MUFPP MONITORING FRAMEWORK PILOT CITIES PROJECT

NAIROBI CITY COUNTY CASE STUDY REPORT - SEPTEMBER 2019

MUFPP Monitoring Framework Pilot Cities Project

Nairobi City County Case Study Report

Acknowledgements

Foreword

It is with great pleasure that we present this report. It is a culmination six months of monitoring the implementation of our obligation under the Milan Urban Food Policy Pact. We assented to this treaty in 2016, having joined other cities in acknowledging that we have to assure our residents of adequate, safe, nutritious and affordable food in a sustainable manner while protecting the interests of our vulnerable members.

The indicator monitoring project has been both a self-evaluation and learning exercise. The twelve indicators which we chose to monitor confirmed to us and to our partners cities that Nairobi City is on the right track in achieving the goals of Milan Urban Food Policy Pact. We have in place the required public policies, legislation and programmes. We have the required structures within the city government. We have the required public and private sector networks that a food system requires.

Nevertheless, Nairobi City demonstrated through the exercise that we have some gaps in implementation of some of these policies, legislation and programmes. Our food is still not properly affordable to all our residents, and a surveillance system for food safety has a lot of room for improvement. Our support system for food-poor and other vulnerable persons is still being strengthened and a significant proportion of children under 18 years of age still need feeding at school. And our food waste-management is still not well developed to provide for recycling of such waste into commercial uses such as organic fertilizers or animal feeds and food recovery for reuse. We welcome these self-evaluation results which we will continue addressing.

Nairobi City will continue implementing the Milan Urban Food Policy Pact and also carrying out the monitoring of the indicators so that we know where we are and what remains to be done to achieving food security for residents. We realize that we need to form a coordinating structure such as a steering committee that will harness the efforts of all our departments toward achieving the objectives of the Milan Urban Food Policy Pact. We welcome partnerships that will hasten the achievements of this objective.

In conclusion Nairobi City is greatly thankful to Resource Centre for Urban Agriculture and Food Security for facilitating the project and the Secretariat of the Milan Urban Food Policy Pact for continuously coordinating our cities toward achieving the goals of the treaty.

Asanteni Sana

MR LEBOO OLE MORINTAT, OGW
AG. COUNTY SECRETARY
NAIROBI CITY COUNTY GOVERNMENT

Contents

1.0 Introduction

This is the report of a project implemented in Nairobi City whose objective is to pilot the use of indicators for the Milan Urban Food Policy Pact Monitoring Framework. The indicators have been developed to track progress in the implementation of the Milan Urban Food Policy Pact. Out of the 44 indicators in the monitoring framework, Nairobi City piloted the use of 12. The project was implemented between April to September 2019.

1.1 Purpose

The purpose of this report is to share the experience and learning from the pilot project in Nairobi and to encourage other cities to start the use of the monitoring framework. It provides lessons and guidelines on how to make good use of the framework even if resources are limited. It shares some highlights or 'Top Tips' for other cities.

1.2 Background

Nairobi City is one of the 47 counties in Kenya and also the capital of the republic. It has an estimated human population of five (5) million; a national census was carried out in August 2019 and the results are awaited any time. It has an area of 696.1 Km^2 which is largely used for commercial and residential premises and with a small area, of about 1,900 ha[1] under conventional agriculture. Urban agriculture technologies and the conventional agriculture are practiced by about 58,000[2] farm-families who are able to produce 1% to 18% of the city's needs in food items, depending on the commodity. The rest of the food needs are met through trade with other counties and, to a small extent, imports from other countries.

Around 29%[3] of Nairobi's population live in informal settlements; other authors estimate the population as over 50%[4]. The level of food insecurity is high in the informal settlements as a result of low incomes and relatively high and fluctuating food prices[5]

The key food policy issues in Nairobi include food governance, social and economic equity, food safety and the environment. The city county government has made efforts to organize its food governance since the transitioning of government functions to devolved units 2013[6]. The city has a department of Food, Agriculture and Forestry which is responsible for promotion of urban food production, coordination of food governance in the city and which also partners with the department of Health Services to implement public health education related to food safety and nutrition and the regulation of the safety of food and feed. The city also

---

[1] Source: County Integrated Development Plan, 2018-2022, www.nairobi.go.ke.
[2] Source: County Integrated Development Plan, 2018-2022, www.nairobi.go.ke.
[3] Source: County Integrated Development Plan, 2018-2022, www.nairobi.go.ke.
[4] Emmanuel Mutisya and Masaru Yarime, (2011), Understanding the Grassroots Dynamics of Slums in Nairobi: The Dilemma of Kibera Informal Settlements, https://www.researchgate.net/.
[5] Kimani-Murage, et al, (2014), Vulnerability to Food Insecurity in Urban Slums: Experiences from Nairobi, Kenya, www.ncbi.nlm.nih.gov/pmc/
[6] Nairobi City County: Sectors, https://nairobi.go.ke/services/

has a department of Education, Youth and Social Services through which prevailing social and economic inequities that affect food access and consumption are addressed. The environment function as it relates to food production, distribution, consumption and waste management is also well integrated in the city county government with a department of Environment, Energy, Water and Sanitation.

A number of activities related to food are underway in Nairobi City as summarized here below:

a. In 2015 the city passed the Urban Agriculture Promotion and Regulation Act which is the governance instrument for promotion of urban food production. The city's farmers have been winning "best farmer" awards for several years[7], having won in 2011, 2012, 2015, 2016 and 2019.

b. In 2018, the city renamed its agriculture sector as the "Food, Agriculture and Forestry Sector" and at the same time created a "Food System and Sector Programme Directorate. This move achieved greater focus on food policy implementation. The Sector has a staff of about 250, including middle and high level management personnel and the field staff who provide extension, health and regulatory services in crops, livestock and other animals, fisheries and forestry and in supervision and coordination of the food system in all 17 sub-counties and 85 wards of the city. The city government encourages partnerships in promotion of urban agriculture with civil society actors, and with farmers themselves and their organizations.

c. Since 2017, the city, in collaboration with Food and Agriculture Organization of the United Nations, under the project "Developing Sustainable Food Systems for Urban Areas: Nairobi City County of 2016/2017, and its ongoing successor "Integrated actions for innovative food systems across rural-urban communities", has been developing the city's food system strategy, including holding discussions on forming a stakeholder platform which will assure the sustainability of its food system. The platform, also to be known as food liaison advisory group, will be private-sector driven and will be discussing food system issues and advise the government how to firming up the enabling food policy environment.

d. In 2017, the city adopted commenced implementation of the urban early warning and early action (UEWEA) initiative on food security. This is a food security surveillance tool that monitors indicators, i.e. equivalized incomes, stable income earners, food baskets afforded, children diarrhoea and shocks in the community against specific thresholds to determine whether it is at normal, alert, alarm or emergency levels. The results of the surveillance triggers implementation of a contingency plan with structured early actions at each of these food security levels. The UEWEA initiative is implemented in partnership with Concern Worldwide, Kenya Red Cross Society and Oxfam.

---

[7] Source: National Farmer Award, https://elgonkenya.com/national-farmers-award-2/ and National Farmers Awards Promoting Kenyan Agriculture, https://www.nestwebia.com/national-farmers-awards-promoting-kenyan-agriculture/.

e. Since 2018, Nairobi City is benefiting from linkages under her C40 Cities membership, which has volunteered a food system advisor.

f. Nairobi City has been developing its Food System Strategy since 2018 and the process is expected to be complete in the current financial year.

g. Nairobi City County became a signatory of the Milan Urban Food Policy Pact (MUFPP) in 2016, and is an elected member of its Executive Steering Committee.

Nairobi City was motivated to participate in the pilot project by her desire to learn the monitoring of the implementation of MUFPP through actual practice afforded by the project. The lessons learnt through the participation will be buttressed by sharing with and mentoring other like cities as well as looking for solutions to the identified gaps.

