

Food Security Research Findings and Recommendations

Nairobi County

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Zero Tolerance to Hunger
Kenya Constitution Article 43 (1)(C)

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List of Abbreviations and Acronyms

AEZs	Agro-Ecological Zones
AGRA	Alliance for a Green Revolution in Africa
AIDS	Acquired Immuno-Deficiency Syndrome
ASDS	Agriculture Sector Development Strategy
AWSC	African Women’s Studies Centre
CAADP	Comprehensive Africa Agriculture Development Program
CCF	Christian Children’s fund
CDOs	County Development Officers
CSO	County Statistical Officer
ERS	Economic Recovery Strategy
FAO	Food and Agriculture Organization
FGDs	Focus Group Discussions
FISP	Farm Inputs Subsidy Program
GDP	Gross Domestic Product
GOK	Government of Kenya
IDPs	Internally Displaced Persons
IFPRI	International Food Policy Research Institute
IFSS	Integrated Food Security Strategy
JICA	Japan International Cooperation Agency
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
Km²	Square Kilometers
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MOA	Ministry of Agriculture
M&E	Monitoring and Evaluation
MTEF	Medium Term Expenditure Framework
NACADA	National Authority for Campaign against Drug Abuse
NASSEP	National Sample Survey and Evaluation Program
NGOs	Non-Governmental Organizations
NFSP	National Food and Nutrition Security Policy

NREGA	National Rural Employment Guarantee Act
NREGS	National Rural Employment Guarantee Scheme
OVCs	Orphans and Vulnerable Children
PRSP	Poverty Reduction Strategy Paper
PWD	Persons with Disabilities
UoN	University of Nairobi

Definition of Key Concepts

Access: “Access” in relation to food means the physical and economic access by a person or households to food through production or purchase.

Adequate food: Availability of food in sufficient quantity and quality to satisfy the dietary needs of individuals including being free from adverse substances.

Food of acceptable quality: Food whose value of quality is determined as fit for consumption based on the criteria of food safety, nutrition content, and standards specified by the Cabinet Secretary or under the Standard Act or any other written law.

Food preservation: Prevention of food from decay, decomposition, or spoilage.

Food production means an activity or process of producing, preparing, processing, making, preserving, packing or repackaging and or changing the form of food;

Food reserve: National food reserve established under section 43 of the Constitution of Kenya.

Food safety: Condition and efforts required to prevent food from possible biological or chemical contamination and contamination by other objects which may harm or endanger the human health.

Food security: A situation where all people, at all times, have regular and permanent physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food

preferences for an active and healthy life.

Food storage: Place where food or food items are stored.

Food: Everything that originates from biological sources and water, whether processed or not, and which is designated as an eatable or beverage for human consumption. It includes food additive materials, food raw material, and other materials used in the process of preparation, processing and or making an eatable or beverage.

Freedom from hunger: A situation where all persons have access to a level of food that is capable of meeting the recommended minimum dietary requirements as may be prescribed by the Cabinet Secretary from time to time.

Household head: The most responsible member of the household who makes key decisions of the household on a day-to-day basis and whose authority is recognized by all members of the household. A household head could be the father, the mother, a child, or any other responsible member of the household depending on the status of the household.

Household: A person or a group of persons residing in the same compound and who are answerable to the same head and share a common source of food. The three important ways of identifying a household are by ensuring that:

- Members share a common cooking arrangement (pool and share their resources for common provisions).
- People are answerable to the same head; and
- People reside in the same compound;

Malnutrition: Poor nutritional status caused by nutritional deficiency or excess.

Minimum amount of food: Amount of food required to meet the minimum nutritional needs of an individual according to age, sex, occupation and health status provided in kind, in equivalent monetary value, and in the form of vouchers or other prescribed manner.

Respondent: Any responsible member of the household who provides information to the enumerator.

Right to food: The right of every person to have regular, permanent and free access,

at all times, either directly or by means of financial purchases, to quantitatively and qualitatively adequate, sufficient and safe food, corresponding to his or her cultural traditions and which ensures a physical and mental, individual or collective fulfilling and dignified life free of fear of hunger or under-nutrition.

Vulnerable persons include infants, children, school going children, pregnant and nursing mothers, the elderly, refugees, internally displaced persons, people with disabilities, sick persons with chronic diseases such as HIV/AIDS, victims of conflict, rural people in precarious livelihood situations, marginalized populations in urban areas, groups at risk of social marginalization and discrimination and any other group that may be identified from time to time.

