



Food and Agriculture Organization of the United Nations



NAIROBI CITY COUNTY FOOD SYSTEM STRATEGY

FOURTH DRAFT

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Preface

This is a food system strategy for implementing Sessional Paper Number 1 of 2012 on the National Food and Nutrition Security Policy; it puts into effect the following directions of the policy:

- a. promotion of sustainable food production systems with support for producers to access affordable inputs as set out in paragraph 2.2.6 (iii) and (vii);
- b. promotion and support for safe and effective food storage and the processing and preservation of various foods as directed in paragraph 2.3.3 (i) and (iv);
- c. support for investment in infrastructure that is necessary for food marketing as well as access to food marketing information by stakeholders as provided in paragraph 2.5.2 (i) and (ii);
- d. support for income generating activities for the food-poor persons while helping the poorest and most vulnerable persons get food in paragraph 2.8.4 (v) and (vii);
- e. Support for water harvesting in paragraph 2.10.3 (i);
- f. promotion of safe practices in food production while addressing urban food safety and quality in paragraph 3.1.7 (i) and (iv);
- g. encouragement of monitoring of food consumption and dietary indicators and the strengthening of nutrition surveillance in paragraph 6.3.2 (iii) and (vi);
- h. implementation of effective food relief and safety-nets while providing food emergency responses in paragraph 7.3.4 and 7.6.4;

A food system is the path that the food traverses from production through to distribution, processing up to consumption and the interplay of policy issues, influences, measures and networks involved. A sustainable food system will deliver food from source to consumers in an efficient and predictable manner and for now and in the future.

The Nairobi City County government has documented and studied her food system with the purpose of understanding it and further to influence it in order to achieve sustainability. This is in line with the provisions of United Nation's Sustainable Development Goal Number 11 on achieving a sustainable city and community by the year 2030. A number of gaps were identified in all the components of the food system. These gaps were ranked and those deemed to be of highest priority were addressed in the strategies; the lower-ranking gaps were recorded for future consideration during the review of the strategy after 5 years.

This document lays out the policies, strategies and frameworks that will be implemented by the government, stakeholders and development partners to address the gaps in the food system and assure the present and future populations of the Nairobi City of consistent and adequate amounts of safe, affordable, accessible and nutritious food.

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Executive Summary

This Food Systems Strategy elaborates plans and approaches for Nairobi City County for implementing the Sessional Paper No. 1 of 2012 on the National Food and Nutrition Security Policy. It identifies that a food system exists in the city with networks and supply chains from most of the counties of Kenya. It observes that within the city and nationally a policy and legal foundation is largely in place. However, the city's food system is largely informal, undocumented and inefficient and, therefore, is unable to sustainably deliver adequate quantities of safe, affordable, accessible and nutritious food to all residents, nor protect commercial interests of its players.

A vision of affordable, accessible, nutritious and safe food for all Nairobi City County residents is perceived and this would be realized through five specific objectives, namely: increase in food production, stable food supply and stable incomes, reduction of food losses and good welfare of food consumers.

Increase in food production will be realized by changing the attitude of Nairobians towards urban agriculture as well as by availing water through its greater harvesting, more intake and recycling together with local rivers clean-up. Existing agricultural land will be preserved through enforcing zoning. Food production and agribusiness will be supported with incentives while poor quality of agricultural inputs will be corrected. In other counties supplying food to Nairobi, the national government will be expected to provide policy answers to impacts of weather and the cost of production.

With respect to food distribution, there will be formalization and integration of the system, together with improvement of the structures and dispersal of markets and other food outlets. Food processing will be improved by reducing the cost and delays in approvals for enterprises, together with improving the capacity of processors and promotion of consumption of processed food through which safety, quality, shelf-life and value would be better assured.

The food consumption measures address both poverty and also safety and nutrition and also food consumer awareness. The food-poor residents are identified and deliberately taken through reduction of vulnerability until they become self-reliant. Food safe and food quality will be improved by increasing the capacity of regulatory bodies as well as empowering consumer organizations. Food recovery is institutionalized as a measure of addressing food security while reducing food waste.

The present institutions and legislation will continue to apply for implementing the Strategy. Nevertheless, two intergovernmental institutions are to be established, one between all counties supplying large quantities of food to Nairobi and which will provide a platform of harmonization and streamlining of supplies while the other will be between Nairobi City and national government institutions with functions in the city relevant to the food system. A regulatory Food Board will be established while a Food Liaison Advisory Group will be a platform of food policy dialogue. A Steering Committee comprising implementing sectors and development partners will guide implementation of the Strategy.

The Strategy provides a 5-year implementation plan which will cost Ksh 2.5 billion in Year 1 and Ksh 8.6 billion in the 5 years as well as a monitoring, evaluation and learning plan with the ultimate oversight of the Nairobi City County Assembly.

1.0 Present situation of Nairobi city food system

1.1 Present situation of food production

Nairobi City sources its food from both local production as well as from other counties and countries. The local production contributes 2-18% of its food needs as illustrated in *Table 1*.

| Food commodity | % produced locally | Food commodity | % produced locally |
|------------------|--------------------|-----------------------|--------------------|
| Milk | 9.7% | Capsicum | 2% |
| Eggs | 18% | Bulb onion | 1% |
| Red meat | 6.6% | Spring onion | 2% |
| Chicken meat | 2.4% | Cowpeas | 1% |
| Aquaculture fish | 3.5% | Indigenous vegetables | 3% |
| Kales | 1.5% | Banana | 2% |
| Spinach | 1% | Avocado | 2% |
| Cabbage | 2% | Mango | 1% |
| Tomatoes | 1% | Herbs and spices | 10% |

Table 1: Local production of selected foods

Among crops, vegetable production is the most dominant enterprise; others include production of maize, beans and non- grain cereals or tubers. The most commonly produced indigenous vegetables produced are *managu*, *terere* and *kunde* (black night shade, amaranth and cow peas respectively); the other common vegetables produced were kale, tomato and onions.

Also practiced is livestock production as well as were farming involving a combination of crop, vegetable and livestock production. According to the 2009 National Census, the food animal populations in the city was as follows:

- Cattle 52,000
- Sheep and goats 80,000
- Poultry 600,000
- Pigs 30,000

Food production enterprises are distributed in the city as follows:

- Cereals production, mainly maize and beans, is concentrated in Njiru, Embakassi, Mihango and Ruai;
- The roots and tubers are grown in small pockets in Ruai, Karen, Mukuru Kwa Njenga and Kawangware;
- Vegetables are most common enterprise in Nairobi with high concentration of producers in Njiru and Karen; in addition there are medium concentrations in Ruai and Embakassi and small pockets in Kawangware and Pangani;
- Fruits have small pockets of producers spread across different locations including Njiru, Embakassi, Ruai and Karen;
- Like fruits, dairy have small pockets of producers in Njiru, Embakassi, Ruai and Pangani;

• Poultry and small ruminants were common in Njiru and Ruai and to some extent in Embakassi.

The main local produce is therefore vegetables, spices, herbs and products of poultry, pigs, sheep, goats and cattle. Nairobi City also is the end- market of many regions which supply produce as summarized in *Table 2*. At least 30 out of 47 counties and 4 foreign countries supplies food to Nairobi.

| County / country | Food commodity | County / country | Food commodity |
|---------------------|--|---------------------|---|
| Kiambu | Arrow roots, bananas, cabbage, amaranth, kales, spinach, eggs | Tanzania | Maize, dolichos, millet, oranges, tangarine |
| Nyandarua | Potatoes, green peas, cabbage | Makueni | Beans, millet, pigeon peas, cowpeas, dolichos, sorghum, water melon |
| Narok | Potatoes, wheat, green maize, green peas, cabbage, Small ruminants, cattle for slaughter | Uganda | Beans, oranges, pawpaw, tangarine |
| Nakuru | Potatoes, green peas, green maize, eggs | Homa Bay | Ground nuts, fish |
| Kisii | Sweet potatoes, bananas,millet, sorghum, soya beans, avocado, onions | Pakistan | Rice |
| Kirinyaga | Sweet potatoes, bananas, rice, tomato | Thailand | Rice |
| Meru | Bananas, dolichos, green grams, pigeon peas, potatoes, beans, sorghum, millet, lentils, mango, pawpaw | Baringo | Potatoes |
| Busia | Maize, ground nuts, yellow beans, arrow roots, fish | Embu | Bananas, mango, water melon, |
| Nyeri | Arrow roots, onions | Kajiado | Sweet potatoes, mango, tomato, Small ruminants, cattle for slaughter |
| Trans Nzoia | Maize | Murang'a | Bananas, avocado, amaranth, kales, spinach |
| Tharaka / Nithi | Bananas | Kitui | Cowpeas, dolichos, green grams, lentils, millet |
| Bungoma | Maize, onions | Siaya | Groundnuts |
| Tana River | Mango, fish | Nairobi City | Amaranth, night shade, spider plant |
| West Pokot 🔨 | Mango | Isiolo | Onions |
| Garissa | Small ruminants, cattle for slaughter | Wajir | Small ruminants, cattle for slaughter |
| Mandera | Small ruminants, cattle for slaughter | Laikipia | Slaughter cattle |
| Bomet | Eggs, potatoes | Kericho | Eggs |
| Nandi | Eggs | Kisumu | Fish |
| Kwale | Fish | Mombasa | Fish |
| Siaya | Fish | Kilifi | Fish |

 Table 2: Main counties and countries supplying food to Nairobi City

According to the World Population Review, the current population of Nairobi is projected to be 6.54 million and is growing at a rate of 4% as a result of births and immigrations; the national population is projected at 52 million and growing at a rate of 2.48%. With respect to cereals production, the average national growth rate for the years 2013 to 2017 was -4.4% (negative

4.4%), according to Knoema.com, comprising wheat -15.24%, maize -2.96%, and rice paddy -9.77%. In the same period primary vegetable production grew by an average of 1.52%, meat by 5.8%, milk by -1.9%, and roots and tubers by -4.06%. The disparity in human population and food production growth rates is cause for concern as it indicates that the country may soon not be able to feed itself from its own production and that Nairobi which relies on the rest of the country for food supplies may have to face this reality.