2.0 Indicator Selection

2.1 Selection of indicators

The indicators that would be monitored were selected by a team drawn from directors of departments of the city county government responsible for aspects of food policy under the leadership of the Food System and Sector Programmes Directorate. Also in the team, which was called Cross-Sectoral Consultative Group, were representatives of Resource Centre for Urban Agriculture and Food Security (RUAF) (through its member Mazingira Institute), FAO and C40 Cities Food System Advisor. The team used the "low-hanging fruit" approach in selecting indicators, where subject-matters in activities that are ongoing or have been implemented and which have easily available data and information were selected. The team also identified persons listed in *Annex 1* to gather or lead in gathering data and information on the selected indicators. It also formed a secretariat to draft the project report comprising Winfred Katumo (Nairobi City) as the Chair, Dr Diana Lee-Smith (RUAF / Mazingira Institute) as Secretary assisted by Sam Ikua (RUAF / Mazingira Institute), Dr Alice Ruto (Nairobi City County), Martha Chege (Nairobi City) and Rebeccah Wanjiru (FAO). The confirmation of the selected indicators was done by the County Executive Committee Member, equivalent to a county minister, responsible for Food, Agriculture and Forestry.

2.2 Challenges in selecting indicators

There were no challenges in selecting the indicators but some had to be adapted from the existing MUFPP wording for ease of monitoring. *Table 1* lays out the indicators that were selected, the reasons for their selecting and if any adaptation was done from the MUFPP wording.

Table 1: Indicators Selected in Nairobi

MUFPP Work Stream	Indicator selected	Reasons	Adaptation
Food governance	1. **Indicator 3**: Presence of a municipal urban food policy or strategy and / or action plans.	On-going activity; ease of access to data and information	None
Sustainable Diets and Nutrition	2. **Indicator 11**: Number of adults with Type 2 diabetes.	As above	The indicator monitored total number of cases and prevalence of all types of diabetes below and above 5 years of age.
	3. **Indicator 12**: Prevalence of stunting for children under 5 years.	As above	None
Social and Economic Equity	4. **Indicator 20**: Percentage of children and youth (under 18 years) benefitting from school feeding programmes.	As above	Report into disaggregated into schools under city county and national government responsibility.
	5. **Indicator 23**: Presence of food-related policies and targets with a specific focus on socially vulnerable groups.	Ease of access to data and information	None
Food Production	6. **Indicator 26**: Presence of municipal policies and regulations that allow and promote agriculture production and processing in the municipal area.	On-going activity; ease of access to data and information	None
	7. **Indicator 30**: Number of urban and peri-urban food producers that benefited from technical training and assistance in the past 12 months.	As above	None
Food Supply and Distribution	8. **Indicator 36**: Number of fresh fruit and vegetable outlets per 1,000 inhabitants (markets and shops) supported by the municipality.	Capacity to undertake limited survey	Indicator was amended to refer only to 2 specific administrative units, called Wards, owing to inadequate resources to carry out census in the whole city
	9. **Indicator 37**: Annual municipal investment in food markets or retail outlets providing fresh food to city residents, as a proportion of total (investment) budget.	On-going activity; ease of access to data and information	Report was extended to cover several years for comparison purposes; the specified of distinction on "fresh food market" was not considered.
	10. **Indicator 39**: Presence of food safety legislation and implementation and enforcement procedures.	As above	None
Food waste	11. **Indicator 33**: Annual proportion of urban organic waste collected that is re-used in agricultural production within or outside municipal boundaries.	Ease of access to data and information	None
	12. **Indicator 43**: Presence of policies or regulations that address food waste prevention, recovery and redistribution	On-going activity; ease of access to data and information	None

3.0 Working with the Indicators

3.1 Methodologies used for each indicator

Desk review of national and city county government records and reports, with limited journal literature review, was used to provide data and information for monitoring 11 of the 12 indicators. The findings were triangulated with review of published scientific and grey literature.

For Indicator 36, census was used to tally the number of fresh fruit and vegetable outlets. The census was facilitated by RUAF (through Mazingira Institute), including a cash support of Ksh 73,400 (about US$ 735) and was carried out by field extension officers from the Food, Agriculture and Forestry Sector, guided by trade and markets officers of the city and introduced to the study administrative Wards by community members; one ward, called Korogocho, was in a low income informal settlement and the other, called Karen, a high income neighbourhood.

3.2 Challenges faced in accessing and sharing data

Existing county and government databases had data only in very basic form, for example counts of visits to health facilities. The numbers of hospital visits by patients concerning diabetes in Indicator 11 had not been disaggregated between Type 1 and Type 2 diabetes. Stunting data was also not disaggregated by gender or space, for example low and high income areas. Better figures and analyses could be found from studies by researchers, although these did not necessarily address the same questions as the indicator requires.

There may be personnel security be risks in counting food outlets in low-income areas due to suspicion accorded to "outsiders" in general and the authorities in particular. Such risks were successfully avoided by the team by using field officers from the communities and local leaders as guides.

3.3 Stakeholders involved

The Indicators' work involved the cross-sectoral collaboration within the Nairobi City County government, with five sectors playing an active role in data gathering and analysis, i.e. Food, Agriculture and Forestry, Health Services, Education, Youth and Social Services, Environment, Energy, Water and Sanitation and Trade and Industrialization. The city county sector responsible for lands and urban planning participated in planning and supervising the project. RUAF participated in the project directly also through Mazingira Institute, a civil society organization.

4.0 Research Results

All the selected indicators were successfully monitored; *Table 2* summarized the findings.

Table 2: Summary of results of monitoring indicators

MUFPP Work Stream	Selected Indicator	Findings
Food governance	Indicator 3: Presence of a municipal urban food policy or strategy and / or action plans.	Nairobi City County Draft Food System Strategy was available and enactment is largely completed.
Sustainable Diets and Nutrition	Indicator 11: Prevalence of diabetes and number of people younger and older than 5 years living with diabetes.	The prevalence of diabetes was 0.15% for persons under 5 years of age (number = 954.) and 1.3% for persons older than 5 years (number = 56,310) in the 12 months from July 2018 to June 2019.
	Indicator 12: Prevalence of stunting for children under 5 years.	The prevalence of stunting for children under 5 years was 6.8% for the period July 2018 and June 2019.
Social and Economic Equity	Indicator 20: Percentage of children and youth (under 18 years) benefitting from school feeding programmes	The percentage of city county public-sector run Early Childhood Development (ECD) pupils benefiting from the programme was 100% (number ≈ 25,556). The percentage of children and youth (under 18 years) in public, alternative and private ECD and in primary and secondary schools benefitting from the feeding programmes was 19.59% (number ≈ 122,342)
	Indicator 23: Presence of food-related policies and targets with a specific focus on socially vulnerable groups.	Nairobi City has food-related policies and which has targets with a specific focus on socially vulnerable groups.
Food Production	Indicator 26: Presence of municipal policies and regulations that allow and promote agriculture production and processing in the municipal area.	Nairobi City has municipal policies and regulations that allow and promote agriculture production and processing in the municipal area.
	Indicator 30: Number of urban and peri-urban food producers that benefited from technical training and assistance in the past 12 months.	17,491 urban and peri-urban food producers, of which 65% were women, benefited from technical training and assistance in the 12 months from July 2018 to June 2019.
Food Supply and Distribution	Indicator 36: Number of fresh fruit and vegetable outlets per 1,000 inhabitants in a specified administrative Ward.	The number of fresh fruit and vegetable outlets per 1,000 inhabitants on 20-22 August 2019 was 86 in Korogocho Ward and 5.5 in Karen Ward.
	Indicator 37: Annual municipal investment in markets or retail outlets providing food to city residents, as a proportion of total (investment) budget.	The investment budget for markets is 2.3% of the total investment budget of the city county government in the current financial year. It was 2.4% in the 2018/19 financial year and 2.4% in the 2017/18 financial year.
	Indicator 39: Presence of food safety legislation and implementation and enforcement procedures.	Nairobi City has food safety legislation and also implementation and enforcement procedures for that legislation.
Food Waste	Indicator 33: Annual proportion of urban organic waste collected that is re-used in agricultural production within or outside municipal boundaries.	The annual proportion of urban organic waste that is re-used in agricultural production within or outside municipality is estimated as 0.6%.
	Indicator 43: Presence of policies or regulations that address food waste prevention, recovery and redistribution	Nairobi City has policies or regulations that address food waste prevention, recovery and redistribution.

4.1 Monitoring Indicator 3: Presence of Food Policy, Strategy or Action Plans

4.1.1 Research Outputs

A self-assessment was done on Indicator 3. Nairobi City County government is developing a food system strategy which is spearheaded by the Food, Agriculture and Forestry Sector and which at the level of Third Draft; it has passed through a technical draft, enrichment of the draft by other relevant departments of the city and further enrichment by the political arm of the city government. It is now awaiting open participation of the people after which is it will be submitted to city cabinet, called County Executive Committee, for final approval, a process that will take only a few months. This strategy is providing a pathway and measures for implementing the National Food and Nutrition Security Policy using the food system approach.