Acknowledgements

This Nairobi Research Project is part of a larger project carried out by the African Women's Studies Centre (AWSC) of the University of Nairobi (UoN) which included 20 other counties namely: Turkana, Kisii, Baringo, Isiolo, Kwale, Mombasa, Nairobi, Elgeyo Marakwet, Trans-Nzoia, Nandi, Makueni, Bungoma, Taita Taveta, Kiambu, Nakuru, Bomet, Kirinyaga, Migori and Kajiado. This research focuses on the implementation of Article 43 (1) (c) of the Constitution of Kenya 2010 which states that *every Kenyan has a right to be free from hunger and to have adequate food of acceptable quality.*

The successful implementation of the Project was possible due to the support, encouragement and goodwill of the University of Nairobi administration led by the Vice-Chancellor Prof George Magoha and the Kenya National Bureau of Statistics led by the Director General, Mr. Zachary Mwangi as well as the hard work of the technical team comprising experts from the UoN and KNBS who carried out the research and to whom the AWSC is grateful.

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Kenyans expect and deserve the promise of Article 43 (1)(c) of the Bill of Rights to be translated into reality. This is a worthwhile journey that Kenyans are ready to walk until the day when no Kenyan goes to bed hungry!

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Executive Summary

The African Women's Studies Centre (AWSC), in collaboration with the Kenya National Bureau of Statistics (KNBS), undertook a countrywide household baseline survey on food security to establish the status of food security in Kenya. In addition to being a reflection of AWSC's recognition of the efforts made by the Government of Kenya towards implementation of food security for all, the study was in accordance with the mandate of AWSC to promote women's experiences, knowledge, needs and contributions towards influencing national and county policies.

The survey was part of a broader project, funded by the National Treasury, which included documenting women's experiences on food security in 20 counties, developing programmatic and policy proposals, and initiating lobbying and advocacy activities directed towards influencing policy makers to adopt these proposals and to make budgetary allocations to fund them. It was also in line with the efforts being put in place to implement the Constitution of Kenya 2010 with particular focus on Article 43 (1)(c) which states that *"every person has a right to be free from hunger and to have adequate food of acceptable quality"* (Republic of Kenya, 2010).

The broad project objectives¹ were to establish the status of food security in Kenya and, through a consultative process, come up

with proposals for ensuring food security in the country and share these proposals with policy makers.

This report outlines the research methodology, key findings, challenges, and recommendations thereof. The research was carried out in 20 counties selected from the country's six agro-ecological zones. The study covered 4,200 households in 440 clusters. In addition, the research teams held consultations with policy makers, including County Executive Officers, among them the Governors and the Members of the County Assemblies; representatives of civil society organizations (CSOs); representatives of institutions responsible for food security; and community opinion leaders, including religious leaders, women, and youth leaders. The research team was led by agricultural scientists and economists. Senior level management of the University of Nairobi and the Kenya National Bureau of Statistics participated in this research.

A key research finding at the national level was that, on average, 18 per cent of the population, which translates to 7.1 million Kenyans, are chronically food insecure suggesting that they are often or always hungry. The findings further indicate that the worst hit county, in terms of hunger, was Turkana County (54%) followed by Kisii County (41%), Migori County (34%), and Isiolo County (29%). Kirinyaga county was the least affected (3%) followed by Bomet (5%), Nakuru (6%), and Kiambu (7%).

Some of the factors found to contribute to food insecurity included high cost of farm

¹ Only objectives related to the household survey carried out by AWSC & KNBS are reflected in this report.

inputs; land fragmentation due to the cultural practice of land inheritance which makes agricultural land uneconomical among farming communities; large families particularly in the Arid and Semi-Arid Land areas; lack of storage and preservation facilities leading to post harvest losses; erratic climatic changes and lack of water for irrigation; insecurity; and poor infrastructure in the rural areas.

The findings show that Nairobi County is food insecure, with 19.6 per cent often and/or always hungry. In total an average of 19.8 per cent of the respondents suffer from chronic food insecurity. It is worth noting that more households headed by women were found to be likely to be food secure than male headed households. Thus, 15.4 per cent of the respondents who said “often/always there was a time when there was no food at all in the household because there were not enough resources to go round” were female headed households as opposed to 21.4 per cent headed by men. Among those who said they or members of their households often/always “slept hungry at night because there was not enough food”, 22.2 per cent were female headed households while 26.6 per cent were headed by men. Some of the factors found to contribute to food insecurity included lack

of/enough income to purchase food, expensive food varieties in the market and inadequate food supply at the market.

The main source of accessing food for the majority of Nairobi respondents was regular monthly salary at 39.2 per cent. Other sources of accessing food were casual labor at 28.3 per cent, trade/small businesses at 22.6 per cent and remittance from relatives at 5.7 per cent.