Low local food production growth rate as compared to human population growth is as a result of interplay of 7 factors, which after being subjected to pairwise ranking, are listed in **Box 1**. There is an attitude problem toward urban agriculture that traverses all segments of the society. People attribute towns with concrete buildings and streets and not with agriculture-related food production. People assume that in an urban setting, one will always walk to the shop and find food. When residential premises are being designed people do not consider that the backyard can be used for food production

Box 1: Ranked factors causing low growth of local food production

- 1. Negative attitude towards urban agriculture.
- 2. Inadequate water for agricultural production.
- 3. Land unavailability.
- 4. Poor quality of food production inputs.
- 5. Poor soils.
- 6. Political factors such as low goodwill and corruption.
- 7. High cost of inputs.
- 8. Un-enabling environment.
- 9. Poor planning.
- 10. Weak governmental support.

for the owner's family, or that the balcony and the roof can be used for food production. This negative attitude is a recent and strange phenomenon for Nairobi as it has not always been like that. The city has a history of official zoning that included agricultural zones in such areas as Dagoretti, Githurai Kimbo, Wendani, Kahawa Sukari and Kasarani. These areas are still largely under agricultural food production today. There has been ranches in the history of the city. And historically, public policy has always provided for zoning urban areas for agriculture. The Urban and Cities Act, No. 13 of 2011, laid the foundation under the new 2010 Constitutional dispensation of integrated development planning that would "provide a framework for regulated urban agriculture" and land "zoning for the purpose of agriculture". Similarly, the Environment Management and Coordination Act, No. 8 of 1999, has provided for, and has been imp lemented through, the National Land-Use Guidelines which has set out environmental standards for urban and periurban agriculture. Public policy encourages urban food production, yet many capable Nairobians have not taken the opportunity to produce food for their households and for commercial purposes.

In many cities of the world, urban agricultural food production is a well-established economic activity; examples are cities such as London, Paris, New York, Cairo, Vancouver, Bangkok, Jakarta and Delhi. Food production thrives in many urban areas.

A second level of negative attitude to agriculture concerns the youth. This phenomenon is not restricted to Nairobi youth but occurs generally all over the world. Agriculture is not normally the career of choice for youth, yet this is the age group with the necessary energy required for many of the agricultural enterprises. With the correct attitude and with support with information

and other incentives, many of the jobless youth can be engaged in urban food production as a business.

Nairobi City is water-deficient not just for human consumption but also for agriculture. The demand for water is 720, 000 litres per day against the supply of 580,000 litres per day. Water for use in Nairobi originates from catchments and reservoirs in other counties, i.e. Murang'a, Nyandarua and Kiambu; this water is used for domestic and industrial purposes and is unavailable or inaccessible for food production.

Nairobi City is traversed by several rivers that flow all-year-around, i.e. Ngong', Nairobi and Kabuthi. These rivers are heavily polluted and the water is not safe for domestic and agricultural use. But polluted rivers can be cleaned as has been done with River Thames, River Singapore and Pearl River in China.

Nairobi receives on average 786.5 mm of rainfall per year. The harvesting and storage of rain water is not yet an established practice in the city and in the country and most of the water just runs down rivers and goes into the ocean.

Other unexploited sources of water are recycled waste-water and underground water. A sewerage treatment system is arranged such that the last lagoon contains clean and safe water, all the waste and harmful organisms in it having been eliminated in the preceding lagoons. The water is released into the rivers and may as well be sent back into the supply system as has been done in Namibia and Orange County of California and is presently being considered in Perth in Australia. With respect to underground water, Nairobi lies on a network of aquifers and research may provide data, information, knowledge and culture on how this water might be exploited for domestic and agricultural use.

Land for agriculture is unavailable owing to human settlement that is normal in a city and also due to delayed zoning. Out of the 696.3 km² that is the area of Nairobi, only 96.8 km² (13.9%) may be used for open- land farming as is known in rural areas. However, there are many land- saving technologies available for urban agriculture, from factory farming, to greenhouses, fish tanks, micro-gardens, sack-gardens, multistory gardens, hydroponics and aquaponics.

Local production efforts are being hampered by poor quality of food production inputs. From fertilizers, to pest-control products and to animal feeds, there has been complaints by users that they have not been getting value for their money and that their targeted production has been falling short as a result of this vice.

Low food production growth is experienced in other counties that supply food to Nairobi. This is attributed to reasons in *Box 2*. The main

problem is erratic weather which may be as a result of negative climatic change, compounded by high costs of production, declining soil fertility and poor quality of inputs.

The national and county governments are distinct and interdependent and can only cooperate and consult, according to the Constitution. However, national government can enact national policies and establish national standards to address these matters.

Box 2: Ranked causes of low food production growth in counties supplying food to Nairobi

- 1. Erratic weather / negative climate change
- 2. High cost of production
- 3. Declining soil fertility
- 4. Poor quality of food production inputs
- 5. Declining availability of agricultural land
- 6. Inadequate governmental support
- 7. Land ownership uncertainties

1.2 Present situation of food distribution

The distribution system of food into and within Nairobi is largely informal which poses challenges of instituting interventions, standards and controls. The transportation routes form a web network from most counties and from neighbouring countries. From farms to primary markets the routes are largely earth roads but from primary markets to Nairobi the routes are tarmac roads and to a little extent railway.

Food commodities are conveyed into the city largely using trucks. Within the city, food transportation is through the use of trucks, pickup vans, buses, *matatu*, carts, cars, and more recently motor cycles.

The Nairobi county government provides and operates 10 open-air wholesale and retail fresh produce markets, i.e. Githurai, Kangemi, Uthiru, Korogocho, Gikomba, Nyamakima, Wakulima, Fig Tree Ngara, City Park, Toi, Kawangware, Kayole / Soweto, Dandora and Muthurwa and three enclosed wholesale markets, the City Market, Burma Meat Market and Kenyatta Market. The private sector runs 80 supermarkets and many smaller retail shops and market stalls. The city also provides hundreds of hotels, restaurants and other eating places. The private sector is also providing cold storage facilities for food in supermarkets as well as a small number of other commercial cold storage premises such as listed in *Table 2*.

| Name of firm | Services offered | Name of firm | Services offered |
|-------------------------------------|--|--|--|
| Branded Fine Foods | Warehousing, cold storage, refrigerated trucks | Fastnet Global Logistics | Warehousing, cold storage |
| Adamji Multi- Suppliers | Warehousing, cold storage, refrigerated trucks | Tabaki Freight Services International Limited | Cold storage |
| Solar Freeze | Mobile solar-powered cold rooms | Alpha Business Park | Warehousing, cold storage |
| Kenya Cold Storage Foods Limited | Cold storage for fish | FreshBox | Cold storage for fruits and vegetables |

Table 2: Some cold storage capacities in Nairobi

The problems in food distribution are listed in **Box 3** after pairwise ranking. The present nature of informal marketing, especially for fresh produce, have created room for a long chain of intermediaries whose participation increases transaction costs and often control access to the market. This is compounded by inadequate provision and enforcement of transportation standards leading to high levels of spoilage, wasting and

Box 3: Ranked problems in food distribution

- 1. Lack of a formal distribution system
- 2. Lack of enabling taxation policy
- 3. Inadequate infrastructure for food distribution
- 4. Poor distribution of markets in the city
- 5. High cost of fooddistribution
- 6. Lack, or poor enforcement, packaging standards
- 7. Inappropriate transportation equipment and means
- 8. Inadequate support services in distribution points
- 9. Food waste and loss

loss of value. The long distribution chain also encounters multiple taxation points, again increasing transaction costs. Where markets have been provided, they often lack platforms for laying food commodities, and are not arranged in stalls, nor in orderly departments that would ease human traffic. The locality of produce markets and supermarkets is not evenly distributed in the city and local retail distributors and residents in underserved areas travel far and spend long times to access food groceries.

1.3 Present situation of food processing

There is low level of food processing in the county and in the country at large, which rely on the manufacturing industries located in the county; this is more significant among the micro, small and medium levels of food trade and affects mostly cereals and vegetables. The main processed foods are milk, especially mala, other milk, drinking fruit juice and peanut butter. *Table 3* lists some of the large processing plants in the city for various foods. Raw produce destined for processing has the same sources as other foods.

| Food Commodity | Processing firm | Food Commodity | Processing firm |
|-------------------|-----------------------------|-------------------|---------------------------|
| Wheat, sugars | Manji Food Industries Ltd | Poultry | Kenchic Ltd |
| Flour | Premier Food Industries Ltd | Cooking oil | Unilever Kenya Ltd |
| Pork, fish | Farmer's Choice Ltd | Flour | Nairobi Flour Millers Ltd |
| Meat 🔨 | Choice Meats Ltd | Wheat | Kabansora Millers Ltd |
| Oils, Flour | United Millers Ltd | Wheat, maize | Unga Limited |
| Flour | Osho Grain Millers Ltd | Flour | Maisha Flour Mills Ltd |
| Honey, peanuts | Greenforest Foods Ltd | Milk | New Kenya Cooperative |
| | | | Creameries |
| Meat | Quality Meat Packers | Meat, fish | Alpha Fine Foods Ltd |
| Fish | Ceer Processing Ltd | | |

| Table 3: | Some p | rocessing | firms | in | Nairob | i City |
|----------|--------|-----------|-------|----|--------|--------|
|----------|--------|-----------|-------|----|--------|--------|

Small-scale backyard processing at retail outlets frequently takes place but at a low level in the city. It comprises activities such as drying, grinding, blending, peeling and filleting.

With respect to various meats, processing largely stops with slaughter and little manufacturing occurs thereafter. There are 23 abattoirs operated in the city and there are another 11 meat manufacturing plants, though fresh meat marketing dominates over the manufactured meats. Dagoretti Abattoir Complex, Bahati- Limuru and the Ndumbuini Pig Abattoirs which are largely in Kiambu County as well as Kenchic, Kiserian, Kitengela, and Ibisil in Kajiado County, Ewaso Narok and East African Meat in Narok County, Mulot between Narok County and Bomet County, Itibo in Kisii County, Muringu in Nakuru County and Kenya Meat Commission, Masii, Matuu and Wamunyu in Machakos County, Sultan Hamud and Emali in Makueni County, Kitui in Kitui County and Nyahururu in Nyandarua County process their animals into meat and supply it to Nairobi CityCounty.

Food processing creates jobs, adds value to the food, prolongs its shelf- life and also enhances its safety. Processing is therefore an important step in the development of a country.

Food processing faces a number of problems as summarized in **Box 4**. The approval process for a new establishment is long and very costly. Besides accessing land, which is very costly in the city, the approval process will involve at least the following government departments: lands, physical planning, public health, National Environment Management Authority and the responsible sector, for example veterinary services for abattoirs and fisheries services for fish processing

Box 4: Ranked problems in food processing in Nairobi

- 1. High costs of approval of processing plants
- 2. Lack of organized marketing system
- 3. High cost of processing
- 4. Lack of knowledge & processing skills
- 5. Low consumer demand for processed products
- 6. Inadequate safe and clean water
- 7. Seasonality of the raw materials
- 8. Low production levels
- 9. High cost of processed products

establishments. To acquire a license to operate the facility, other additional agencies become involved such as Single Business Permit office and the Occupational Health and Safety office. To manufacture a food commodity and release it to the market, yet more approval bodies come in such as the Kenya Bureau of Standards.