The draft strategy acknowledges that Nairobi City food system 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. It therefore has the vision of affordable, accessible, nutritious and safe food for all Nairobi City County residents. It will achieve four objectives, namely increase in food production in Nairobi urban area and in rural counties supplying food to the city, stability of food supply and incomes, reduction of food losses and good welfare of food consumers.

The conclusion of the strategy will be good evidence of implementation of Articles 1, 2, 3 and 4 of the MUFPP, subject to successful roll-out. Another self-assessment after one year will be necessary to monitor implementation of the strategy.

4.1.2 Suggestions on how to use the information

The food strategy development work is not complete and therefore the results of this monitoring activity will not be used until the work is complete.

4.1.3 Suggestions on dissemination of information

Dissemination of this aspect of monitoring Indicator 1 will not be done but will await completion of the enactment process of the strategy.

4.2 Monitoring Indicator 11: Diabetes

4.2.1 Research Outputs

Background

The indicator measures the number and percentage of people living with diabetes. It was based on routine service data collated monthly on the Kenya Health Information System (KHIS).

The indicator was adapted from the original (2018) version of the MUFPP framework and falls under the main thematic area of sustainable diets and nutrition, with a view of addressing non-communicable diseases associated with poor diets and obesity.

With consequent measurement of this indicator, Nairobi City County would be able to track the prevalence of this condition, and of the improved diet-related health outcomes within the city.

2. Methodology

Desk review was done for the quantitative data collected from the routine service provision from an approximately 87% of the expected 512 reporting facilities within Nairobi City County. For the purposes of this report, the data was ordered in quarters for the months between July 2018 and June 2019; age disaggregation of "under 5 years" and "over 5 years" was used. The data collation systems are changing and future reporting will shift to capture data on people living with Type 1 and Type 2 diabetes separately and disaggregated further by various age groups.

3. Research Results

The prevalence of diabetes was 0.15% of persons under 5 years of age, numbering 954 in the year under review, and was 1.3% for persons older than 5 years, numbering 56,310, as detailed in *Table 3*.

4. Discussion

The original indicator tracks Type 2 diabetes which is associated with unhealthy diets and nutrition and inadequate exercise. Under Articles 1 and 2 of the MUFPP, cities have committed to promote healthy diets and good nutrition, which interventions the indicator is supposed to monitor. The adapted indicator does not give a very effective method of accurately reflecting the portions of the population facing the highest burden of diabetes, especially the target Type 2 diabetes. However, with the expected rolling out on improved data capture tools for the reporting of non-communicable diseases, there will be better-disaggregated data so as to provide more information on the subject and to enable more targeted prevention and management measures for the general population, more so those in the low income residential areas.

Obtaining data in a useful form for the MUFPP Indicators format was the biggest challenge. Future monitoring should track improvements not only in disaggregating the data but also in confirming reduction of diet and nutrition related diseases as expected by the MUFPP.

4.2.2 Suggestions on how to use the information

The information generated by monitoring Indicator 11 should be used in informing the refining the KHIS to capture Type 2 diabetes in various age groups and different income levels. Subsequently, future monitoring will inform development and tracking of programmes for promoting healthy diets and nutrition that would achieve the reduction of Type 2 diabetes in the city.

4.2.3 Suggestions on dissemination of information

Information from monitoring Indicator 11 may be disseminated locally to stakeholders but uploading it in the city county official website and in the structured nutrition and diet campaigns by the government and partners in the community.

Table 3: Number of patients with and without diabetes in Nairobi City County health facilities (July 2018 to June 2019)

Period / Data	Population estimates of patients <5 yrs	Patients with diabetes <5 yrs	Prevalence of diabetes <5yrs	Population estimates of patients >5 yrs	Patients with diabetes >5 yrs	Prevalence of diabetes >5yrs
Jul to Sep 2018	156,451	297	0.19%	1,068,717	15,357	1.44%
Oct to Dec 2018	156,451	289	0.18%	1,068,717	13,197	1.24%
Jan to Mar 2019	162,385	162	0.1%	1,097,269	14,314	1.3%
Apr to Jun 2019	162,385	206	0.13%	1,097,269	13,442	1.23%
TOTAL	**637,672**	**954**	**Average 0.15%**	**4,331,972**	**56,310**	**Average 1.3%**

Source: *Population estimate was from the Kenya National Bureau of Statistics*

Notes: These figures reflect the 'workload' of the facilities whereby every visit to the health facility within the month is captured. Depending on the nature of the individual health status, varying review dates are given. Thus, one individual may only make one visit per month to their doctor, others two per month etc. Also to note, the data captured for those over 5 years is a combination of people on treatment for both Type 1 and Type 2 diabetes.

4.3 Monitoring Indicator 12: Children Stunting

4.3.1 Research Outputs

1. Background

The indicator measures the prevalence of stunting for children under the age of 5 years. Monitoring the indicator made use of the routine service data collated from the health facilities monthly on the Kenya Health Information System (KHIS).

The indicator shows the measure of poor linear growth among children under 5 years in accordance with the MUFPP framework indicators. It falls under the main thematic area of sustainable diets and nutrition, with a view of addressing diseases associated with poor diets under Article 1 and 2 of the MUFPP. Stunting is defined as the impaired growth and development of a child that is due to poor nutrition, recurrent or chronic infection. Stunting causes poor nutrient intake, absorption or utilization, and inadequate psychosocial stimulation. The unfortunate consequences of stunting occurring in the first 1,000 days (from conception to 2 years of age) include frequent illness, increased risk of chronic illness into adulthood, poor cognitive and educational performance, lost productivity and low adult wages[8].

2. Methodology

Desk review and analysis was carried out on the quantitative data that was collected from the routine service provision from an approximately 87% of the expected 512 reporting facilities within Nairobi City County in the months July 2018 to June 2019.

3. Research Results

From a general population of under-5-years of 637,672, the prevalence of stunting was reported to be 6.8%. *Figure 1* shows the proportion of children under 5 years attending the Child Welfare Clinic (CWC) and are stunted across the different sub-counties in Nairobi. The peaks were noted during months when there was *Malezi Bora* week in June and November. *Malezi Bora*, Swahili for 'Good Nurturing', is a public campaign by the Ministry of Health, UNICEF and other partners to protect children's health through encouraging routine use of local health centres. It targets expectant mothers and children under 5 years who are encouraged to make regular CWC visits besides seeking for medical care for an ailment or for routine immunization.

This current stunting rates of 6.8% can be compared with figures from a nutrition survey conducted in the slums of Nairobi County in 2017, where 26.1% of the children surveyed (n=840) were moderately stunted while 7.7% were severely stunted[9].