To address the plight of the food insecure households from Nairobi County experiencing chronic food insecurity, the respondents made recommendations which we reproduce in this Report. In addition, having analyzed the reports of the various Counties and looked at best practices in nationwide as well as in other countries, the AWSC has come up with policy and program proposals aimed to enhance food security in Nairobi County and in Kenya. Adoption and implementation of the proposed interventions will ensure that every Kenyan is food secure which will go a long way towards the realization of the MDG 1, the Kenya Development Blue Print, Vision 2030 and above all, the Constitution of Kenya, Article 43 (1) (c) that guarantees every person the “right to be free from hunger, and to have adequate food of acceptable quality”.

Background and Context for the Nairobi County Report

1.1 Introduction

The African Women's Studies Centre (AWSC), which is based at the University of Nairobi, recognizes that the experiences of African women in almost all spheres of life have been invisible. This multi-disciplinary centre aims at bringing women's experiences, knowledge, needs, and contributions to mainstream knowledge and processes. The AWSC draws its membership from various colleges of the University of Nairobi, namely: Humanities and Social Sciences, Agriculture and Veterinary Sciences, Health Sciences, Biological and Physical sciences, Architecture and Engineering and Education and External Studies.

It has been acknowledged that women play a central role in ensuring food and nutrition security in Kenya and other sub-Saharan countries because it is central to the achievement of human dignity. In the last few years, the AWSC has consolidated studies, research findings, and policy issues from Kenya and the region in relation to food security. The present budget submission by the AWSC was part of a process directed towards the achievement of meaningful engagement and contribution to the current national discourse on the implementation of Article 43 (1)(c) of the Constitution of Kenya (2010), which states that *"every person has a right to be free from hunger and to have*

adequate food of acceptable quality". The right to food for all is of crucial importance to the AWSC because the Centre appreciates the magnitude of the task and has a strategic interest in the achievement of equity among the genders, the very poor, and other vulnerable groups in society. The full implementation of the constitutional provision means that the government must put in place strategies and structures to realize and institutionalize the availability of food to all in a sustainable manner. Food security is an issue of dignity and hence no Kenyan should go to bed hungry for any reason.

The AWSC recognizes the efforts made by the Government of Kenya towards implementation of food security. However, given the poverty situation in the country and the food security vulnerability, more needs to be done towards enhancement of an all-inclusive countrywide food security policy and programming. The AWSC has, therefore, chosen to focus on working with Parliament, county assemblies, the national and county governments, and other policy makers in order to ensure the implementation of Article 43 (1)(c) that guarantees Kenyans the right to food.

The Centre also plans to complement and support the implementation of the Food Security and Nutrition Policy and other initiatives such as the National Social Protection Policy and the Agriculture,

Fisheries and Food Authority Act, among other policy documents, aimed at ensuring food and nutrition security. The Project also takes cognizance of Schedule Four of the Constitution that devolves some of the activities related to food security to the county governments.

The AWSC conducted the research reported here in collaboration with the KNBS during the calendar year 2013. The research covered the six agro-ecological zones in Kenya and 20 counties, namely: Kisii, Nairobi, Kiambu, Nakuru, Elgeyo-Marakwet, Kirinyaga, Kajiado, Bomet, Makueni, Bungoma, Taita Taveta, Migori, Trans Nzoia, Turkana, Baringo, Isiolo, Kwale, Mombasa, Nandi, Laikipia.

1.2 Objectives of the Research

The objectives of the research were to:

- Establish the status of food security in the country;
- Review best practices in institutional, legal, and policy frameworks for implementation of Article 43 (1)(c) and make policy recommendations at the national and county levels;
- Involve citizens' participation in the development of food security initiatives;
- Use evidence-based advocacy for greater allocation of resources for food security initiatives;
- Establish whether the economic, social and political pillars of Vision 2030 take into consideration food security concerns.

In addition, using the research findings, the team was required to evaluate the Vision 2030 pillars to establish their capacity to ensure food security; share the research findings with food security stakeholders (policy makers, civil society organizations and the general public) at the county and

national levels; generate proposals for ensuring full implementation of Article 43 (1)(c) of the Kenya Constitution 2010; and document women's experiences, knowledge, and perceptions in relation to food security and share the findings.

1.3 Efforts by the Kenya Government to Address Food Security

In 2011, Kenya government developed the National Food and Nutrition Security Policy (FNSP) with the aim of adding value, building synergies, and supporting the implementation of existing national and sectoral policies and strategies to effectively address issues of food insecurity and malnutrition in the country. The current efforts so far have been inadequate in addressing issues of malnutrition comprehensively, thus the need to have an overarching policy that integrates food and nutrition security initiatives.