Processed food commodities enter a market that is not organized and compete alongside unprocessed products. Processing overheads such as equipment, utilities and skills acquisition are high and this leads to high prices of products which are out-competed by the cheaper unprocessed produce. The situation is not helped by consumers most of who prefer unprocessed products over the processed commodity.

1.4 Present situation offood consumption

Food consumers in Nairobi are of diverse categories. There are the low income categories who are the majority. There are the middle income categories, which is the second largest group. High income consumers are also a significant proportion and have their food tastes and needs. Consumers may also be categorized by their communities, where most Kenyan ethnics groups are represented, alongside regional and international food clienteles. The most consumed food commodities are listed in *Table 4*.

| Declared dietary commodity on the 24 hours and 7 day recall period | Proportion of Nairobians |
|---|-----------------------------|
| Oils and fats | 96.1% |
| Spices, condiments and beverages | 94.6% |
| Sweets especially sugar | 94.6% |
| Cereal products such as <i>ugali</i> , bread and rice | 92.3% |
| Vegetables such as onion and tomato | 91.8% |
| Dark green leafy vegetables such spinach and kale | 84.4% |
| non-grain starch root tubers such as cassava, potatoes and arrow roosts | 45.4% |
| Flesh meat | 42.6% |
| Vitamins A rich fruits | 38.8% |
| Animal source foods such as fish | 24.3% |
| Organ meat | 21.5% |

Majority of Nairobi residents prepare their own food at their homes, more so for breakfast and dinner; however, the proportion of residents eating out is increasing. The diets of Nairobians comprise grain cereals such as maize and largely do not contain Vitamins A rich fruits, the animal source foods such as fish, organ meat and flesh meat, suggesting a non- negligible risk of malnutrition. Also not well incorporated in diets are root tubers, cassava, potatoes and arrow roots. Based on the results of analysis using the Food Insecurity Experience Scale, half of the number of Nairobians is food insecure, with 16% as severely insecure, 18% moderately insecure and 19% slightly insecure.

A large majority of Nairobians rely on purchased food from retail outlets; 20% of the population produce part of their food while only 10% rely on their own-produced food most of the time. Staples (i.e. Irish potatoes, rice and maize), vegetables (especially kales, spinach, cabbage and amaranth), fruits (especially bananas, oranges and mangoes), meat (especially beef, pork and mutton), poultry and dairy are the common key foods purchased by consumers in Nairobi.

The problems faced by the consumption component of the food system are summarized in *Box 5*.

Poverty is the major issues of concern in food consumption. The choice of diets and the quantity of composites of the diet is a factor of consumer incomes and preferences. Nairobi has a large population of low income populations in the informal settlements. The Urban Early Warning and Early Action tool on food security identified Korogocho slums as

Box 5: Ranked problems in food consumption

- 1. Poverty
- 2. High cost of food relative to incomes
- 3. Inadequate consumer awareness
- 4. Negative aspects of consumer preferences
- 5. Disorganized / ineffective consumer organizations
- 6. Inadequate enforcement of food safety measures
- 7. Lack of enabling policy environment for food recovery
- 8. Unethical practices by suppliers and producers

the most vulnerable of the city's settlements owing to absence of well-paying income-generating activities in the neighbourhood. The effect of poverty on food consumption is exacerbated by the

relatively high cost of food that results from high transaction costs along the long value chains. As a result of poverty and high food prices, Nairobi has a high prevalence of undernourished children as compared to the counties in the country.

Within the middle- income and high- income segments of the population knowledge on nutrition is deficient, a situation made worse by culturally-biased consumer preferences. Many otherwise nutritious diets are forgone in favour of less nutritious but culturally acceptable diets. An example is maize which is over-exploited in diets whereas there are other equally good carbohydrate-rich foods. Fish, a risk source of protein, is only now being accepted by many communities as food.

Food safety measures have been enacted in the Public Health Act, Cap. 242, the Food, Drugs and Chemical Substances Act, Cap. 254, the Meat Control Act, Cap. 356, the Fertilizers and Animal Foodstuffs Act, Cap. 345 and the Fisheries Management and Development Act, No. 35 of 2016. But there is weakness in the enforcement of these measures by the government and by the other value-chain players. Consumers are deficient in capacity and knowledge of discriminating safe food from unsafe food. The consumer organizations that should stand watch over food consumer interests are inactive and therefore ineffective. The situation has provided fertile grounds for proliferation of unethical practices by food producers and suppliers that harm the safety and quality of food.

1.4.1 Present Situation of Food Waste and Recovery

Food waste and loss occurs in all the components of the Nairobi City food system. Waste and loses are attributed to factors such as lowered consumption during cold season for plantains, incidental cuts, breakages and crushing, low quality, spillage, soaking in rain, rotting and spoilage, overstoring, broken grain, chaff presence, over-ripening, rodent-bites, and inaccessible markets, with cuts predominating for potatoes. *Table 5* details the extent of some of the food waste and losses calculated as a per cent of sales.

| Food commodity | % wasted or lost | Food commodity | % wasted or lost |
|----------------|------------------|----------------|------------------|
| Watermelon | 22.2% | Onions | 6% |
| Groundnuts | 20% | Potatoes | 4.0% |
| Pawpaw | 18.5% | Vegetables | 2.69% |
| Tomatoes | 18.2% | Meats | 1.68% |
| Cabbages | 16.7% | Beans | 1.1% |

Table 5: Some food waste and losses in Nairobi

The average food loss and waste for all categories of foods is 4.0%.

Food waste management is practiced to a large extent, with large proportion of waste going for animal feeding; other measures used include lowering prices to entice customers and using the unsold stock at home.

Waste recovery refers to recycling of otherwise wasted food back into the human food chain. Hotels ordinarily find themselves with large quantities of uneaten but otherwise good food. Such food usually goes as garbage, despite its nutritional value. Waste recovery for human consumption is not yet institutionalized but may be happening informally. A formal waste recovery system will be amenable to introduction of standards to protect public health and other consumer interests.

1.5 Present situation of food policies

Kenya has ample public policies and legislation relevant to Nairobi City food system, some of which are listed in **Box 6**. There is adequate policy and legislative framework for operating a sustainable food system in Nairobi. The framework recognizes and provides for urban and extraurban agricultural food production, easing of food marketing and business, city zoning for various enterprises including agriculture, provision of food safety and consumer protection.

Nevertheless, implementation of these policies and enforcement of these legislation is insufficient.

| - | |
|-----------------------|--|
| Establishment of a | Box 6: Some policies and law relevant to the Nairobi food system |
| food authority | 1. Comprehensive Africa Agriculture Development Programme |
| would be necessary | 2. Sustainable Development Goals, particularly Goal No. 1, 2 and 11. |
| to integrate | 3. Milan Urban Food PolicyPact |
| functions in the 4 | 4. Constitution of Kenya |
| components of the | 5. Kenya Vision 2030 |
| food system. Also | 6. Big 4 Presidential Agenda |
| necessary is | 7. National Food and Nutrition Security Policy |
| amendment of | 8. National Social Protection Policy |
| legislation on | 9. National Trade Policy |
| physical planning | 10. County Integrated Development Plan |
| and buildings to | 11. Urban Areas and Cities Act |
| allow for innovative | |
| food production | 12. Physical Planning Act |
| techniques and | 13. Public Health Act |
| space utilization | 14. Food, Drugs and Chemical Substances Act |
| models such as roof- | 15. Crops Act |
| top gardening. | 16. Urban Agriculture Promotion and RegulationAct |
| Better | 17. Fisheries Management and Development Act |
| implementation of the | e National Social Protection Policy will necessitate manning and |

implementation of the National Social Protection Policy will necessitate mapping and documenting vulnerable groups in the city, integrating them into a social assistance programme, using a formal monitoring framework to assess the impacts of such a programme and instituting resilience-building programmes to graduate beneficiary groups out of the welfare support.

The capacities for implementation of these policies and legislation within the scope of a food system would need to be built. For sustainability purposes, the implementation frameworks need to integrate nutrition education, gardening and sustainable food system in the school curriculum.

1.6 Overall situation of food system

A food system for Nairobi City exists but is largely informal and undocumented. It comprises local and extra-Nairobi food production, a network of distribution routes and means that is informal and largely private sector-driven, working within a low processing situation and geared to nourishing a large population that includes a huge low income segment. The sustainability of the system is threatened by a myriad of problems and challenges in each of its components.

At production, the system contends with negative attitudes to agriculture and the vagrants of weather and climate, compounded by high inputs costs and low quality inputs. At distribution, the chain is long, unevenly laid out, and has very many governmental and private-sector players, each which adds to the transaction costs and transaction time such that the consumer is landed with high-priced food at a situation where many incomes are meager. Processing that would otherwise create jobs as well as enhance food safety and quality is hampered by high costs while its products are made to compete with unprocessed produce that is also favoured by most of the consumers. Consumers receive food of indeterminate safety and quality that is also dear as compared to the level of incomes of most city residents, a situation that has precipitated noteworthy levels of food insecurity and malnutrition.

2.0 Problem Statement

The food system of Nairobi City is presently not able to efficiently deliver adequate amounts of safe, nutritious and good quality food to all the city residents nor afford good benefits to commercial players in food production, processing and distribution.

3.0 Vision of the Strategy

Affordable, accessible, nutritious and safe food for all Nairobi City County residents.

4.0 The Principles of the Strategy

The Strategy will be founded on the following principles:

- a. Food self-sufficiency for Nairobians.
- b. Economic efficiency in the food industry.
- c. Conservation of natural resource-base during food trade.
- d. Stability of food prices, food availability and incomes in the food industry.
- e. Good welfare of food consumers.

5.0 Objectives of the Strategy

The overall objective of the Strategy is to attain consistent food security for city residents while safeguarding the commercial interests of food industry entrepreneurs.

The following are the specific objectives of the Strategy:

- 1. Increase in food production
- 2. Stable food supply and incomes
- 3. Reduction of food losses
- 4. Good welfare of food consumers

5.0 Policy Directions

5.1 Increase in food production

Nairobi City Government will spearhead the improvement of local food production and at the same time facilitate the increased supply of food from other counties and, where necessary, other countries. In order to achieve this aim, negative attitudes toward urban agriculture will be addressed while at the same time improving water supply for household and agricultural uses, planning the use of land and correcting the quality of agricultural inputs.