---

[8] World Health Organization (WHO), (2019), Stunting in a Nutshell,
https://www.who.int/nutrition/healthygrowthproj_stunted_videos/en/
[9] Concern Worldwide, (2017), Nutrition survey conducted in the slums of Nairobi County,
http://www.nutritionhealth.or.ke/wp-content/uploads/SMART%20Survey%20Reports/Nairobi%20County%20SMART%20Survey%20Report%20-%20May%202017.pdf
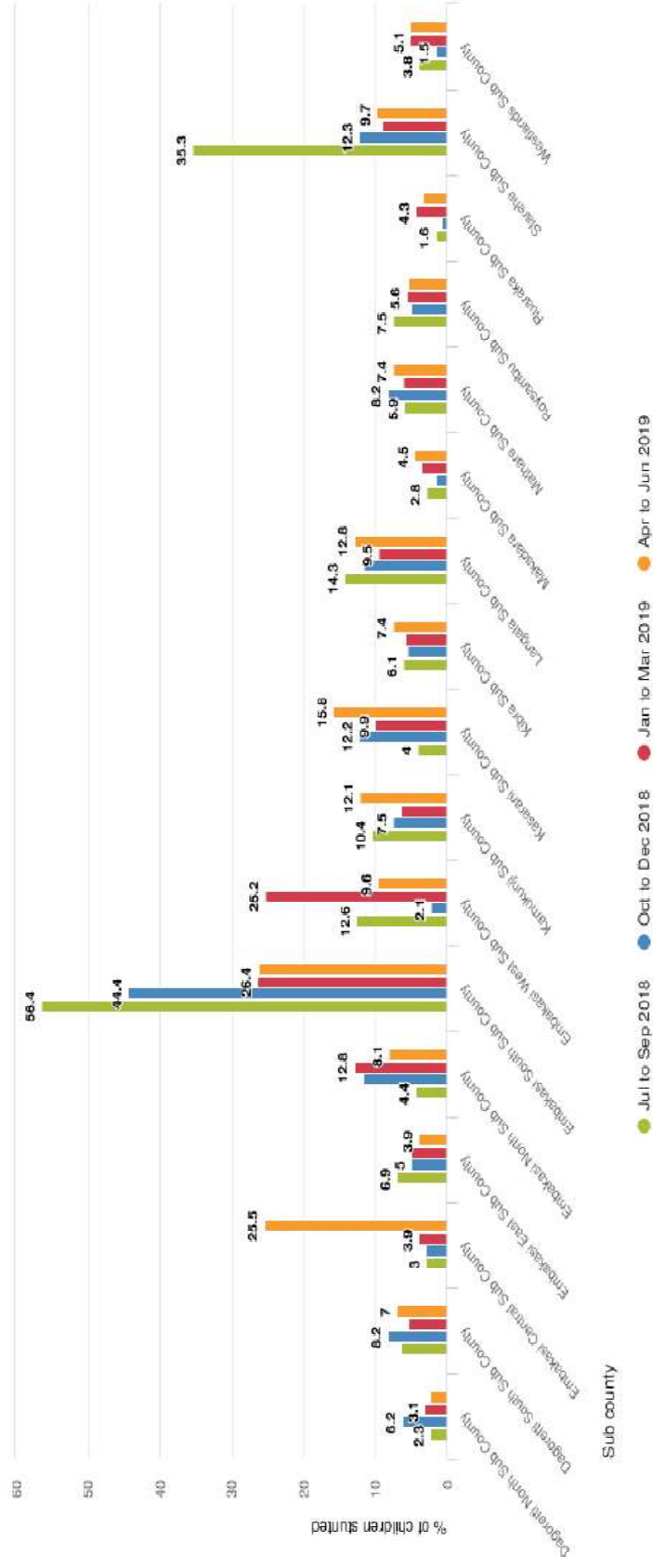
Fig. 1: Proportion of Under 5yrs attending CWC who are stunted

4. **Discussion**

Based on WHO classification that is used to assess the severity of malnutrition[10], the prevalence of stunting in children under 5 years of age of 6.8% is low. However, the stunting rates in the slums would be classified as moderate. This finding shows a reduction of stunting as compared with a baseline survey in 2014 which recorded a stunting of 33.5% (30.1-37.2 95% CI)[11]. The significant decline in the stunting rates can be attributed to the Process for Promoting Child Feeding (ProPAN) project which was implemented within the slums of Nairobi with support from Concern Worldwide[11].

There is need to continuously monitor this indicator as it is a good measure of chronic malnutrition which can only be corrected in the first two years of a child's life. The city county and partners can prioritize nutrition interventions for pregnant, lactating women and children below 2 years to address stunting. This could be through cross-sectoral collaborations to find out where the challenge with improving this rates lie between market food prices, nutritional practices in day care and early childhood development education (ECDE) centres or elsewhere. The data can also be collected through the school health program where children 3-5 years can be measured height which shall be compared with the standards. This will improve on the number of children assessed as currently children above 3 years do not attend the CWC for growth monitoring.

The weakness in monitoring of the indicator is its limited coverage as children above 3 years are not taken to the health facility regularly for nutrition assessment and support. There is also inadequate equipment for assessment of stunting, which could affect assessment of some children in some facilities. Inadequate nutrition staff also hampers support of interventions to address stunting[11].

4.3.2 Suggestions on how to use the information

The information generated through monitoring this indicator should be used to review and improve the existing data capture under KHIS toward covering all children under 5 years of age, whether still at home or commencing attendance to ECDE. The information should also be used to design and roll out interventions in subcounties with high standing rates in line with Nairobi's commitments under Articles 1 and 2 of MUFPP.

4.3.3 Suggestions on dissemination of information

For the purpose of reaching local stakeholders, the information from monitoring this indicator should be disseminated by uploading in the city county website and also through using mass media and in community engagement programmes.

---

[10] WHO, 2019, Global Database on Child Growth and Malnutrition
https://www.who.int/nutgrowthdb/about/introduction/en/index5.html
[11] Concern Worldwide – Kenya (2017). Nutrition survey conducted in the slums of Nairobi County.
http://www.nutritionhealth.or.ke/wp-content/uploads/SMART%20Survey%20Reports/Nairobi%20County%20SMART%20Survey%20Report%20-%20May%202017.pdf

4.4 Monitoring Indicator 20: School Feeding Programme

4.4.1 Research Outputs

1. Background

The indicator measures the proportion of children and youth (everyone under 18 years old) attending school who benefit from school feeding programme. This can be in form of cash, food transfers and other forms of social protection systems to provide vulnerable population with access to healthy food in line with Articles 1 and 2 of MUFPP.

Since 1980, the Ministry of Education jointly with lead stakeholders like World Food Programme (WFP) and Feed the Child (FTC) have implemented school meal programmes targeting the most food insecure districts with the lowest enrolment and completion rates and high gender disparities – including all primary schools in the marginalized arid and semi-arid lands in Kenya and the informal settlements of Nairobi City.

The Constitution of Kenya, 2010, in Articles 185(2), 186(1) and 187(2) distributed functions between the National and County Governments. The national government is mandated to oversee primary and secondary education, develop educational policies, curriculum, maintain standards and examinations as well as training and capacity building of personnel, while the county governments are mandated to oversee pre-primary education and child-care facilities. It is against this backdrop that the national government took over the management of primary schools in Nairobi City County, a function previously held by the Nairobi City Council.

From 2018, Nairobi City County fully took up its constitutional mandate by providing free pre-primary education, including a feeding programme, for all the learners in her 230 ECD centres. The situation is however different in primary schools and private ECD centres. Before they withdrew their school feeding programme in 2018/2019, both WFP and FTC were feeding over 140,000 primary school children in over 166 public and non-formal primary schools in Nairobi. The Ministry of Education had promised to take up the feeding program which however has not yet taken off and this leaves close to 200, 000 vulnerable pupils in pre-primary and primary schools without reliable nutritious meals while in school.

2. Methodology

Desk review and analysis was carried out on the quantitative data collected from the Education, Youth and Social Services Sector in Nairobi City County Government and submitted by the 17 sub-county education officers and collaborated with data from the Ministry of education, WFP and FTC.

3. Research Results

There is approximately 150,000 pre-primary school going children in Nairobi County. Of these, 25,556 are in Nairobi City County facilities and benefit from free school

feeding programme. The rest are in private and complimentary schools with unverifiable feeding programmes.

There are 377,626[12] primary school going children in the city (public, private and complimentary) and all these are not under any known feeding programme.

Secondary school students, numbering about 96,786 in both public and private schools (Ministry of Education Term 1 2019) are under feeding programmes provided by their respective schools.

Therefore the percentage of all children and youth under 18 years in public, alternative and private ECD, and in primary and secondary schools benefitting from the feeding programmes is 19.59% and are approximately 122,342 against a total of 624,412.

There are over 200,000 vulnerable school going children in Nairobi county who are in dire need of school feeding initiative.

4. Discussion

School feeding programs help to get children into school and keep them there, through enhancing enrolment and reducing absenteeism; the programs contribute to learning, through avoiding hunger and enhancing cognitive skills and their implementation fulfils the city's commitment under Articles 1 and 2 of MUFPP. The county government is expanding its ECD facilities to accommodate more pre-primary learners. Enrolment in the public ECD centres rose by over 10, 000 in a year. The 80% of children not under a school feeding programme is therefore a concern of the city government.

Consultation and cooperation with the national government key stakeholders and partners should therefore be instituted to address this gap. The Home-grown School Feeding Program started by the national government should be fast tracked and strengthened.

4.4.2 Suggestions on how to use the information

The information derived from monitoring this indicator should be used to strengthen existing school feeding programmes and to engage national government and partners on the feeding situation in public and non-formal primary schools in the county.

