Authority (NEMA) is a regulatory body under Ministry of Environment and Mineral Resources and is charged with environmental issues. Its main activity is to safeguard environment from degradation. Public Health Standards Board charged with responsibility of developing standards and advice the Ministry of Public Health of Sanitation on regulatory issues while Kenya Dairy Board (KDB) sets standards for all dairy products and provide regulatory role to dairy processors, registration and capacity building.

4.1.3. Agricultural International Research Institutions

These are institutions which operate in the country under the auspices of Consultative Group on International Agriculture Research (CGIAR) consortium. They provide linkages and partnership with national institutions. These include International Livestock Research Institute (ILRI), International Center for Research in Agro forestry (ICRAF), RELMA, CIP and Urban Harvest.

4.1.4 Processors

These are entrepreneurs involved in value addition of agricultural products to improve on quality, shelf life, handling and taste. They are both government and private sector. Private processors deal with dairy and dairy products, cereal and cereal products, meat and meat products, fruits and drinks, beverages, spices, fish and fish products.

4.1.5 Input suppliers

These are firms and individuals that supply production requirements that are not produced on the farm. These include fertilizers, agrochemicals, feeds, seeds, packaging materials, farm equipments, farm machinery, semen suppliers, hatcheries, embryo suppliers. They provide an important link in farm technological development and dissemination.

4.1.6 Producer Associations

These are structured bodies bringing together producers to pool resources to achieve certain well defined objectives. These include farmer fora, cooperative societies, and common interest group.

4.1.7 Financial Institutions

These are institutions that provide financial solutions to farmers and processors. They include AFC, Equity, Coop Bank, Faulu, K-Rep, KWFT and SACCOS.

4.1.8 Community Based Organizations

Community Based Organizations (CBOs) are groups coming together with the common purpose of uplifting the welfare of the members. These groups have defined leadership structures and guiding constitutions and are required by law to be registered by the Department of Social Services. CBOs deal with a wide range of development issues. The common denominator among CBOs is the involvement of the community in planning, resource mobilization, implementation and participatory monitoring and evaluation.

CBOs provide a good entry point and avenue for engaging UPAL actors along the value chain. CBOs provide support services required by individual farmers such as capacity building, microcredit, access to market and market information. CBOs also act as intermediaries for other service providers in the UPAL sub-sector.

4.1.9. Non-Governmental Organizations

Non-Governmental Organizations (NGOs) are corporate registered organizations which are not affiliated to Government and are mainly development oriented. There are local and international NGOs, most of them getting resources from donors. Some of the NGOs with UPAL related activities include Mazingira institute, Farm Concern, Genetic Technologies, Africa Harvest, Green Towns, World Vision, Care Kenya, Green Belt movement, Practical Action, AGRA, CRS, Winlock International, Land O'lakes, Technoserve and Solar Cookers International.

Their main strength is in resource mobilization for targeted development. They also have the potential to uplift UPAL activities through CBOs by offering financial and training support and development of infrastructure. In addition NGOs can improve networking and formation of partnerships with other stakeholders.

4.1.10 Development Partners

Development partners offer financial and technical support to needs identified by Government or the community through their various organizations. Some of the development partners who are or may be involved in UPAL activities include FAO, IDRC, GTZ, JICA, DFID, EU, USAID, SIDA, Ford Foundation, World Bank, GEF, UNEP, ADB and Rockefeller Foundation.

Development partners have the capacity to supplement Government resources for promotion of e-marketing, improvement of major infrastructure like markets, roads, waste treatment plants, warehouses and rail linkages.

5.0 PROPOSED INSTITUTIONAL ARRANGEMENT FOR UPAL COORDINATION

In order to ensure there is coordinated implementation UPAL policy it is proposed that the following institutional arrangement be put in place.