In this regard, the county government will:

- 1. put in place an awareness programme on urban agricultural food production. The programme will include;
 - a. Intensification of extension and support services to households.
 - b. Wider application of extension tools such as campaigns, information, education and communication materials, meetings, seminars, workshops and exchange visits with other cities that are more advanced in urban food production.
 - c. Engagement with the education sector to advocate for curricula change that would incorporate urban agricultural food production.
 - *d.* Engagement with national government to provide national policies, standards and norms that would improve food production in the entire country.
- 2. carry out programmes, projects and measures to improve the supply of water for domestic and agricultural use, including;
 - a. promotion of water harvesting through reviewing the building code to allow roofwater collection, providing large-scale reservoirs such as lakes, dams and tanks, cleaning and using water in Nairobi rivers, and applying water harvesting and conservation technologies;

b. recycling waste water, firstly through a feasibility study and subsequently piloting and roll out. Domestic water recycling campaigns will be promoted. Nairobi underground water will be assessed for usability and, if found suitable, connected to the supply system.

- c. increasing water intake from other counties which will be enhanced through promotion of afforestation at source and the carrying out of measures to address threats to climate.
- *d. firmer prevention of wastage and leakages from the already installed water supply lines.*

- 3. carry out agricultural land preservation, identification and protection, including;
 - a. completing the city zoning programme where historically known land for agriculture will be set aside;
 - b. reclaiming other land for agriculture after assessing the suitable of soils, water and air for food production;
 - c. using open spaces in the city for agricultural activities that enhance and are commensurate with the objective of the open space;
 - *d.* promoting the use of contracts between institutions and individuals owning large tracts of land and interested food producers;
 - e. promoting the use of land-saving technologies for agricultural food production.
- 4. set and enforce standards for agricultural inputs, in consultation and cooperation with the national government.
- 5. support food production and agribusiness with incentives such as affordable inputs, access to credit and guaranteed market.

5.2 Stable food supply and incomes

Nairobi City County government will spearhead the delivery of food from source in a costefficient manner and will ensure that distribution points in the city are evenly distributed closer to the consumers and that the food industry entrepreneurs earn sustainable incomes.

In order to achieve this aim, the county government will;

- 1. Establish a formal food distribution system through:
 - a. Instituting and monitoring the food distribution map;
 - b. Defining the desired system;
 - c. Engaging the private and public sector players to buy into and operate the system;
 - *d. Promoting the shortening of the value chains. The will involve organizing markets and integrating supply chains as well as promoting contract farming.*
 - *e. Providing incentives to private players operating the system to improve their cost-efficiency;*
 - f. Collecting and disseminating marketing and other information relevant to Nairobi food system to stakeholders, including creating platforms for dialogue and information sharing.
- 2. Create an enabling environment for the food industry players to participate in the formal food distribution system, including;
 - a. Promoting the organization of food marketers;
 - b. Reviewing transportation, marketing, storage and trading laws to remove bottlenecks facing food industry players;
 - c. Setting and reviewing standards of food packaging, transportation and traceability, in consultation and cooperation with the national government.

- *3. Restructure, rehabilitate and redesign existing food distribution points, including;*
 - a. for open-air or closed markets, installing stalls and platforms and organizing the process flow into departments for different produce in order to ease human traffic.
 - *b.* giving incentives for the food industry players to install food stores and food coldrooms;
 - *c. providing food waste management and recovery facilities at the distribution points.*
- 4. Establish new food distribution points, mobile or fixed, in under-served areas of the city while reviewing the physical plan of the city to achieve fair distribution of food markets as well as wholesale and retail outlets.
- 5. Reduce the costs of approvals for establishing processing facilities and also ease the process by establishing a one-stop window for such approvals.
- 6. Build the capacity of food processors, through:
 - a. Supporting with seed capital such as temporary display or selling booths, grants and equipment;
 - b. Sensitization and trainings, including information, education and communication materials, media campaigns and exchange visits.
 - c. Linkage with quality assurance agencies.

53 Reduction of foodlosses

Food is lost through spoilage, wastage as well as through under-utilization. Spoilage starts after harvesting owing to poor storage and preservation and continues through the distribution through improper packaging and conveyance. Similarly, wastage takes place at marketing due to poor handling, inadequate storage and preservation as well as gross contamination which customers reject. At consumption food is again wasted at left overs that would otherwise be edible and safe.

In order to reduce food losses, the county government will;

- 1. Promote the consumption of processed foods by:
 - a. carrying out promotional campaigns and other sensitization of consumers on benefits of value-added and processed foods;
 - training processors on marketing skills such as influential packaging;

Promote food recovery, through:

- a. Conducting sensitizations of stakeholders on the food recovery concept;
- b. Promotion of separation of food waste at household and institutional levels;
- c. Piloting and subsequent roll-out of food recovery programme, in partnership with the private sector.

5.4 Good welfare of food consumers

Nairobi City County government will ensure that food is adequate, affordable, accessible and safe for consumers. The food-poor residents will be supported to access food while all consumers will be protected from food contamination. Nutritional and dietary information will be provided in a structured manner to prevent obesity and other food- lifestyle diseases and conditions.

In this regard, the county government will:

- 1. promote income-generating activities for the unemployed and food-poor residents;
- 2. ensure that food vulnerable persons are registered and documented and put in safety net programmes; the programme will have a graduation system for persons who are no longer vulnerable after the interventions. The graduation process will involve categorization of vulnerability into severe, moderate and low and the determination of a minimum food-basket for a household. All vulnerable persons will receive food relief. Once the food situation has been stabilized, the person will receive support to start an income-generating enterprise depending on their choice and their capabilities. Such enterprises include urban agriculture, trade and other businesses. A person running a start-up enterprise will graduate into moderate vulnerability and later low vulnerability as income builds up; once the household can access or earn the minimum food-basket from the enterprise, it would no longer be considered vulnerable. The community will be encouraged to develop a formal way of persons stepping out of vulnerability such as a ceremony or an instrument like a certificate.
- 3. introduce subsidized foods for sale to the poor; this will involve identifying a government agency that will buy food at market rates and resell it to registered poor persons at a fraction of the market price.
- 4. institute a food contingency plan with early warning and early action components as follows:
 - a. The early warning component will comprise food and nutrition assessment in the community. This strategy for the assessment will align with the United Nation's Sendai Framework for Disaster Risk Reduction, 2015 -2030, and the report of Nairobi's Indicator Survey for Urban Emergencies; it will be reported under "normal", "alert", "alarm" and "emergency" categories;

Rb.

The early action component will comprise measures at each of the four categories of the food and nutrition situation.

i. During "normal" phase food production will enhanced and food supply smoothened within the usual capacity of responsible government agencies. Commencement of stockpiling of food that will be distributed during emergency phase will done at the "normal" phase, together with *identification of vulnerable persons. The government will contract the private sector to stockpile food its behalf.*

- *ii.* In the alert phase food stockpiling and registration of vulnerable persons will continue but with be augmented with public education and community outreach.
- iii. In the alarm phase, information sharing will be stepped-up, members of staff will be put on standby, stockpiling of food rations will continue and mapping of vulnerable persons will take place.
- iv. In the emergency phase, food relief and any other social protection measures will be rolled out. A threshold of the emergency phase will be established above which the response will be handed over to the national government emergency and disaster mitigation agencies to take up and manage.
- 5. Enhance consumer awareness on food safety and good nutrition through public health and nutritional education tools;
- 6. Strengthen capacity for enforcement of food safety measures and food quality standards, through:
 - a. Training and re-training.
 - b. Appointment of inspectors to fill any gaps.
- 7. Create an enabling environment for better performance of consumers' organizations, through;
 - a. Sensitization on importance of consumer organizations.
 - b. Promotion of organization of consumers.
 - c. Building the capacity of consumer organizations.
 - *d.* Empowerment of consumers to demand safe food and discriminate unsafe, poor quality food.

60 Institutional Framework

This Strategy will be implemented by institutions and structures in the public and private sectors. While the food system will be operated largely by the private sector, the county government will provide development interventions and capacity building activities and also offer the public good services, specifically regulation, extension services and information.

The specific roles of institutions and players are set out here-below:

1. The national government

a. The Ministry responsible for food and agriculture in the national government will be expected to:

- i. Enact national policies, legislation, standards and norms to promote food production in the entire country;
- ii. In collaboration with development partners, provide grants and other incentives to operate the food system;
- iii. In collaboration with Nairobi City County government, provide information relevant to the food system to the food industry players;
- b. The respective national government ministries involved in the food system, such as ministries responsible for agriculture, health, environment, land, water and social protection, will be expected to support the system with research and development. The areas of research include raising agricultural production and productivity, managing effects of climatic change, waste recycling, sanitation, pollution-reduction, water management, change management, land-saving technologies and assessing the suitability of the city's soils, water and air for food production;
- c. The Ministry responsible for national social protection will be expected to enhance social protection programmes in the county, including cash transfers, free food distribution, direct feeding programmes, food stamps, school-based food program, social health insurance, microfinance, price subsidies, subsidized agricultural inputs, public works program and waivers and exemptions in line with national social protection policy;
- d. The Ministry responsible for emergency and disaster management and the county office responsible for emergency and disaster management will establish the threshold for each government in the response measures; the Ministry will take up mitigation measures from the county government when the threshold is exceeded.
- e. The Ministry responsible for national treasury will be expected to rationalize taxation measures to boost the food industry and zero-rate water storage tanks;
- f. The National Environment Management Authority will be expected to spearhead the cleaning of Nairobi City rivers and the extraction of the underground water for research, piloting and roll-out;
- g. The Kenya Forest Service will be expected to approve off-site afforestation by the Nairobi City County government in the water catchment areas in other counties.

For the purpose of consultation and cooperation in the implementation of these strategies with concurrent jurisdiction between national government and Nairobi City County government, an Inter-Governmental Relations Committee on Nairobi City Food System is hereby established and will be operationalized as laid out in the Inter-governmental Relations Act, No. 2 of 2012; the committee will comprise representatives of Nairobi City County government and those of national Ministries responsible for food, agriculture, health, environment, land, water, social protection, disaster management, finance, environment and forestry.