4.4.3 Suggestions on dissemination of information

Dissemination of the information from monitoring this indicator may be through official correspondences and the official website of the city.

---

[12] Source: Ministry of Education, Term 1, 2019

4.5 Monitoring Indicator 23: Food-Related Policies Targeting Vulnerable Persons

4.5.1 Research Outputs

1. **Background**

The State and its organs are obligated by the Constitution of Kenya to assure the right and fundamental freedom from hunger and to access adequate amounts of quality and safe food by all her people[13]. Written public policies have elaborated on how this obligation will be fulfilled, with special attention to vulnerable persons; these include the Sessional Paper No. 10 of 2012 on the Kenya Vision 2030[14], Sessional Paper No. 1 of 2012 on the National Food and Nutrition Security Policy[15] and the Sessional Paper 4 of 2014 on the National Social Protection Policy[16]. Sub-national governments, such as the city county government, are required by the Constitution to implement national policies. Monitoring the indicator involved analysis of these policies to document their presence and also tracking their implementation with respect to vulnerable persons in the city.

2. **Methodology**

Desk review and analysis was carried out on the Kenya Vision 2030, the National Food and Nutrition Security Policy and the National Social Protection Policy to document their provisions in relation to vulnerable persons and to Articles 3, 4 and 5 of MUFPP.

3. **Research Results**

The Kenya Vision 2030 is the national economic blueprint of the country. It sets out to institutionalize poverty reduction and equity as a principle in economic, social and political programmes, with special attention to all vulnerable groups. It recognizes vulnerable groups including widows and widowers, orphans and children at risk, persons with disabilities, under-age mothers, the poor of the poorest, internally and externally displaced persons and the elderly. It identifies strategies to reduce vulnerabilities, including expanding pro-poor financial services, empowering people with special needs to make them self-supporting, establishment of a consolidated social protection fund for cash transfers to orphans and vulnerable children and the elderly and full implementation (including appropriate budgetary allocations) of the Disability Fund.

The National Food and Nutrition Security Policy directs the promotion of urban employment and improved access to food through implementing and monitoring

---

[13] Government of Kenya, 2010, Constitution, Articles 21 and 183, www.kenyalaw.org.
[14] Government of Kenya, 2012, Sessional Paper No. 10 on Kenya Vision 2030, http://www.foresightfordevelopment.org/sobipro/54/1263-sessional-paper-no-10-of-2012-on-kenya-vision-2030
[15] Government of Kenya, 2012, Sessional Paper No 1 on National Food and Nutrition Security Policy, https://extranet.who.int/nutrition/gina/sites/
[16] Government of Kenya, 2014, Sessional Paper No. 4 on National Social Protection Policy, https://www.socialprotection.or.ke/

special measures to help the poorest and most vulnerable to meet their minimum food and nutrition requirements.

The National Social Protection Policy elaborates social assistance measures including direct cash transfers to poor and vulnerable people over their lifecycle, including in-kind benefits, asset protection and rehabilitation to re-establish livelihoods, direct feeding programmes for those vulnerable to malnutrition, meals and nutritional support to schools, the older persons and pre-school-age children and asset development and income opportunities to establish sustainable livelihoods. A National Social Assistance Authority has been established which rolls out these interventions in the country, including in the city.

Nairobi City County has directly institutionalized these social assistance measures and mainstreamed the equity principle in its County Integrated Development Plan[17] through structural and budgetary provisions. Additionally, Nairobi City is implementing the UEWEA initiative to assess the food security situation in low-income settlements and to trigger response mechanisms that corrects the situation with the aim of achieving and sustaining the "normal" status.

4. **Discussion**

Nairobi City has and is implementing food-related policies with special attention to vulnerable persons and groups, as provided in Articles 3, 4 and 5 of the MUFPP. Implementation of food security surveillance and the social assistance interventions would nevertheless benefit with financial support under partnerships with stakeholders in order to assure uninterrupted service.

Social protection cut across the two levels of government. Consultation and cooperation is therefore necessary for the purpose of accessing data and information for monitoring the indicator and for measuring success in achieving the intended objectives.

4.5.2 Suggestions on how to use the information

The information generated by monitoring this indicator may be used in mobilizing greater support with resources, in establishing coordination mechanisms between national and city county structures and in establishing partnerships.

4.5.3 Suggestions on dissemination of information

The information generated by monitoring this indicator may be disseminated to local stakeholders through the official website, official correspondence, mass media and community fora.

---

[17] County Integrated Development Plan, 2018-2022, www.nairobi.go.ke.

4.6 Monitoring Indicator 26: Municipal policies and regulations that allow and promote urban agricultural production and processing

4.6.1 Research Output

1. **Background**

The indicator monitoring policies and regulations facilitating urban food production and processing and their implementation. The production of food in urban areas takes place in many cities of Africa and the world. Policy shifts entrenched urban food production in the 2000's in response to research and the decentralization agriculture to local governments.

2. **Methodology**

Desk review and analysis was carried out on the County Integrated Development Plan, 2018-2022[18] (CIDP), the Urban Agriculture Promotion and Regulation Act, No. 4 of 2015[19], and the Environmental Management and Coordination Act (EMCA), No. 8 of 1999[20], against the provisions of Articles 2 and 5 of MUFPP.

3. **Research Results**

The CIDP institutionalized the authorization and promotion of urban agricultural production and processing in Nairobi but providing a full sector, equivalent to a national ministry, the Food, Agriculture and Forestry Sector, for that purpose and providing it with human, physical and material resources for its extension and regulatory work. The staff capacity of the Sector is 250 and it has a presence in all the administrative units of the city.

The objects of the Urban Agriculture Promotion and Regulation Act include contributing to food security through increasing access to agricultural extension services, regulation of access to land and water for use in urban agriculture, giving priority to residents of high density and informal settlements, protection of the safety of food and institutionalizing administrative procedures for access to agricultural resources including organic waste. It allows persons to engage in agriculture in the city county subject to the Act and compliance with other laws relating to planning, environment, nuisance and public health. The Act is operational while the regulations for rolling out the measures that are of legal nature are in the enactment process.

The EMCA provides for development of national land-use guidelines. These has since been developed and published[21]. The kind of livestock and crops permitted for agriculture in urban and peri-urban areas, without harm to the environment, have been specified.

---

[18] County Integrated Development Plan, 2018-2022, www.nairobi.go.ke
[19] Nairobi City County Urban Agriculture Promotion and Regulation Act, www.kenyalaw.org
[20] EMCA, www.kenyalaw.org.
[21] National Land-Use Guidelines, at
http://www.nema.go.ke/images/Docs/Guidelines/national%20landuse%20guidelines-nema.pdf

4. Discussion

Nairobi City fully promotes urban food production and processing as expected from its commitment to Articles 2 and 5 of MUFPP while being alive to requirements of health of crops and livestock, and the environment, and the safety of food generated through these practices. Many urban households producing food do it for their own subsistence, although good incomes can be earned, especially from livestock products. However, middle and upper income households are better able to produce food in backyards than the low-income households living in high-density areas. By legislating for urban agriculture promotion and regulation, Nairobi City County has made a significant advance in this work stream of the MUFPP Indicator Framework.

4.6.2 Suggestions on how to use the information

The information generated by monitoring this indicator may be used in enhancing urban food production and processing and in mobilizing additional resources for purpose.

4.6.3 Suggestions on dissemination of information

Information from monitoring this indicator may be disseminated in the official website of the city and in the extension service networks. It may also be directly shared within the city's network of partners.

4.7 Monitoring Indicator 30: Technical training and assistance benefits for urban and peri-urban food producers

4.7.1 Research Output

1. Background

The indicator measures the number of urban and peri-urban food producers who have benefited from technical training in the last 12 months in line with Article 2 of MUFPP. Monitoring of the indicator was through analysis routine quarterly reports from July 2018 June 2019.

The provision of extension services and other capacity building for food producers is applied based on "Guidelines and Standards for Agricultural Extension and Advisory Services, 2017" and the "National Agricultural Sector Policy, 2012, both by the Ministry of Agriculture, Livestock and Fisheries which is under the National government. Extensions services are benefits for food producers also under the Urban Agriculture Promotion and Regulation Act. Extension approaches used in Nairobi included trainings, demonstrations, shows, farm visits, field days and exhibitions.