The Kenya Vision 2030 is a significant government policy document that aims to boost food security in the country through various flagship projects such as improvement of infrastructure, creation of more employment opportunities, and development of irrigation schemes among others. The vision for the agricultural sector is to be "innovative, commercially-oriented and modern farm and livestock sector" (Republic of Kenya, 2007). If the Kenya Vision 2030 is properly implemented it will mitigate food insecurity in the country considerably.

The Kenya Agriculture, Fisheries and Food Authority (AFFA) Act provides for the establishment of the Agriculture, Fisheries and Food Authority to administer matters of agriculture, preservation, utilization and development of agricultural land and related matters (Parliament of Kenya, 2013). Among other functions, the Authority shall, in consultation with the county governments,

among other things: (a) administer the Crops Act and the Fisheries Act; (b) promote best practices in, and regulate, the production, processing, marketing, grading, storage, collection, transportation and warehousing of agricultural and aquatic products excluding livestock products; (c) collect data and maintain a database on agricultural and aquatic products excluding livestock products; (d) determine the research priorities in agriculture and aquaculture; (e) advise the national government and the county governments on agricultural and aquatic levies; (f) carry out such other functions as may be assigned to it by this Act, the Crops Act, the Fisheries Act and any other written law.

The Constitution of Kenya presents the boldest move by the Government of Kenya towards achievement of food security and places the responsibility of ensuring food security to the Government through its provision of the right to food (Republic of Kenya, 2010). The right to food, as mentioned earlier, means that the Government shall not take actions that result in increasing levels of hunger, food insecurity and malnutrition. Furthermore, the Government must use its available resources to eradicate hunger.

In the 2013/14 financial year, the number of beneficiaries of the cash transfer program for the orphans and vulnerable children (OVC) was doubled from 155,000 households to 310,000 households. Those receiving the Old People's Cash Transfer (OPCT) was also doubled from 59,000 to 118,000 households. The coverage of those with extreme disability was also increased from 14,700 to 29,400 households. The number of other disabled persons under coverage of cash transfer was also doubled. Further, about Ksh 400 million was set aside for the Presidential Secondary School Bursary Scheme for orphans, poor and

bright students while Ksh 356 million was allocated for urban food subsidy. In addition, the government has shown commendable efforts towards the provision of irrigation infrastructure including the largest irrigation scheme in the history of Kenya, the one-million-acre Galana-Kulalu in the Coast region.

1.4 Summary of the National Food Security Status

This section presents the results of the household baseline survey on food security in Kenya. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Household food security means applying this concept to individuals within the household. Conversely, food insecurity exists when people do not have adequate physical, social or economic access to food (FAO, 2010).

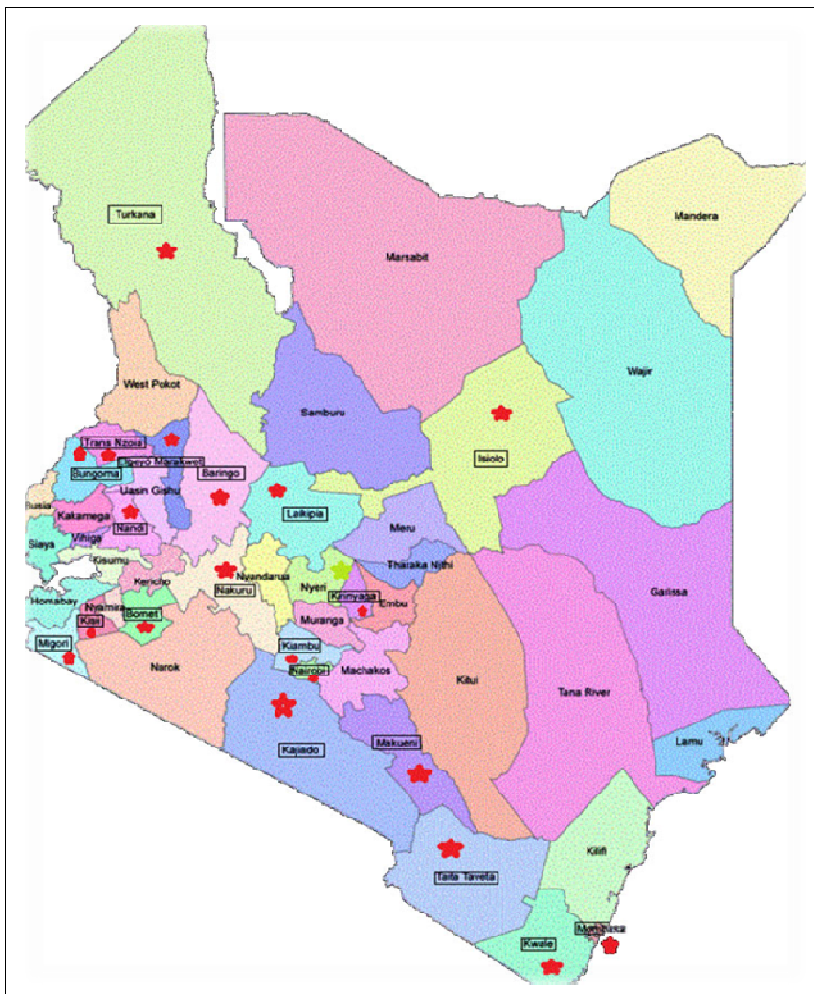
The findings of the AWSC/KNBS National Food Security Baseline Survey indicate that food insecurity in the country at the moment is at worrying, alarming, and unacceptable levels, with a large proportion of the sampled counties experiencing high levels of food insufficiency. Food and nutrition insecurity is one of the challenges currently affecting development in Kenya and is closely linked to the high level of poverty in the country; a situation that has serious implications on food security as the chronically food insecure suffer from extreme poverty (Republic of Kenya, 2008). In recent years, it is estimated that at any one time about 2 million people require assistance to access food. Moreover, the level of food insecurity usually escalates significantly during periods of drought, heavy rains, and/or floods. Ensuring food security