2. The Nairobi City County government

- a. The County Sector responsible for food and agriculture will:
 - i. Be responsible for the overall coordination and monitoring of the implementation of this Strategy,

- ii. Promote local production and processing of food, including the adoption of domestic water harvesting and conservation technologies relevant to food production;
- iii. In collaboration with county health services sector, sensitize consumers on food safety and good nutrition and strengthen the enforcement of food safety measures;
- iv. In collaboration with development partners, implement awareness programme on urban agricultural food production;
- v. With the approval of Kenya Forest Service and in consultation and cooperation with other counties, implement afforestation off-site at the source-counties for Nairobi City water intake;
- vi. Participate in zoning of agricultural areas under the leadership of the County Sector responsible for physical planning;
- vii. In collaboration with the County Sectors responsible for environment and lands and development partners, investigate the suitability of soils, water and air for food production with the aim of reclaiming such lands;
- viii. Implement land-saving technologies for urban agricultural food production and enhance extension services;
- ix. In collaboration with the County Sectors responsible for environment, lands and education, regulate urban agriculture in open spaces and promote contracts between farmers and individuals and institutions owning large tracts of land.
- x. In partnership with the County Sectors responsible for trade, marketing, planning and development partners, implement the establishment and monitoring of Nairobi food distribution map;
- xi. Host the Food Liaison Advisory Group (FLAG) established under this Strategy;
- xii. In collaboration with the County Sectors responsible for trade, marketing, and cooperatives, promote the shortening of food commodity value chains and the organization of food marketers,
- xiii. In collaboration with the County Sector responsible for environment, address threats to climate originating from agricultural food production;
- b. The County Sector responsible for housing will spearhead the amendment of the building code to provide for roof and wall water-harvesting and for application of land-saving agricultural technologies on buildings.
- c. The County Sector responsible for water will stop the wastage and leakage of water in presently installed water- lines and, in partnership with the Nairobi Water and Sewerage Company and the County Sector responsible for environment:



Promote water harvesting and conservation;

Development and implement projects to provide for large-scale water harvesting, treatment and water reservoirs in artificial lakes, dams and tanks;

- iii. In collaboration with National Environment Management Authority, clean Nairobi rivers and facilitate use of their waters, spearhead the investigation of measures to recycle waste water and use the underground water in the city;
- d. The County Sector responsible for urban planning will fast-tract and complete zoning of the city land to set aside land for agricultural food production and to set aside land to evenly distribute food distribution points in the city;

- e. The County Sector responsible for trade and markets will;
 - i. restructure, rehabilitate and redesign existing markets and other food distribution include the missing stalls, platforms, departments for different produce and other necessary structures
 - ii. in collaboration with the County Sector responsible for physical planning, provide new food distributions points (mobile or fixed) in under-served areas of the city;
 - iii. provide incentives for private sector players to install food stores and food cold-rooms.
- f. The County Sector responsible for finance will;
 - i. coordinate activities to reduce the cost of approvals for food processing plants;
 - ii. establish a one-stop approval window.
 - iii. In collaboration with the County Sector responsible for trade, consider and approve incentives for establishment of food processing plants.
- g. The Nairobi City County Food Board is hereby established and will be institutionalized through county legislation. It will comprise members drawn from the Sectors responsible for food and agriculture, public health, marketing, environment, trade, planning as well as private sector members drawn from consumer organizations and development partners. The convener and host will be the sector responsible for food and agriculture. The functions of the Board will be as follows:
 - i. To give directions and make decisions on food waste management, food recovery programme, and subsidized food for the poor;
 - ii. To build the capacity of food consumer organizations;
 - iii. To receive food system and food map monitoring reports and advise the county government on policy options for corrective actions;
- h. The Food Liaison Advisory Group (FLAG) is hereby established and will be institutionalized through county legislation. It will be a multi-stakeholder platform comprising members drawn from the food system components of production, distribution, processing and consumption as well as public sectors, civil society organizations, academic institutions and development partners. Its meetings and activities will be facilitated by the Sector responsible for food and agriculture and its outputs will be transmitted to the county government through the same Sector. The FLAG will represent the voices of the various food system actors. The FLAG members will be a key resource for flagging potential food system related problems and advising decision makers at the county, and through the county government, the national levels on integrated approaches that permit sustainable food system planning.
- **3.** The Joint Committee on Nairobi City Food System is hereby established and will be institutionalized in the Intergovernmental Relations Act, No. 2 of 2012, as provided in section 23 of that Act. It will comprise county executive committee members responsible for food and agriculture from Nairobi City and from the county governments regularly supplying food to Nairobi, a representative of Ministry of Agriculture, Livestock,

Fisheries and Irrigation, and a representative of the Council of County Governors. The convener of the Joint Committee will be by the Nairobi City county executive responsible for food and agriculture. The mandate of the Joint Committee will be to study, discuss and reach mutual agreement on all matters pertaining to the smooth, efficient and sustainable supply and distribution of food to Nairobi City.

4. The Steering Committee for the Food System Strategy is hereby established and will comprise the directors of all the Nairobi City County directorates in charge of implementing aspects of the Strategy. The secretariat for Steering Committee will be provided by the directorate responsible for Nairobi City food system in the county sector responsible for food and agriculture. The Steering Committee will meet quarterly coordinate the actors in the implementation of workplans for putting into action the Strategy in the responsible sectors.

5. The private sector

The private sector will drive and implement the food system under the Strategy, i.e. producing, distributing, processing and consuming food and, under the FLAG, influence government to create the environment necessary for sustainability of their ventures.

6. The civil society organizations and community-based organizations

Civil society organizations, including consumer organizations, Mazingira Institute, Concern Worldwide, Oxfam-GB, Kenya Red Cross Society and others will advocate for good food governance and will support the implementation of the Strategy in the areas of their special interests.

7. The development partners

Development partners will be welcome to support the implementation of the Strategy with finances and through supporting programmes and projects that are provided in the Strategy.

7.0 Legal Frame work

The current applicable national and county legislation will be applied in the implementation of the Strategy. These are the crops, public health, trade, fisheries, and animal legislation in *Box* 7.

The following development will be made to county legislation:

- 1. The Nairobi City County Solid Waste Management Act will be amended to provide for food recovery.
- 2. Legislation will be enacted by the county assembly to provide the legal framework for all directions and strategies of legal nature that are not implementable through existing legislation, including the Food Board, the Food Liaison Advisory Group, food contingency plans and food recovery.

8.0 Monitoring and Evaluation Frame work

А monitoring and evaluation (M & E) plan will be developed and implemented by the County Sector responsible for food and agriculture. It will be used for tracking activities, outputs, outcomes and impacts in the implementation of the Strategy.

Baseline survey will be conducted where data is missing. Monitoring will be continuous and will be reported on a quarterly basis while evaluation will be done

Box 7: Legislation to implement food system Strategy

- 1. Animal Diseases Act, Cap 364
- 2. Crops Act, No. 16 of 2013
- 3. Dairy Industry Act
- 4. Environmental Management & Coordination Act, No. 8 of 1999
- 5. Fertilizers and Animal Foodstuffs Act, Cap 345
- 6. Fisheries Management and Development Act, No 35 of 2016
- 7. Food, Drugs and Chemical Substances Act, Cap 254
- 8. Meat Control Act, Cap 356
- 9. Nairobi City County Abattoirs Act
- 10. Nairobi City County Solid Waste Management Act
- 11. Nairobi City County Urban Agriculture Promotion and Regulation Act
- 12. Pest Control Products Act, Cap 246
- 13. Physical Planning Act, Cap 286
- 14. Plant Protection Act, Cap 324
- 15. Public Health Act, Cap 242
- 16. Science, technology and Innovations Act, No. 28 of 2013
- 17. Standards Act, Cap 496
- 18. Water Act, No. 43 of 2016
- 19. Fisheries Management and Development Act, No. 35 of 2016

bi-annually. Regular planned assessments of the M&E system will be done in order to ensure that indicators are measuring what they are meant to, that data are generated according to standards, that data analysis and communication of results give the information needed by decision-makers, and that data management includes an assessment of overall data quality.

The M & E missions will comprise multisectoral and multi-stakeholder personnel facilitated by the County Sector responsible for food and agriculture. The M & E report will be submitted to the County Assembly after adoption in the County Executive Committee.

9.0 Implementation Matrix

The specific objectives were elaborated into outputs, activities and targets, with the roles of the leading implementing agency and collaborators spelt out in an implementation plan that is laid out in *Table 6*. The Strategy will cost Ksh 2,506,000,000 for the first year and Ksh 8,609,000,000 for the 5 years 2021-2025.

Table 6: Nairobi City County Food System Plan of Operation 2021 -2025

| SO1: Food Production Increased: | Year 1=KES 66 | 2,100 | ,000 | т | DTAL | FOR 5 YEAR | | - | |
|--|--|-------|----------------|----|------|------------------------|--------------------------|----------------------------------|--|
| Outputs and Activities | Targets/ Details | | Timeframe Yr 1 | | | Budget Yr | Budget 5 | Responsibility | |
| | | Q1 | Q2 | Q3 | Q4 | 1 In 000,000 KES | Yrs in 000,000 KES | Lead Agency | Collaborators |
| Output 1.1 Awareness programme on urban food production enhanced | | | | | | 30 | 156 | | |
| 1.1.1 Intensify extension and support services to households to build awareness on urban food production | Sensitization and awareness through mass media: Target 1 million farmers. | Х | х | х | x | 20 | 126 | Food Agriculture &Forestry | LUUHP, CIT, Media Houses, National Government |
| 1.1.2 Advocate for curricula change at all education levels to incorporate urban food production | Engage consultant to review curricula, conduct Advocacy fora with experts and stakeholders to fine-tune curricula | Х | x | x | | 10 | 30 | ESGS&Y | Food Agriculture &Forestry, MOALF Universities, TVET Research Institutions |
| Output 1.2 Programmes/projects and measures to improve | | | | | | | | | |
| the supply of water for agricultural use enhanced | | | | | | 218 | 1315 | | |
| 1.2.1 Engage relevant actors on reviewing urban planning and building protocols to integrate water harvesting for urban food production | Map out relevant stakeholders and create forum & online engagement mechanisms | х | x | х | x | 5 | 5 | NCWSC | LUUHP, CIT, Privat firms, Architects, Food Agriculture &Forestry, EEW&N |
| 1.2.2 Spearhead study and roll out recycling waste water for possible utilization in urban food production | Design water recycling project, Pilot project and roll out scaled up interventions | Х | х | Х | х | 100 | 300 | NCWSC | Food Agriculture &Forestry, NEMA, AWWDA, EEW&NI |
| 1.2.3 Engage relevant actors to increase regular water supply in the city for possible use in urban food production(Including creating lakes/dams, by runoff harvesting, stopping leakages in regular supply lines) | -Consultation meetings -Facilitate action plan for increasing water -support action plan to distribute water to farmers | Х | X | X | x | 50 | 210 | NCWSC | Food Agriculture &Forestry, NEMA, AWWDA, EEW&NF National Treasury |
| 1.2.4 Train communities and institutions on water harvesting and application to food production (e.g. Rain water harvesting, rrigation water conservation and ground water harvesting & aquifer recharge and water pollution control) | Target to rain 5,000 farmers | х | x | x | x | 10 | 50 | ESGS&Y | NCWSC, NEMA, AWWDA, Health Services, National Treasury, MOALFI |
| 1.2.5 Liaise with Nairobi Environment Management Authority for a programme to clean Nairobi rivers and Nairobi sewage with a view to using the water for agriculture | -consultative meetings -writing proposals and raising fund | | | x | x | 3 | 500 | NEMA | Food Agriculture &Forestry, NCWSC ,AWWDA, EEW&N National Treasury |
| 1.2.6 Assess the suitability of Nairobi ground water for agriculture and institute digging boreholes | -consultative meetings -Seismic mapping -water testing | | | х | х | 50 | 250 | EEW&NR | Food Agriculture &Forestry, NCWSC ,AWWDA, EEW&N |