Demonstration of fish harvesting

2. Methodology

Desk review and analysis of quarterly reports of the Food, Agriculture and Forestry Sector from July 2018 June 2019. The reports capture the number of beneficiaries and are disaggregated according gender and age.

3. Research Results

Table 4 lays out the number and gender of beneficiaries of the food production extension service. 17,491 food producers and handlers were reached with agriculture extension messages while 2,400 new clients requested for extension services. Therefore, a total of 19,891 clients benefited from crops, livestock and fisheries extension messages in the period under review.

There are other organizations in civil society carrying out training of urban and peri-urban farmers, provided that they are in partnership with the city county government or their programmes are accredited and recognized by the city county government. These include, for example, Mazingira Institute's training through the Nairobi and Environs Food Security, Agriculture and Livestock Forum (NEFSALF[22]). The number of beneficiaries in these avenues was not captured but should be done in the future.

Demonstration Farm, Lang'ata Sub county, Nairobi

---

[22] NEFSALF, www.mazinst.org/NEFSALF

Table 4: Beneficiaries of food production extension services

Key Performance Indicator	Target 2018/19	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total M	Total F	2019
Number of farmers adopting modern agricultural technologies reached	16,150	3779	4,302	4,343	5,067	6,202 (35%)	11,289 (65%)	17,491
Number of new farmers requested for extension services	850	308	749	997	346	982 (40%)	1,418 (60%)	2,400

Source: Nairobi City County Quarterly Reports from July 2018 to June 2019

4. Discussion

Nairobi City is implementing Article 2 of MUFPP as pertains to implementation of policies and regulations for the promotion of urban and peri-urban food production. The number of beneficiaries as compared to the number of farm families is good and should be enhanced. There may be some double-counting of beneficiaries, for example visits to several Nairobi show stands, or repeat signing up for extension services in the year. On the other hand, there could be under-counting as some trained farmers also train people in their areas, creating a snow-ball effect.

4.7.2 Suggestions on how to use the information

The information generated by monitoring this indicator may be used as a self-evaluation report for the Food, Agriculture and Forestry Sector with a view to making improvements for the future. It may also be used for building partnerships and for mobilizing resources needed for the service

4.7.3 Suggestions on dissemination of information

Dissemination of this information may be made through the official website, mass media, and extension fora.

4.8 Monitoring Indicator 36: Fresh fruit and vegetable outlets per 1,000 inhabitants of an area

4.8.1 Research Output

1. Background

The Indicator monitors the linkage between sustainable diets and nutrition and food supply and distribution. It establishes the number of fresh fruit and vegetable outlets per 1,000 inhabitants of an area, irrespective of whether the outlets were formal or informal.

2. Methodology

Two administrative wards were selected for the research, i.e. Korogocho, a low-income settlement and Karen, a high-income area. A simple count of the fresh fruit and vegetable outlets was done. The population of the wards was estimated from the Kenya National Bureau of Statistics sources.

Fresh fruit and vegetable market, Korogocho

The census tool was designed by the Secretariat as a table for counting on a single page. It captured the number of kiosks, supermarkets and mobile vendors selling fruits, vegetables and those selling both fruits and vegetables in the two areas. The counts were carried out 20-22 August 2019 to determine the number of outlets in each area. Training of field staff was carried out on 19 August 2019 and the count was done simultaneously in the two areas over the next three days. Local staff of Food, Agriculture and Forestry Sector connected to the communities and local leaders, helped characterize the areas and performed the count, in close collaboration with local staff from Health Services Sector and the members of the Secretariat. The totalling and reporting was done by the team following a feedback de-briefing meeting of the Secretariat with the field staff on 23 August.

3. Research Results

There were 86 fresh fruit and vegetable outlets per 1,000 population, all in walking distance in Korogocho while Karen has 5.5 outlets per 1,000 inhabitants.

Figure 2 illustrates the census for various villages in Korogocho which has an estimated population of 25,912 in nine administrative units called villages. There were a total of 2,233 fresh fruit and vegetable outlets, 2,042 being kiosks and 191 being mobile vendors; there was no supermarkets selling fresh food. The high count in Nyayo village indicates it is the location of a market, while Grogon B lacked outlets, being next to the market.
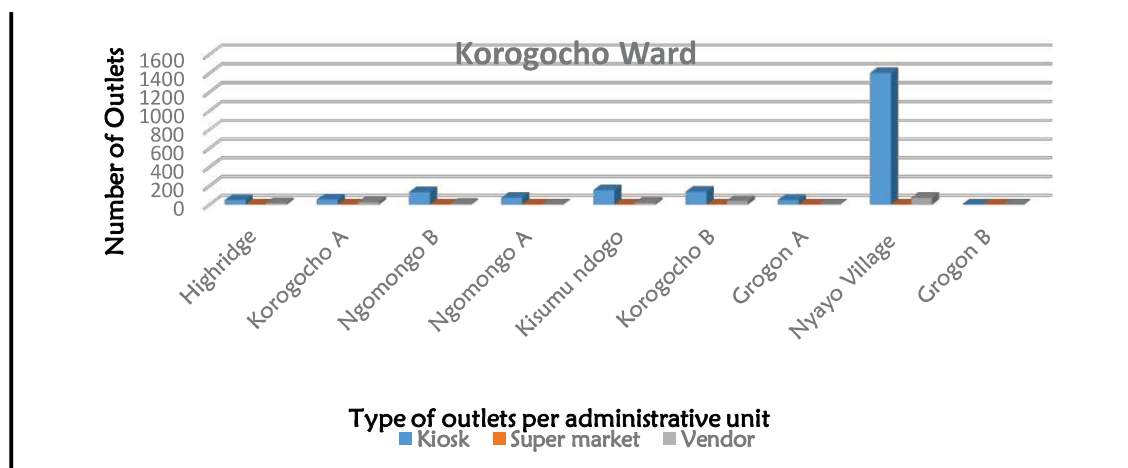
Figure 2: Number of fresh fruits and vegetables outlets in villages in Korogocho

Figure 3 illustrates the census results for Karen Ward which has an estimated population of 42, 535 living in eight administrative units. There were 203 Kiosks, 15 supermarkets and 15 mobile vendors. "Karen area" being a shopping centre had the highest number of outlets at 81, including seven supermarkets that stocked both fresh fruits and vegetables, characteristic of high income strata; it also had the same number of mobile vendors and 67 kiosks. The informal settlement of Kuwinda in Karen had no supermarkets or mobile vendors but had 17 kiosks.
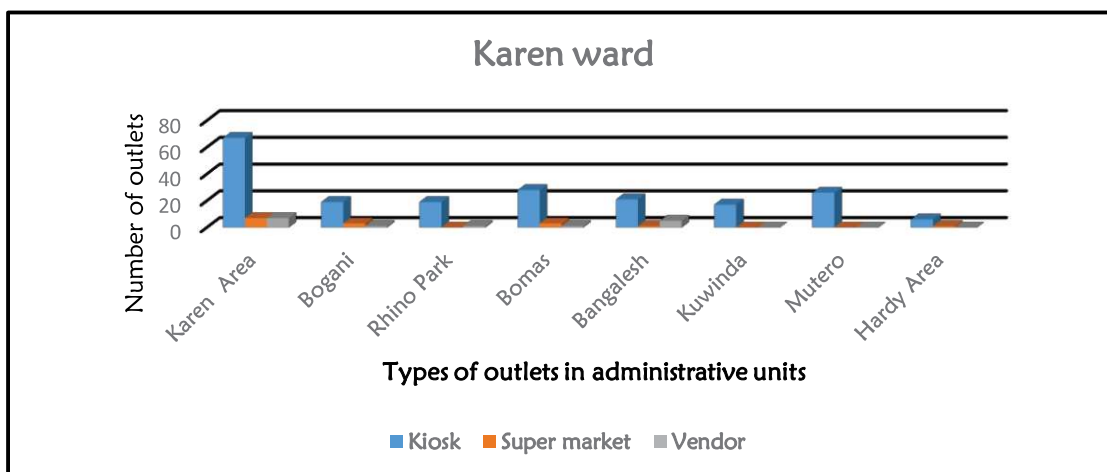
Figure 3: Number of fresh fruits and vegetables outlets in villages in Karen

4. Discussion

The indicator was adapted as it would have been very expensive to carry out the census in the whole city with its 85 wards. The low income slum had higher population density and also higher number of fresh fruit and vegetables than the high income area. The Karen population also use cars to shop and may prefer shopping in malls where everything is 'under one roof'.