5.1 National UPAL Steering Committee (NUSC)

This is will be the organ responsible for policy and overseeing of UPAL policy implementation in the country. The NUSC will comprise Permanent Secretaries of line ministries and Chief Executives of key private sector institutions involved in UPAL with the PS agriculture as the convener. NUSC will be responsible for constituting UPAL Coordinating Committee and initial developing guidelines for their operation. The Government and other stakeholders will engage CBOs in community mobilization and sensitization on policy, legal and regulatory framework governing the UPAL sub-sector. The central and local governments will continue to engage development partners in funding priority development programmes to support UPAL activities.

5.2 UPAL Coordinating Committee

This is the technical committee with the responsibility of spear heading implementation of policy. It comprises Directors of the line ministries, Chief Executives and representatives of key institutions involved in UPAL. The committee will oversee and coordinate the implementation of UPAL activities in municipals, and Town councils and their precincts.

5.3 Municipal and Town Councils Agriculture and Livestock Committees (MCAL)

To mainstream UPAL planning and implementation in all urban and peri-urban areas, a department of agriculture and livestock will be established in each municipal and town council. The MCAL will be committees responsible for the management of UPAL programmes and projects at the municipal and town council level. These

committees will comprise Heads of Departments of relevant line ministries, local Authorities and representatives of key institutions within the Municipal and Town council jurisdictions.

The convener will be Agriculture and Livestock Heads of Departments.

6.0 REVIEW MONITORING AND EVALUATION

Monitoring and evaluation will provide indication of progress made on the implementation of the policy. The Implementation Framework (IF) schedule provided elsewhere in this document forms the main reference for the monitoring and evaluation process.

The indicative timeframes on the IF begin from the time the policy becomes effective. The duration increases with depth and complexity of implementation of the expected outcome. The outcomes that are relatively easy to implement have been allocated less time and likewise those that require less resources to implement.

The relevant institutions for the particular outcome have been listed against it with leadership for the monitoring and evaluation falling on the institution whose mandate that outcome closely falls. The resources to be used for monitoring and evaluating that particular outcome will be provided by the leading institution in so far as the Committees do not have their own resources.

The Municipal and Town Council Agriculture and Livestock Committees will implement the policy and carryout supervision missions and review meetings four times annually. The supervision reports and minutes of the meetings will be written promptly to the UPAL Coordinating Committee with copies circulated to other relevant stakeholders for information and feedback.

The UPAL Coordinating Committee is mandated to supervise implementation of the policy and operations of the Municipal and Town Council Agriculture and Livestock Committees. It will carryout two supervision missions and review meetings annually. The supervision reports and minutes of the meetings will be written promptly to the National UPAL Coordinating Committee (NUSC) with copies circulated to other relevant stakeholders for information and feedback.

The NUSC will provide guidance and supervise operation of the UPAL Coordinating Committee with periodical backstopping of the Municipal and Town Council Agriculture and Livestock Committees. The Committee will carryout one supervision and backstopping mission and review meeting annually. The supervision report and minutes of the meeting will be written promptly to the line Ministers with copies circulated to other relevant stakeholders for information and feedback.

4.2 Implementation Framework (IF)

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
Land use	(i) Promote use of appropriate agricultural technologies that are suitable for reduced land for agriculture e.g. use of hydroponics, high value and land intensive crops and livestock enterprises.	KARI, CIP, ILRI, Institutions of Higher Learning, MoA, MoLD, MoFD, MoNMD & KFS	4th year	(i) Increased yields (ii) Number of technologies
	(ii) Set aside land and investment in technologies for municipal waste management while capacity building in use of simple technologies that can be applied by farmers			
	(iii) Integration of UPAL as a component of urban land planning by the Local Authorities and central Government. For example, land should be zoned so that irrigation activities can take place next to treatment plants to allow use of treated sewage.	MoLG, MOA, MoA, MoLD, MoFD, KFS MoL and MoNMD	5 th Year	Solid waste disposal and effluents discharge
	(iv) Development of a framework for improving access and use by farmers to idle/unutilized land for agricultural production	NGOs, NEMA, Local Authorities and MoWI, MoA, MoLD, MoNMD, MoF&W MoCD&M & KFS	5th year 2nd Year	Additional area under UPAL UPAL Departments established