| | -support communities to dig boreholes | | | | | | | | ational Treasury, MoWSI |
|--|---|---|---|---|---|-----|-----|----------------------------------|---|
| Output 1.3 Identification of agricultural land, its protection and preservation carried out | | | | | | 27 | 90 | | |
| 1.3.1 Liaise with relevant actors to identify and zone off spaces in the city suitable for agriculture | -Hold consultative meetings -map out areas and Gazette them. | х | Х | | | 20 | 60 | LUUHP (Survey and GIS) | FA&F, Residents' Associations |
| 1.3.2 Support interested communities to protect, preserve and utilize the zoned off spaces for food production | -Develop guidelines for community centered land protection and preservation Conduct community trainings on the same | x | x | X | x | 5 | 20 | Food Agriculture &Forestry | LUUHP, NEMA, MICNG |
| 1.3.3 Lobby institutions to reserve and utilize unused land on food production | -consultative Meetings | Х | Х | x | x | 1 | 5 | Food Agriculture &Forestry | LUUHP, EEW&NR |
| 1.3.4 Lobby individuals owning large tracts of land in Nairobi to utilize it for food production | -Consultative meetings with land owners. -Formulation of MOUs and framework of collaboration | х | Х | x | x | 1 | 5 | Food Agriculture &Forestry | LUUHP, EEW&NR, County Solicitor |
| Output 1.4 Standards for agricultural inputs established and enforced | | | | | | 9 | 19 | | |
| 1.4.1 Document information from farmers on substandard farm inputs to trace sources | -Engage consultant for study | х | х | x | Х | 5 | 0 | Food Agriculture &Forestry | MOALFI, LUUHP, PCPB, KVB,KALRO, Research Inst. |
| 1.4.3 Conduct public participation with farmers, sellers and other stakeholders on the issue of substandard inputs | -Public participation forums -Documentation of results | x | X | x | X | 2 | 10 | Food Agriculture &Forestry | MOALFI,LUUHP, PCPB, KVB, KEBS, Sub-county Admin, County Commissioner |
| 1.4.4 Hold meetings with relevant actors to discuss standards, solutions and enforcement measures | Meetings, workshops | Х | | x | | 1 | 5 | Food Agriculture &Forestry | Health services ,KEBS, NEMA, PCPB, KEPHIS |
| 1.4.5 Network with relevant actors to implement solutions and enforce standards | Meetings, workshops, formation of a network forum, inspection visits, information and research facilities sharing | X | X | x | x | 1 | 3 | Food Agriculture &Forestry | Health Services ,KEBS, NEMA, PCPB, KEPHIS, KARLO, Research institutions |
| Output 1.5 Appropriate food productivity improvement technologies promoted | | | | | | 131 | 466 | | |
| Crops development | | | | | | | | | |

| 1.5.1 Set up research and demonstration sites for high potential, space saving technologies for crops (especially | -Identification sites Setting out infrastructures | x | x | x | x | 6 | 26 | Food Agriculture | LUUHP,EEW&NR, Research =, |
|--|---|---|---|---|---|----|-----|----------------------------------|---|
| vegetables, herbs, spices, mushrooms | - Conducting out research | | | | | | 1 | &Forestry | Farmers, NG |
| 1.5.2 Train crop farmers on proper agronomy (tillage, seed, fertilizers, compost, lime and water, etc) to improve productivity | workshops, seminars, farm visits, field days | Х | x | x | x | 10 | 30 | Food Agriculture &Forestry | Research Inst, Sub- county Admin, private extensionists |
| 1.5.3 Support informal settlement farmers with starter kits for micro-gardening (e.g. multi-storey gardens, hanging gardens, moist beds , containers gardens, etc) | -Identification of beneficiaries -Training &, Exchange Visits, -Provision of starter kits on | X | X | X | X | 20 | 100 | Food Agriculture &Forestry | MOALFC, National Govt, Religious inst, Schools, Sub-county admin, Community Leaders |
| Livestock development | | | | | | | | | |
| 1.5.4 Provide training on best practice poultry keeping including feeds formulations | workshops, seminars, farm visits, field days | х | х | Х | Х | 5 | 25 | Food Agriculture &Forestry | Research Inst, Sub- county Admins |
| 1.5.5 Provide informal settlement youth and women groups with starter kits for poultry keeping (e.g. on Poultry Structure, chicks, feeds, feeders and drinkers, etc) | -Identification of beneficiaries - Training & exchange visits -Providing starter kits -Establish poultry slaughterhouses | | x | x | | 50 | 150 | Food Agriculture &Forestry | Religious inst, Schools, Interior and Sub county admIn, Community Leaders , Hatcheries Association |
| 1.5.6 Provide extension on best practice to dairy, small ruminants and pig farmers including feeds formulations | workshops, seminars, farm based extension, field days | x | х | x | X | 10 | 50 | | MOALFC, Research Inst, Sub-county Admin, Breeders |
| 1.5.7 Develop a poultry abattoir through PPP | -feasibility study, -selection of company,-MOU, -commissioning, -monitoring | | | x | × | 10 | 5 | | |
| Fisheries development | | | | | | | | | |
| 1.5.7 Provide training to fish farmers on best practice including feeds formulation | Workshops, seminars, farm visits, field days | Х | Х | x | Х | 5 | 25 | Food Agriculture &Forestry | Research Inst, Sub- county Admins, KEMFRI |
| 1.5.8 Support informal settlement farmers with fish keeping starter kits-e.g. tanks, fingerlings, feeds (especially youth and women groups) | Identification of beneficiaries Training & exchange visits, | Х | X | x | х | 10 | 50 | Food Agriculture &Forestry | Research Inst, Sub- county Admin, Fish hatcheries, KEMFRI |
| 1.5.9 Sensitize and train learning institutions with spare land on fish production with emphasis on best practices | workshops, seminars, farm visits, field days | X | X | x | X | 5 | 5 | Food Agriculture &Forestry | Research Inst, Learning Inst, Sub- county Admin |

| | | | | | 101 | 345 | | |
|---|--|---|--|---|--|--|--|--|
| -Develop tools for market information collection -Develop Nairobi Food Market Information System -Disseminate information | X | Х | x | X | 30 | 70 | CTC&C | Food Agriculture &Forestry, CIT, Research Inst, Learning Inst |
| workshops, seminars, exhibitions, groups trainings | Х | х | x | x | 3 | 15 | CTC&C | Food Agriculture &Forestry, Research Inst, Learning Inst, KEBS, KDB, Farmers, |
| Training on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilot | x | X | x | x | 5 | 25 | CTC&C | Food Agriculture &Forestry, Research Inst, Learning Inst, Farmers, Exporters, Input suppliers, financial inst |
| workshops, seminars, exhibitions, groups trainings, demonstrations | x | X | × | X | 10 | 50 | Food Agriculture &Forestry | CTC&C, Research Inst, Learning Inst, Exporters, equipment suppliers, financial inst |
| Training, workshops, seminars, exhibitions, groups, demonstrations | x | X | x | X | 3 | 15 | CTC&C | Food Agriculture &Forestry, Research Inst, Learning Inst, ESGS&Y, Exporters, Input suppliers, financial inst |
| -Capacity building -Develop reference system linking with appropriate credit institutions | х | X | x | x | 20 | 60 | CTC&C | Food Agriculture &Forestry, Research Inst, Learning Inst, Exporters, Input suppliers, financial institutions |
| Consultative meetings to design, Capacity building through training, workshops, seminars and implement a pilot | x | x | × | X | 30 | 110 | Food Agriculture &Forestry | CTC&C, Research Inst, Health Services, National Government |
| | collection -Develop Nairobi Food Market Information System -Disseminate information workshops, seminars, exhibitions, groups trainings Training on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilot workshops, seminars, exhibitions, groups trainings, demonstrations Training, workshops, seminars, exhibitions, groups, demonstrations -Capacity building Develop reference system linking with appropriate credit institutions Consultative meetings to design, Capacity building through training, workshops, | collection -Develop Nairobi Food Market Information System -Disseminate informationX | collection -Develop Nairobi Food Market Information System -Disseminate informationXXworkshops, seminars, exhibitions, groups trainingsXXTraining on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilotXXworkshops, seminars, exhibitions, groups trainings, demonstrationsXXXTraining, workshops, seminars, exhibitions, groups trainings, demonstrationsXXXTraining, workshops, seminars, exhibitions, groups, demonstrationsXXX-Capacity building linking with appropriate credit institutionsXXXConsultative meetings to design, Capacity building through training, workshops,XXX | collection -Develop Nairobi Food Market Information System -Disseminate informationImage: System NormationImage: System Normationworkshops, seminars, exhibitions, groups trainingsXXXTraining on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilotXXXworkshops, seminars, exhibitions, groups trainings, demonstrationsXXXXTraining, workshops, seminars, exhibitions, groups trainings, demonstrationsXXXXCapacity building Develop reference system linking with appropriate credit institutionsXXXXConsultative meetings to design, Capacity building through training, workshops,XXXX | collection -Develop Nairobi Food Market Information System -Disseminate informationImage: System Image: System Norkshops, seminars, exhibitions, groups XXXXXTraining on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilotXXXXXworkshops, seminars, exhibitions, groups trainings, demonstrationsXXXXXTraining, workshops, seminars, exhibitions, groups training, demonstrationsXXXXXTraining, workshops, seminars, exhibitions, groups, demonstrationsXXXXX-Capacity building Develop reference system linking with appropriate credit institutionsXXXXXConsultative meetings to design, Capacity building through training, workshops,XXXXX | collection -Develop Nairobi Food Market Information System -Disseminate informationImage: Seminate informationImage: Seminate informationworkshops, seminars, exhibitions, groups trainingsXXXXX3Training on contract farming, identify risks and develop risk management plans, identify commodities for piloting and execute the pilotXXXXX5workshops, seminars, exhibitions, groups trainings, demonstrationsXXXXX10Training, workshops, seminars, exhibitions, groups trainings, demonstrationsXXXX3-Capacity building linking with appropriate credit institutionsXXXX20Consultative meetings to design, Capacity building through training, workshops,XXXX30 | Image: Constraint of the second sec | Image: Construction of the second s |