Observations in the field showed that kiosks were mostly being operating by women, though actual count by gender was not done. However, it was mostly men who were doing the mobile vending. This was attributed to the use of hand-carts and wheelbarrows in Korogocho which are typically men's tools of trade, while women carry goods on foot. In Karen, however, the vendors mostly used pick-up and saloons cars, though there were also hand-carts.

4.8.2 Suggestions on how to use the information

The information gathered in monitoring this indicator will be useful in proper planning of future monitoring of this indicator. The outlet distribution dynamics that were observed will also be useful in planning expansion of distribution points in the study and equivalent areas.

4.8.3 Suggestions on dissemination of information

This information may be disseminated to local stakeholders through the official website and correspondences and directly in the network of partners.

4.9 Monitoring Indicator 37: Annual municipal investment in food markets or retail outlets

4.9.1 Research Outputs

Access to food is an attribute of food security and is both a physical and economic variable. The indicator monitors the investment of city county government in food

supply and distribution infrastructure pursuant to implementation of Article 2 of the MUFFP.

A desk review and analysis of county investment budgets for several recent years was carried out with the objective of calculating the investment budget for market development as a proportion of the total investment budget of the city county government.

Table 5 summarized the investment budget for markets and the total investment budgets for the last 3 financial years. The proportion of investment for markets in the total investment budget of the county is 2.3%. This is slightly less than in the previous 2 years which was 2.4%.

Table 5: Investment in markets compared to total investment budget of Nairobi

Financial Year	2019/2020	2018/2019	2017/2018
Municipal Investment in Market Services	252,000,000	242,500,000	200,000,000
Total Investment Budget of City County	10,992,500,000	9,967,594,000	8,365,000,000
Proportion of investment in markets to total investment budget	0.023	0.024	0.024

Sources: Itemized Budget, 2019/2020 and Final Supplementary Budget 2018/2019

The development vote head of "market services" was assumed to comprise market infrastructure. It is possible that market services may be supported by the vote other than infrastructure. It was also assumed that all budgeted markets would incorporate food distribution structures, though in reality some markets distribute solely non-food commodities.

New market under construction, Westlands, Nairobi

4.9.2 Suggestions on how to use the information

The information generated from monitoring this indicator may be used for self-evaluation by the responsible sector against the access to food rights of the city residents. It may be used for mobilizing resources to assure more efficient food supply and distribution.

4.9.3 Suggestions on dissemination of information

This information may be disseminated to local stakeholders through the official website and correspondences and to residents on the city, as needed.

4.10 Monitoring Indicator 39: Food safety legislation and implementation and enforcement procedures

4.10.1 Research Outputs

1. Background

The indicator monitors the presence of food safety legislation and its implementation capacities in the city county government. Assurance of the safe of food contributed to implementation of Articles 1 and 2 of the MUFPP.

2. Methodology

A desk review and analysis was carried out on several national and county legislation and the implementation and enforcement procedures as they are addressed in Nairobi, and with reference to the MUFPP Indicators Framework "outcome area" and "recommended action" for Indicator 39. The reviewed legislation are the Public Health Act, Chapter 242[23], the Food, Drugs and Chemical Substances Act, Chapter 254[24], the Nairobi City County Urban Agriculture Promotion and Regulation Act and the Nairobi City County Abattoirs Act.

3. Research Results

The Public Health Act is the overarching law on food safety but is elaborated in greater detail with respect to food safety by the Food, Drugs and Chemical Substances Act. These legislation affectively provide for the safety of food in alignment with the Codex Alimentarius. They provide for competent authorities, which are in place in the city, as well as inspectors and implementation and enforcement procedures. The food supplier is

Inspection of fish and meat

responsible for supplying safe food to the market. Inspectors have unhindered access to food and food premises whereby that may carry out inspection of food and premises, seize or recall unwholesome food, suspend operations and, through a judicial process, have it disposed and offenders held to account through legal action. The Public Health Act also allows for community members to institute a complaint of nuisance, where the same enforcement procedures would be followed; this may apply to complaints about inappropriate urban farming from neighbours.

The Nairobi City County Urban Agriculture Promotion and Regulation Act provides for assurance of food system in accordance with national legislation and through

---

[23] Public Health Act, www.kenyalaw.org
[24] Food, Drugs and Chemical Substances Act, www.kenyalaw.org.

extension services on good agricultural and good hygiene practices, contributes to food safety. The County Abattoirs Act assures the hygiene and safety of meat; it is fairly new and yet to be rolled out, though the national Meat Control Act, Cap 356[25], has been the foundation for meat safety services all over the country, including in Nairobi City.

Despite this strong legal foundation, the country in general and the city in particular have no food surveillance system for most food hazards, with the exception for horticultural and fisheries products destined for export markets; passive surveillance is used. The outreach of food safety controls to the many informal sector operators and the small and medium food enterprises is essential and is not yet properly developed.

4. Discussion

The city has legislation and procedures for assuring food safety as required by Article 2 of MUFPP and other national and international law. However capacity is wanting in the area of development and implementation of food safety surveillance systems. With the development of the city's capacity for monitoring and guiding Nairobi's overall food system, it is hoped to take an inclusive and cross sectoral approach to the enforcement of food safety across all activities in the system, from management of waste as an agricultural input, through production, value addition, distribution and through to consumption. This will involve the general public awareness as well as capacity building for city staff and other stakeholders.

4.10.2 Suggestions on how to use the information

The information from this indicator monitoring may be used to sensitizing the food industry, for mobilizing resources for capacity building enforcement agencies and for galvanizing the city for concerted action to achieve food safety.

4.10.3 Suggestions on dissemination of information

This information may be disseminated in the official website and correspondences, in the mass media and in engagements with the community and the food industry.

4.11 Monitoring Indicator 33: Food Waste Recycling

4.11.1 Research Outputs

1. Background

The indicator monitors the collection and re-use of urban organic waste in agricultural production within the city and outside its boundaries. It tracks the implementation of Articles 1 and 2 of the MUFPP in relation to food and other organic waste. The proportion of re-used waste is estimated.

---

[25] Meat Control Act, www.kenyalaw.org.

2. Methodology

Desk review and analysis of policy documents and published literature on waste recycling relevant to Nairobi was done. The reviewed data and information from literature was triangulated with current data from the from the Nairobi City County sector responsible for the environment. The reviewed literature was Njenga (2010)[26], Prain (2010)[27], JICA (2010)[28] and the Nairobi City County Solid Waste Management Act[29].

3. Research Results

The Solid Waste Management Act requires separation of organic from other wastes, but is partially implemented. It specifies multiple types of waste including agricultural waste.

JICA (2010) reported 92.4% of Nairobi's waste was organic in 1997 and 85.0% in 2010. Although JICA (2010) could not estimate quantities of organic waste recycled in situ, Prain (2010) found that backyard urban farms recycled 100% of food wastes and 88% of manure. Njenga (2010) gave the proportion of farming households generating and using compost and manure as 35%, observing that 40% of waste do not reach the dumpsite. Njenga (2010) mapped compost and manure flows linking Nairobi and surrounding areas, including rural Kajiado and elsewhere.

Waste segregation and sorting station

Very few compost and manure recycling groups exist in Nairobi, either historically or currently. In 2010 it was estimated only 0.6% of the city's organic waste was processed by such groups, according to Njenga (2010)[30], (i.e. 2,500 tonnes per annum). Only 14 such groups were to be found then. In 2019 a total of 27 recycling groups were found but only half or at most two thirds of these were handling organic waste and the amount collected and processed is not estimated[31].

---

[26] Njenga, et al, 2010, Recycling Nutrients from Organic Wastes in Kenya's Capital City, http://erepository.uonbi.ac.ke/
[27] Prain, G., et al, African Urban Harvest: Agriculture in the Cities of Cameroon, Kenya and Uganda, https://link.springer.com/content/pdf/bfm%3A978-1-4419-6250-8%2F1.pdf
[28] JICA, 2010, Preparatory Survey for Integrated Solid Waste Management in Nairobi City in the Republic of Kenya, http://open_jicareport.jica.go.jp/pdf/12005443.pdf
[29] Nairobi City County Solid Waste Management Act, www.kenyalaw.org.
[30] Njenga, et al, 2010, Recycling Nutrients from Organic Wastes in Kenya's Capital City, http://erepository.uonbi.ac.ke/
[31] Nairobi City County Environment Sector data, July 2019.