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
				Additional area under UPAL
Safety of UPAL Practice and Products	<ul style="list-style-type: none"> (i) Promote and build capacity on good agricultural and livestock production practices and enhance quality control in feed formulation and safe use of agrochemicals (ii) Develop mechanisms for coordinated enforcement of product safety, traceability and standards (iii) Put in place measures to curtail use of waste water for crop and livestock production while encouraging use of treated waste water (iv) Establish mechanisms to ensure regular and effective inspection and control the use of agrochemicals and veterinary drugs (v) Enforcement of Industrial and Public Health Acts to curb discharge of industrial effluent into the open and to ensure food safety. (vi) Strengthen surveillance to ensure feeds are sourced from credible sources (vii) Advocacy and sensitization of consumers to make 	<p>MoA, MoLD, PCPB, HCDA, KDB, KEBS, MoCD&M</p> <p>MoA, MoLD, MoFD, MoPH, HCDA, KEPHIS, KEBS, FPEAK</p> <p>MoLG, NEMA, Local Authorities, MoWI, MoNMD, MoPH</p> <p>PCPB, Drugs and Poisons Board, MoA, MoLD, MoCD&M</p>	<p>3rd year</p> <p>3rd year</p> <p>2nd Year</p> <p>2nd Year</p>	<p>Quality of food and feeds marketed</p> <p>Good agricultural practices</p> <p>Area irrigated using treated water</p> <p>Reduced residues in food and cases of</p>

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
	informed choice about safe food	<p>MoPH, NEMA, KEBS, MoA, MoLD, MoCD&M</p> <p>MoA, MoLD, MoFD, MoCD&M, KEBS, MoT</p> <p>MoPH, MoA, MoLD, Kenya Consumer Network, NGOs</p>	<p>2nd year</p> <p>1st year</p> <p>2nd Year</p>	<p>poisoning</p> <p>Registration of agro-chemical dealers</p> <p>High quality feeds and high and quality yields</p> <p>Increased awareness and informed choices by consumers</p>
Technology development and dissemination	<p>(i) Promote public-private partnership to commercialize developed technologies.</p> <p>(ii) Promote collaboration between research, public and private extension service providers to develop appropriate technological packages that are demand driven and beneficiary led.</p> <p>(iii) Enhance budgetary support for research and extension for UPAL activities.</p> <p>(iv) Invest in capacity building for extension service providers, research and extension clientele.</p>	<p>MoA, MoFD, KARI, NGOs, Universities, KEPSA, MoLD, MoCD&M, CGIAR Research Institutions, CBOs, Beneficiaries</p> <p>MoF, Development Partners, Private Sector, NGOs</p>	<p>3rd year</p> <p>1st year</p> <p>2nd year</p>	<p>(i) Partnerships developed and more technologies commercialized</p> <p>Improved technology adoption and increased yields</p> <p>Technologies</p>

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
	(v) Promote and strengthen linkages and networking between research institutions, extension service providers and other stakeholders.	MoA, MoLD, MoCD&M, MoFD, CGIARs, Universities, KARI, KEMRI Research Institutions, MoA, MoLD, MoCD&M, NGOs, CBOs, NCST	3 rd Year 1 st year	developed and adopted Increased productivity Technologies developed and adapted
Environmental pollution	(i) Sensitize the UPAL stakeholders on the dangers and risks associated with environmental pollution. (ii) Review and develop new regulations to bridge existing gaps and enhance coordinated enforcement of existing laws on environmental conservation. (iii) Build capacity of lead agencies; improve partnerships and networking for dealing with environmental concerns. (iv) Explore opportunities and promote investments in agricultural waste management through public-private	MOA, MOLD, MOPH, NEMA, MOLG, Local Authorities, NGOs NEMA, Local Authorities, MoPHS,	1 st Year 4 th Year	Adoption of sustainable UPAL practices Reduced incidences of violations and