| Output 1.7 Performance of extension delivery improved | | | | | | 146.1 | 7 77.5 | | |
|--|---|---|---|---|---|-------|-----------|----------------------------------|---|
| 1.7.1 Conduct study to firm up capacity building needs for different categories of farmers in different localities | -engage consultant for the study-Publish the findings | х | x | | | | 2 | Food Agriculture &Forestry | CIT, Research Inst, Learning Inst, Farmers, financial institutions |
| 1.7.2 Improve skills of current extension staff to match identified farmer capacity building needs | -Training needs assessment - conduct skills improvement interventions | Х | Х | x | х | 10 | 50 | Food Agriculture &Forestry | Human Resource, Research Inst, Learning Inst, Treasury, FAO |
| 1.7.3 Employ additional staff to cover existing extension staffing gap including nutrition experts | Capacity gap analysis, develop job description and specifications | | X | | | 20 | 150 | Food Agriculture &Forestry | Human Resource, Treasury, CPSB, PSC |
| 1.7.4 Lobby for and implement motivation improvement for extension staff | workshops, study tours, exchange visits, petitions by County Assembly, budget lobbying and Review of staff development & scheme of service | | Х | x | Х | 15 | 75 | Food Agriculture &Forestry | NCC Assembly, Human Resource, CPSB, Staff union |
| 1.7.5 Design and implement system for appraising and increasing field performance of extension staff | Review the existing performance assessment scheme, set targets based on appraisal template | х | | | | 0.1 | 0.5 | Human Resource | Food Agriculture &Forestry, NCC Assembly, CPSB, Staff union |
| 1.7.6 Develop and intensively utilize innovative digital extension technology | -TV programs, radio programs, print media content, social networks based extension, interactive mobile telephony, | x | x | x | x | 100 | 500 | | |

SO2: STABLE FOOD SUPPLY/INCOMES ACHIEVED

Year 1=KES 607,000,000 TOTAL FOR 5 YEARS=KES2,818,500,000

| Outputs and Activities | Targets/ Details | Timeframe Yr 1 | | | | Budget Yr Budget 5 | | Responsibility | |
|--|--|----------------|----|----|----|------------------------|--------------------------|----------------|------------------------------------|
| | | Q1 | Q2 | Q3 | Q4 | 1 In 000,000 KES | Yrs in 000,000 KES | Lead Agency | Collaborators |
| Output 2.1 All-inclusive food distribution system put in place | | | | | | 450 | 2082 | | |
| 2.1.1 Conduct physical survey of the city for fair distribution of food markets as well as wholesale and retail outlets and define desired distribution system | Engage consultant for study | x | x | | | 5 | 5 | CTC&C | FA&F, LUUHP |
| 2.1.2 Conduct public participation for buy-in | Town hall meetings, social media, mass media | x | x | x | х | 12 | 24 | CTC&C | FA&F, LUUHP, Governor's PR unit |
| 2.1.3 Facilitate establishment of markets and retail outlets where non-existent and in underserved areas | Land buying and putting infrastructure | x | х | х | x | 300 | 1500 | CTC&C | FA&F, Forestry ,LUUHP |

| Open tendering process for the work | v | v | v | v | 100 | 500 | CTC&C | FA&F |
|---|--|---|---|---|--|--|---|---|
| | × | X | X | X | 100 | 500 | | |
| | | | | | | Δ | | |
| - | | | | | | | | |
| Conduct capacity building | | | | | | | | |
| | | | | | | | CTC&C | |
| Promote the integration of food marketing | | | | | | | | |
| | | | | | | | | |
| | Х | х | Х | Х | 30 | 50 | | FA&F, NG |
| -Design monitoring tool | | | | | | | CTC&C | FA&F, NG |
| | х | х | х | х | 3 | 3 | | , |
| | | | | | - | | | |
| | | | | | 133 | 622 | | |
| Duild conscituter sustamizing the ovicting | | | | | 155 | 022 | CTC ⁹ C | FA&F, NG, NCC |
| | | | | | | | CICAC | |
| policies& legal framework | | | | | | _ | | Assembly |
| | X | Х | | | 2 | 7 | | |
| Consultant to formulate a legal document to | | | | | | | CTC&C | NG, NCC Assembly |
| guide removal of bottlenecks | | | | | | | | County Solicitor |
| | x | х | х | | 7 | 7 | | |
| Consultant to formulate a legal document to | | | | | | | CTC&C | FA&F, NCC |
| 5 | | | | | | | creac | Assembly, County |
| guide standards & traceability | vv | | | | 2 | 4 | | Solicitor NG, KBS |
| | ~~ | | | | 2 | 4 | 0700.0 | , |
| | | | | | | _ | CIC&C | NCC Assembly |
| | | | Х | Х | 2 | 4 | | |
| Install one-stop online approval system | | | | | | | CTC&C | FA&F, CIT |
| | | | Х | Х | 20 | 100 | | |
| Incentives through Build Operate Transfer | | | | | | | CTC&C | FA&F,NG |
| (BOT) Model | | | | | | | | |
| | | | х | х | 100 | 500 | | |
| | | | | | | | | |
| | | | | | 24 | 114 | | |
| -Sensitize the processors | | | | | | 114 | FA&F | CTC&C, NCC |
| | | | | | | | | Assembly, micro- |
| | V | | v | v | 10 | 50 | | |
| | × | X | X | X | 10 | 50 | 0700.0 | finance Inst, Banks |
| - | | | | | | | CIC&C | FA&F, NG, |
| posters, civic forums | | | | | | | | Government & NC |
| | х | Х | х | х | 12 | 60 | | County Assembly |
| Organize quality assurance training | | | | | | | CTC&C | FA&F, NG |
| | x | | | х | 2 | 4 | | |
| | -Design mkt management model, policy & guidelines on how to run the markets Conduct capacity building Promote the integration of food marketing -Design monitoring tool Build capacity for customizing the existing policies& legal framework Consultant to formulate a legal document to guide removal of bottlenecks Consultant to formulate a legal document to guide standards & traceability Study on costs, distribution chain, and possible waivers Install one-stop online approval system Incentives through Build Operate Transfer | XX-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity buildingPromote the integration of food marketingX-Design monitoring toolX-Design monitoring toolXBuild capacity for customizing the existing policies& legal frameworkXConsultant to formulate a legal document to guide removal of bottlenecksXConsultant to formulate a legal document to guide standards & traceabilityXXStudy on costs, distribution chain, and possible waiversXXIncentives through Build Operate Transfer (BOT) ModelIncentives the processors involve them in zoning -Establish grant mechanismXThrough education facilities, social media, posters, civic forumsX | XXX-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity building-Promote the integration of food marketingXX-Design monitoring toolXX-Design monitoring toolXXBuild capacity for customizing the existing policies& legal framework-Consultant to formulate a legal document to guide removal of bottlenecksXXConsultant to formulate a legal document to guide standards & traceabilityStudy on costs, distribution chain, and possible waiversIncentives through Build Operate Transfer (BOT) ModelSensitize the processors havolve them in zoning -Establish grant mechanismXXOrganize quality assurance training | XXXX-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity buildingImage: Conduct capacity buildingPromote the integration of food marketingXX-Design monitoring toolXX-Design monitoring toolXXSuild capacity for customizing the existing policies& legal frameworkImage: Consultant to formulate a legal document to guide removal of bottlenecksXConsultant to formulate a legal document to guide standards & traceabilityXXStudy on costs, distribution chain, and possible waiversXXIncentives through Build Operate Transfer (BOT) ModelXXSensitize the processors involve them in zoning -Establish grant mechanismXXOrganize quality assurance trainingXXX | XXXXX-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity buildingIIIPromote the integration of food marketingXXXX-Design monitoring toolXXXX-Design monitoring toolXXXXBuild capacity for customizing the existing policies& legal frameworkIIIConsultant to formulate a legal document to guide removal of bottlenecksXXXConsultant to formulate a legal document to guide standards & traceabilityXXXStudy on costs, distribution chain, and possible waiversXXXInstall one-stop online approval systemIXXSensitize the processors -Involve them in zoning -Establish grant mechanismXXXOrganize quality assurance trainingXXXX | NoteXXXXXXXX100-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity building | XXXXXX100500-Design mkt management model, policy & guidelines on how to run the markets Conduct capacity building | xxx |