4. Discussion

Much more organic waste is recycled by urban agriculture in Nairobi than what is being separated and recycled through collection; the estimated proportion of organic waste re-used in agriculture is however small.

More effective ways of measuring organic solid waste quantities produced and recycled need to be developed by the city and its partners. This indicator can be useful in future for tackling climate change by seeing urban farming as a mitigation measure and making it part of waste management strategies through cross-sectoral collaboration between environment and food and agriculture sectors.

4.11.2 Suggestions on how to use the information

Measuring this indicator would strengthen urban rural linkages through organic waste management and could potentially improve waste management and re-use in agriculture and food production. This information may also make a strong case for establishing good records of formal waste recycling.

4.11.3 Suggestions on dissemination of information

Local dissemination of information from monitoring this indicator may be done through official websites and correspondences and directly in networks with partners.

4.12 Monitoring Indicator 43: Food waste prevention, recovery and redistribution

4.12.1 Research Outputs

1. Background

The Indicator monitors the presence and implementation of policies and regulations related to food waste prevention, recovery and redistribution. Such policies would implement Articles 1 and 2 of the MUFPP.

2. Methodology

Desk review and analysis was carried out on the Public Health Act, Chapter 242, the Nairobi City County Solid Waste Management Act, 2015, JICA (2010)[32] and the Nairobi City County Urban Agriculture Promotion and Regulation Act 2015.

3. Research Results

The Public Health Act provides for waste prevention and the prudent management of waste so that it does not cause a nuisance to the public, empowering the medical officer and the courts of law to control such nuisance.

---

[32] JICA, 2010, Preparatory Survey for Integrated Solid Waste Management in Nairobi City in the Republic of Kenya, http://open_jicareport.jica.go.jp/pdf/12005443.pdf

The Solid Waste Management Act specifies the following types of waste generators: municipal, market, construction and demolition, industrial solid, agricultural, biomedical, hazardous, e-waste, plastic and junk. The County Executive Committee Member responsible is empowered to categorize, facilitate and promote the recovery of all forms of waste and is required to provide containers for this purpose. Members of the public are required to use these containers, failure to do so constituting an offence.

The Urban Agriculture Promotion and Regulation Act, 2015, requires the County Executive Committee Member for Food, Agriculture and Forestry Sector to ensure collaboration among the relevant stakeholders of the county government to manage organic waste for its use as an input for urban and rural agriculture.

These legislation are being fairly implemented and success in the objective has not yet been realized. Additionally, there is presently no legislation providing for food recovery for human consumption.

4. **Discussion**

There is currently weak coordination between the different sectors of Nairobi City County on the management of food and other waste. Public education on the provisions of different laws passed by the Nairobi City County and national government on this subject is desired. There are private sector organizations, some currently collecting and trying to separate waste, which should be encouraged in the practice.

4.12.2 Suggestions on how to use the information

The information generated from monitoring this indicator should be used as a self-audit by the responsible city authorities so that they can recognize the gaps and improve on the capacity and outreach for implementation.

4.12.3 Suggestions on dissemination of information

Local dissemination of information from monitoring this indicator may be done through official websites and correspondences, mass media, community engagements and directly in the networks with partners.

5.0 Key Learnings from Pilot Phase

5.1 Strengths & weaknesses of the MUFPP framework of indicators

Many of the MUFPP framework of indicators are easy to work with and do not require complicated research and expenses. A major weakness is absence of thresholds for the indicators such that the results for quantitative indicators are not evaluable in terms of success and failures.

5.2 Additional supports needed to work with the indicators

Some indicators such as Number 33 and 36 require a lot of resources to fully monitor. Such resources would have been needed together with a longer project period.

5.3 Team for monitoring the indicators on a longer term basis

Nairobi City County has a private-sector driven performance auditors. That team should be empowered to incorporate monitoring of the MUFPP indicator as part of their terms of reference. Alternatively, a centralized monitoring and evaluation team at city headquarters may do the work.

5.4 Improvements to the indicator framework

Indicator Number 33 should be moved from the MUFPP area of food production to the area of food waste, where it rightly fits in.

5.5 Way forward with indicator work

It is anticipated that monitoring this indicator will continue after the pilot case study and cover all the 44 indicators progressively. The inter-sectoral collaboration through the CCG should be institutionalized in the county, for example as a "steering committee" on implementation and monitoring of MUFPP.

5.6 Challenges and benefits of working with RUAF and other pilot cities in this process

RUAF provided a focus on the indicator monitoring process and enabled learning the monitoring system through action. The project enabled effective team-building across several otherwise distance departments of the city county government. Through interaction with teams from the other two pilot cities, i.e. Antananarivo (Madagascar) and Quito (Ecuador) the project team came to understanding the interpretation of the indicators well.

6.0 Summary of insights to share with other cities

The following "hot tips" may be important for other cities:

1. Make sure the indicators process is entrenched in local government decision-making organs so that everyone buys in and it is institutionalised.

2. Make sure different sectors and disciplines are all involved. Respect different types of knowledge and information.

3. Keep records on MUFPP implementation work carefully; they may be useful for reference later.

4. Review the indicator framework carefully and make sure local conditions are taken into account. Don't be afraid to adapt and make suggestions on the framework. Local experience counts.

5. Make connections to the government agencies gathering and analysing data so that they respond to your monitoring and evaluation needs.

6. Keep an eye on research papers and government reports; they have a lot of data and information.

7. Use consultation to determine important key messages.

8. Get the key messages on what is learned out to the important targets who can act on them.

7.0 Overall conclusion

The project has confirmed, based on the 12 indicators monitored, that Nairobi City County government is implementing the MUFPP. Some of the articles have been implemented as part of the historical governance measures while others were deliberately brought on board following MUFPP. For some articles, implementation is well done but for others, re-focussing within government is necessary. Institutionalizing the indicators framework within government will go a long way to ensure that MUFPP is fully operationalized and confirmed through monitoring the indicators.

Annex 1

Contributors for research in monitoring selected indicators

Contributor	Organization / Department	Indicator
Food System and Sector Programmes Directorate	Nairobi City County Food, Agriculture and Forestry	Indicator 3: Food policy or strategy
Martha Chege	Nairobi City County Health Services	Indicator 11: Number of people living with diabetes
Martha Chege & Jessica Mbochi	Nairobi City County Health Services	Indicator 12: Prevalence of stunting for children under 5 years
Raphael Kinyungu	Nairobi City County Education, Youth and Social Services	Indicator 20: Percentage of children and youth (under 18 years) benefiting from school feeding programme
Food System and Sector Programmes Directorate	Nairobi City County Food, Agriculture and Forestry	Indicator 23: Presence of food-related policies and targets with a specific focus on socially vulnerably groups
Food System and Sector Programmes Directorate	Nairobi City County Food, Agriculture and Forestry	Indicator 26: Presence of municipal policies and regulations that allow and promote agriculture production and processing within the municipal area
Wilfred Katumo	Nairobi City County Food, Agriculture and Forestry	Indicator 30: Number of urban and peri-urban food producers that benefited from technical training and assistance in the past 12 months
Dr Diana Lee-Smith	RUAF (Mazingira Institute)	Indicator 33: Re-use of organic waste in agriculture production
Maurice Kavai	Nairobi City County Environment and Natural Resources Sector	
Winfred Katumo, Dr Alice Ruto, Sarah Chemutai, Emily Osundwa, Joyce Milenye, Grace Gagochi, Josephine Njogu, Lucy Mbugua, Elizabeth Mailu, Redemta Mwangi	Nairobi City County Food, Agriculture and Forestry	Indicator 36 Number of fresh fruit and vegetable outlets per 1,000 population
Martha Chege, James Mwangi, Anastacia Mbala and Anastacia Ndururu	Nairobi City County Health Services	
Food System and Sector Programmes Directorate	Nairobi City County Food, Agriculture and Forestry	Indicator 39: Presence of food safety legislation and implementation of enforcement procedures
Food System and Sector Programmes Directorate	Nairobi City County Food, Agriculture and Forestry	Indicator 43: Presence of policies or regulations that address food waste prevention, recovery and redistribution