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
	<p>sector players.</p> <p>(v) Promote good agricultural practices, and improve public awareness on the same through increased extension and advocacy by implementing agencies.</p>	<p>MoLG, Provincial administration and other regulatory agencies</p> <p>KARI, Universities, CGIARS, NGOs, Line Ministries, KEFRI, NEMA, Private sector, CBOs</p> <p>Local Authorities and MoLG, Development partners, Private sector, NGOs</p> <p>MOA, MOLD, MOPH, MOLG, Research, Local Authorities, NGOs</p>	<p>4th Year</p> <p>6th Year</p> <p>2nd Year</p>	<p>number of prosecutions</p> <p>Coordinated implementations of UPAL programmes</p> <p>Investment in waste management</p> <p>Improved quality of agricultural produce</p>
Crop and Livestock Production	<p>(i) Develop, disseminate and promote adoption of appropriate technologies through partnerships</p> <p>(ii) Strengthen crop and livestock disease surveillance and control of livestock movement</p> <p>(iii) Enforce laws on pesticide, fertilizer and animal feeds</p>	<p>KARI, CGIARS, MoA, MoLD, NGOs, MoCDM, MoFD, CBOs,</p> <p>KEPHIS, MoPHS,</p>	<p>4th Year</p> <p>1st Year</p>	<p>Increased production and productivity</p> <p>Reduced disease</p>

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
	quality and disposal of industrial chemicals	Local Authorities, DVS, Provincial Administration PCPB, MoPH, NEMA, MoA, MoLD, MoI, Local Authorities,	2 nd Year	prevalence and increased productivity Sustainable agricultural and waste disposal practices
Provision of Support Services	<ul style="list-style-type: none"> (i) Form and strengthen producer organizations for UPAL activities to enhance access to credit, markets and other support services. (ii) Liaise with relevant Government agents and investors to improve access roads, light railway, knacker's yards, and poultry slaughter houses and cold stores. (iii) Improve crop and livestock diseases surveillance and enforce existing legislation related to disease control. (iv) Build the capacity various support service providers and beneficiaries including advocacy and sensitization to the farmers on the benefits of e-commerce. (v) Encourage more players in provision of breeding services thereby making such services readily available and affordable. 	<p>MoA, MoLD, MoF&W, MoCD&M, NGOs, CBOs, KENFAP, Social Services, Private sector</p> <p>KEPHIS, MoPHS, Local Authorities, DVS, Provincial Administration</p>	<p>3rd Years</p> <p>7th Year</p>	<p>Improved service delivery, improved productivity</p> <p>Improved marketing of products</p>

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
		KEPHIS, MoPHS, Local Authorities, DVS, Provincial Administration MoA, MoLD, MoCD&M, MoFD, Universities, NGOs, Producer Groups, Consumer Groups	1 st Year 3 rd Year	Reduced disease prevalence and increased productivity Improved production and productivity and marketing
Policy, legal and regulatory	-Review, development and implementation of regulatory framework that is supportive of UPAL by relevant public and private institutions -Coordinated enforcement of existing regulatory framework that relates to matters that touch on the sub-sector in order to maximize synergies.	M0LG, MoPH&S, CCN, MoA, MoLD, MoL, MENR	Continuous process	Number of supportive subsidiary legislations enacted.
Markets and Marketing	(i) Strengthen existing and promote formation of new commodity based producer and consumer organizations. (ii) Establish and improve market information exchange systems. (iii) Develop mechanisms for coordinated enforcement of	MoCDM, MoA, MOLD, KDB, MoFD, CBOs, NGOs, KENFAP, KCN MoCD, MoA, MoLD, KDB, CBOs,	3 rd Year 2 years	Improved synergies and capacity for informed choices Improved bargaining power,