SO3: FOOD LOSSES REDUCED

Year 1=KES 289,000,000 TOTAL FOR 5 YEARS=644,500,000

| Outputs and Activities | Targets/ Details | Time | frame | Yr 1 | | Budget Yr | Budget 5 | Responsibility | |
|---|---|------|-------|------|----|------------------------|--------------------------|----------------------------------|---------------------------------------|
| | | Q1 | Q2 | Q3 | Q4 | 1 In 000,000 KES | Yrs in 000,000 KES | Lead Agency | Collaborators |
| Output 3.1 Markets infrastructure improved | | | | | | 211.5 | 529.5 | | |
| 3.1.1 Study the feasibility of incorporating cold storage and on- | Engage consultant for feasibility study | | | | | | | Food | LUUHP |
| site food processing on-site in the major markets | | x | х | | | 4 | 4 | Agriculture &Forestry | |
| 3.1.2 Identify entrepreneurs interested in setting and running the System | Open bid tendering | x | x | x | x | 3 | 3 | CTC&C | Food Agriculture &Forestry |
| 3.1.3 Provide lease, licensing and technical support to the entrepreneurs | 3 no of capacity building workshop per quarter | x | x | x | x | 4.5 | 22.5 | CTC&C | Food Agriculture &Forestry |
| 3.1.4 Upgrade informal markets with infrastructure such as stalls, platforms, water, hygiene and trash management | Upgrade 2 number of informal markets | x | x | x | x | 200 | 500 | CTC&C | Food Agriculture &Forestry, HS |
| Output 3.2 Food waste in markets minimized | | | | | | 46 | 66 | | |
| 3.2.1 Study and design improved System for managing the food markets to minimize waste | Conduct 1 no feasibility study | | | x | x | 30 | 30 | LUUHP | Food Agriculture &Forestry, EEW&NR |
| 3.2.2 Conduct public participation on best protocols for managing the markets | Conduct 4 no of public participation events | | | x | х | 4 | 10 | CTC&C | Food Agriculture &Forestry |
| 3.2.3 Manage solid waste sorting and hygiene facilities | Ongoing throughout | х | Х | Х | Х | 4 | 10 | CTC&C | HS |
| 3.2.4 Institute a process for forming market management committees | Formulate a policy for managing the markets | | | x | x | 5 | 5 | CTC&C | Food Agriculture &Forestry |
| 3.2.5 Provide training and start off assistance to the market management committees | Conduct 4 no of training activities | | | | x | 2 | 6 | CTC&C | Food Agriculture &Forestry |
| 3.2.6 Monitor performance of the market management committees and provide backup | Ongoing throughout | | | | x | 1 | 5 | CTC&C | Food Agriculture &Forestry |
| Output 3.3 Recovery/recycling of food waste promoted | | | | | | 31.5 | 49 | | |
| 3.3.1 Research on food waste recycling appropriate for Nairobi situation | Initial study and continuous for information update | x | x | | | 4 | 6 | Food Agriculture &Forestry | EEW&NR |
| 3.3.2 Carry out promotional campaigns and other sensitization of consumers on food waste recovery/cycling | Conduct 12 no awareness campaigns (mass media) | | | x | x | 20 | 20 | Food Agriculture &Forestry | EEW&NR |
| 3.3.3 Identify entrepreneurs interested in food waste recycling | EOI, Request for proposals, evaluation and award | | | x | x | 3 | 5 | Food Agriculture &Forestry | EEW&NR, CTC&C |
| 3.3.4 Provide lease, licensing and technical support to entrepreneurs interested in food recycling | 3 no trainings/quarter and follow-up | | | x | x | 4.5 | 18 | Food Agriculture &Forestry | EEW&NR, CTC&C |

SO4: CONSUMER WELFARE ENSURED

Year 1=KES 719,500,000 TOTAL FOR 5 YEARS=1,823,000,000

| Outputs and Activities | Targets/ Details | Time | eframe | Yr 1 | | Budget Yr | Budget 5 | Responsibility | |
|--|--|------|--------|--------|--------|----------------|--------------------------|------------------------------------|---|
| | | | | | | 1 In | Yrs in 000,000 KES | Lead Agency | Collaborators |
| | | Q1 | Q2 | Q3 | Q4 | 000,000 KES | | | |
| Output 4.1 Food security safety-net programmes for vulnerable populations instituted and implementation of County Nutrition Action Plan enhanced | | | | | | 66.5 | 253 | | |
| 4.1.1 Document numbers and locations of the food vulnerable city populations and classify vulnerability levels | Contract Census by KNBS | x | х | | | 20 | 80 | Social services | Food Agriculture &Forestry |
| 4.1.2 Design food contingency plan for vulnerable population | Develop food contingency plan for vulnerable population | ~ | × | | D, | 3 | 3 | Food, Agriculture & Forestry | Disaster Management Office & Social services, County Nutrition Office |
| 4.1.3 Conduct continuous food and nutrition monitoring in accordance with the contingency plan | - consultant to install data - maintain database | × | | | | 3.5 | 18 | Food, Agriculture & Forestry | ICT sector |
| | -Revise surveillance tool | x | | | | 1 | 2 | Food, Agriculture & Forestry | County Nutrition Office |
| | food security and nutrition security surveillance | х | Х | Х | X | 3 | 15 | Food, Agriculture & Forestry | County Nutrition Office |
| 4.1.4 Implement the response programmes according to the contingency plan | Procure and stockpile food and nutrition relief kits | х | х | X | X | 9 | 20 | County Disaster Office | Food, Agriculture & Forestry,private sector |
| 4.1.5 Lobby for riparian and forests, parks, and other open spaces to be managed by urban poor for environmentally friendly food production | - stakeholder meetings - Recruit beneficiaries | x | x x | X X | X X | 2 5 | 10 5 | Food, Agriculture & Forestry | Lands office, urban planning office, roads office, water office, environment, schools and KFS |
| 4.1.6 Harness waste food from export companies to feed the poor | -MOUs with export companies -activate collection, processing and distribution | х | х | х | х | 20 | 100 | | |
| Output 4.2 Safe food and good nutrition efforts supported | | | | | | 441 | 1555 | | |
| 4.2.1 Set up county food safety laboratories | -Identify laboratories, build capacities, manage | x | X | x | x | 300 | 1000 | Health Sector | County Veterinary Services, Fisheries Services, Veterinary Laboratories, National Public Health Laboratory, development |

| | | | | | | | | | partners |
|---|---|---|---|---|----|----|-----|---|---|
| 4.2.2 Conduct routine monitoring of food system on food safety issues | -Routine food safety surveillance | x | x | x | x | 20 | 100 | Health Sector | County Veterinary Services, development partners |
| 4.2.3 Conduct consumer public awareness on food safety and good nutrition | Carry out mass media public health campaign | | Х | Ċ | × | 10 | 50 | Health Sector | County Veterinary Services, development partners |
| 4.2.4 Improve capacity of human resources to provide community training on health, food safety and good nutrition | Train and sensitize 7700 persons | x | × | x | ×́ | 15 | 30 | Health Sector | County Veterinary Services, development partners |
| 4.2.5 Appoint optimal number of food safety inspectors | -36 new food safety inspectors | × | x | | | 31 | 160 | Health Sector, County Veterinary Services, County Fisheries Services | Health Sector, County Veterinary Services, County Fisheries Services |
| 4.2.6 Facilitate safety inspectors on improved enforcement of hygiene, food safety measures and quality standards | Training and equipping 350 food safety inspectors | x | x | x | x | 35 | 165 | Health Sector, County Veterinary Services, County Fisheries Services | Health Sector, County Veterinary Services, County Fisheries Services |
| 4.2.7 Conduct regular meetings on food standards and safety with other counties supplying food to Nairobi | 3 initial meeting and 1 annual meeting of joint committee | x | х | Х | Х | 30 | 50 | Food, Agriculture & Forestry | Council of Governors, Health Sector |
| Output 4.3 Food consumer rights organizations supported | | | | | | 12 | 15 | | |
| 4.3.1 Sensitize stakeholders in the food system on importance of consumer rights organizations | Meetings with stakeholders, media campaigns | х | х | Х | Х | 10 | 10 | Food, Agriculture & Forestry | Consumer organizations |
| 4.3.2 Conduct empowerment of consumers to organize into rights organizations and lobby their rights | Network with CBOs, NGOs to carry out empowerment | | Х | Х | Х | 2 | 5 | Food, Agriculture & Forestry | Consumer organizations |

| SO5: STRATEGY IMPLEMENTATION MANAGED EFFECTIVELY | Year 1 | .=KES | 228, | 500,0 | 00 | TOTAL FO | R 5 YEARS | =204,250,000 |) |
|--|---|-------|-------------|-------|----|------------------------|--------------------------|----------------------------|--|
| Outputs and Activities | Targets/ Details | Time | frame | Yr 1 | | Budget Yr | Budget 5 | | sponsibility |
| | - | | 01 02 03 04 | | | 1 In 000,000 KES | Yrs in 000,000 KES | Lead Agency | Collaborators |
| 5.1 Operational Secretariat Established and working | | | | | | 200 | 100 | | |
| 5.1.1 Formalize the existing secretariat and identify key operational officers | Monthly meetings of the Secretariat Officers | x | | | | 0 | | Food System Secretariat | NCC Assembly Governor's Office |
| 5.1.1 Establish a fully equipped secretariat premises | Offices, office systems, and equipment in place | x | x | | | 100 | | Food System Secretariat | NCC/FAO/ Partners |
| 5.1.2 Recruit requisite secretariat staff | -Officers deployed to the secretariat & new ones hired -recruitment charge | x | x | | | 2 | | Food System Secretariat | NCC/Partners |
| 5.1.3 Formalize relations with partners supporting the programme operations | Partnerships for operational support developed | | x | x | | 0 | | Food System Secretariat | Partners Identfied |
| 5.1.4 Secretariat management operating effectively | -salaries, technical assistance, operational costs | х | х | х | x | 98 | 100 | | |
| 5.2: Coordination and oversight facilitated | | | | | | 20.45 | 76.25 | | |
| 5.2.1 Set up and operationalize NCC Food System Steering Committee | 4 quarterly meetings of Steering Committee | х | х | х | х | 0.2 | 1.0 | Food System Secretariat | NCC Assembly Governor's Office |
| 5.2.2 Facilitate meetings to activate and operationalize the Food Liaison Advisory Group | 4 quarterly meetings | х | х | х | х | 1.5 | 7.5 | Food System Secretariat | NCC Assembly Governor's office |
| 5.2.3 Facilitate meetings to activate and operationalize the Joint Committee on Nairobi Food System | Convene 1 annual 3-day meeting of Joint Committee | | х | | | 10 | 50 | Food System Secretariat | NCC Assembly Governor's office |
| | Contract consultant to develop or review legislation to establish Food Board | х | x | | | 2.5 | 2.5 | Food System Secretariat | Governor's office, NCC Assembly |
| 5.2.4 Facilitate meetings to activate the proposed Nairobi City County Food Board | Enact legislation to establish Food Board | | х | x | | 2.5 | 2.5 | Food System Secretariat | HS, LUUHP ,CTC&C, NCC Assembly |
| | Convene quarterly meetings of Food Board | | | x | x | 0.5 | 4.5 | Food System Secretariat | Governor's Office, National Government |
| | 2 consultative meetings to deliberate formation of the Committee | x | | | | 0.75 | 0.75 | Food System Secretariat | IGRTC, Governor's Office, County Secretary, IGR&CEC office |
| 5.2.5 Facilitate meetings of Inter-Governmental Relations Committee on Nairobi City Food System | -Enact regulations to establish the Committee under Intergovernmental relations Act , - facilitate meetings | x | x | x | x | 2.5 | 0 7.5 | Food System Secretariat | IGRTC, Governor's Office, County Secretary, Intergovernmental relations &CEC office |

| Output 5.3: Monitoring and Evaluation System developed and in use | | | | | 8 | 28 | | |
|---|---|---|-----|------|---------|---------|------------------------------------|----------------------------------|
| 5.3.1 Design the M&E System | Engage consultant to design the M&E System | x | | | 3 | 3 | Food System Secretariat | Finance and Economic Planning |
| 5.3.2 Adopt and apply the ME system | Formation of M&E Team and carrying out M&E missions | | x | x | 5, | 20 | Food, Agriculture & Forestry | Finance and economic planning |
| GRAND TOTAL IN KES MILLIONS | | | | | 2,506.1 | 8,608.7 | | |
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