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
	<p>product and market standards by stakeholders.</p> <p>(iv) Promote product differentiation to meet market needs.</p> <p>(v) Establish modern wholesale satellite markets at strategic locations.</p> <p>(vi) Modernize existing and built additional markets to meet rising modern market needs.</p> <p>(vii) Increase designated slaughter facilities for small stock and game</p> <p>(viii) Enforce regulations to control informal marketing and slaughter of small stock</p> <p>(ix) Discouraging informal marketing of UPAL products through establishment of designated food courts, cottage industries and mainstreaming them into formal marketing</p>	<p>NGOs, FBOs, LMC,HCDA, KACE,MoFD</p> <p>KEPHIS, KEBS, KDB, KMC, NEMA, MoPH&S, Local Authorities, MoCDM, MoA, MoLD, MoFD, NGOs</p> <p>MOT, MOA, MoFD, MOLD, KDB, CBOs, KEBS, NGOs</p> <p>MoLG, MoLD, MoA, MoW, Development Partners, Local Authorities</p> <p>MoLG, MoLD, MoA, MoW, Development Partners, Local Authorities</p>	<p>4th year</p> <p>2nd Year</p> <p>10 years</p> <p>10 years</p> <p>5th Year</p> <p>5th Year</p>	<p>commodity prices and improved distribution of products</p> <p>Improved product quality and value for money</p> <p>Wider product choice</p> <p>Consolidated wholesale and retail distribution</p> <p>Improved product quality access and value for money</p> <p>Improved product</p>

POLICY CONCERNS	APPROACH	RESPONSIBILITY	TIME FRAME	INDICATORS
		<p>MoLD, MoFD, Local Authorities, NEMA, MoPHS</p> <p>MoLD, MoFD, Local Authorities, NEMA, MoPHS</p> <p>MoLD, MoA, MoFD, Local Authorities, NEMA, MoPHS</p> <p>Producer Organizations, KCN, NGOs</p>	5 th Year	<p>quality and access</p> <p>Improved product quality and accessibility</p> <p>Access to quality food</p>

APPENDIX

I Kenya Laws with Implications on UPAL

1. Local Government Act, Cap 265
2. Animal Diseases Act, Cap
3. Public Health Act, Cap. 242
4. Land Control Act, Cap 302
5. Agricultural Act, Cap 318
6. Land Control Act, Cap 302
7. Local Government Act, Cap 265
8. Physical Planning Act, Cap 286
9. Local Authorities Act, Cap 265
10. Science and Technology Act, Cap 250
11. Environmental Management Coordination Act, 2000
12. Agriculture Act, Cap 318
13. Horticultural Crops Development Authority Order, 1967 (Legal Notice No. 229/1967).
14. Standards Act, Cap 496
15. Kenya Plant Health Inspectorate Service Order, 1996
16. State Corporations Act, Cap 446
17. Registration of Tittles Act, Cap 281
18. Government Lands Act, Cap 280
19. Registered land Act, Cap 300
20. Draft National Land Policy, 2009
21. Land Tittles Act, Cap 251
22. Sectional Properties Act, No. 2 of 1987
23. Draft Nairobi Metropolitan Bill, 2009
24. Fertilizers and Animal Feedstuffs Act, Cap 345

II Institutions Involved in UPAL Activities

1. Ministry of Local Government (MoLG) and Local Authorities
2. Ministry of Agriculture
3. Ministry of Livestock Development
4. Ministries of Public Health and Sanitation/Health
5. Ministry of Environment and Natural Resources
6. Ministry of Lands
7. Ministry of Nairobi Metropolitan Development
8. Ministry of Youth Affairs
9. Ministry of Planning and National Development
10. Ministry of Cooperative
11. Ministry of Fisheries Development
12. Ministry of Water and Irrigation
13. Local Authorities
14. Water and Sewerage Companies
15. Universities
16. Kenya Agricultural Research Institute
17. National Environmental Management Authority
18. Urban Harvest
19. Community Based Organizations
20. Financial Institutions
21. Non-Governmental and Faith Based Originations
22. Horticultural Crops and Development Authority
23. The Kenya Dairy Board
24. Kenya Meat Commissions
25. Producers, Traders, Processors' and Associations
26. Local and International Research Organizations
27. Universities and Colleges of Agriculture
28. Kenya Bureau of Standard (KEBS)
29. Kenya Plant Health Inspectorate Services (KEPHIS)

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