and nutrition in Kenya is, therefore, a critical challenge.

The Household Baseline Survey on Food Security was carried out in 20 counties that were scientifically sampled to represent the 47 counties in Kenya. Forty-five counties in Kenya (excluding Nairobi and Mombasa) were first classified into six Agro-ecological Zones (AEZs) of Kenya. The AEZs are Upper Highlands, Upper Midlands, Lowland

Highlands, Lowland Midlands, Inland Lowlands and Coastal Lowlands. An Agro-Ecological Zone is a land resource mapping unit, defined in terms of climate, landform and soils, and/or land cover and having a specific range of potentials and constraints for land use (FAO, 1996). Figure 1 is a map of Kenya showing the 20 counties visited during the baseline survey.

Figure 1: Map of Kenya Showing the 47 Counties



The red stars indicate the 20 counties visited

1.5 Methodology

The methodologies used by the researchers included a household survey where 4,200 households in the 20 counties were interviewed on their food security status using a hunger module to assess household experiences in the last 10 months before the study. The survey addressed the issues of availability, access, utilization and sustainability of food. In addition to the household survey, the views of opinion leaders were sought using key informant questionnaires, focus group discussions, and debriefing sessions. Further, institutional questionnaires were administered to the County Development Officers to obtain the opinions of government officials on food security in each of the visited counties. The counties sampled for the survey were Kisii,

Nairobi, Kiambu, Nakuru, Elgeyo-Marakwet, Kirinyaga, Kajiado, Bomet, Makueni, Bungoma, Taita Taveta, Migori, Trans Nzoia, Turkana, Baringo, Isiolo, Kwale, Mombasa, Nandi and Laikipia. Initial research findings were shared with county governments, members of the county assemblies and members of the Civil Society Organizations for further input.

Research findings from the 20 counties and desk review on institutional, policy and legal frameworks were shared at a national workshop with the chairpersons of the agriculture committees of the county assemblies. Table 1 below gives details of the Agro-Ecological Zones in which the sampled counties fall.

Table 1: Agro-ecological Zones in Kenya and Sampled Counties for the Baseline Survey

Agro-Ecological Zones	Counties	
Upper Highlands	Murang'a	Meru
	Nyandarua	Nyeri
	Nakuru	Elgeyo Marakwet
Upper Midlands	Machakos	Nyamira
	Narok	Vihiga
	Kisii	Kirinyaga
	Kiambu	Trans Nzoia
Lowland Highlands	Uasin Gishu	Nandi
	Kericho	Laikipia
Lowland Midlands	West Pokot	Kakamega
	Tharaka Nithi	Kisumu
	Homa Bay	Embu
	Siaya	Kitui
	Busia	
	Kajiado	Bungoma
	Bomet	Taita Taveta
	Makueni	Migori

Inland Lowlands	Mandera	Tana River
	Wajir	Marsabit
	Garissa	Samburu
	Turkana	Isiolo
	Baringo	
Coastal Lowlands	Lamu	Kilifi
	Kwale	
Urban	Nairobi	Mombasa

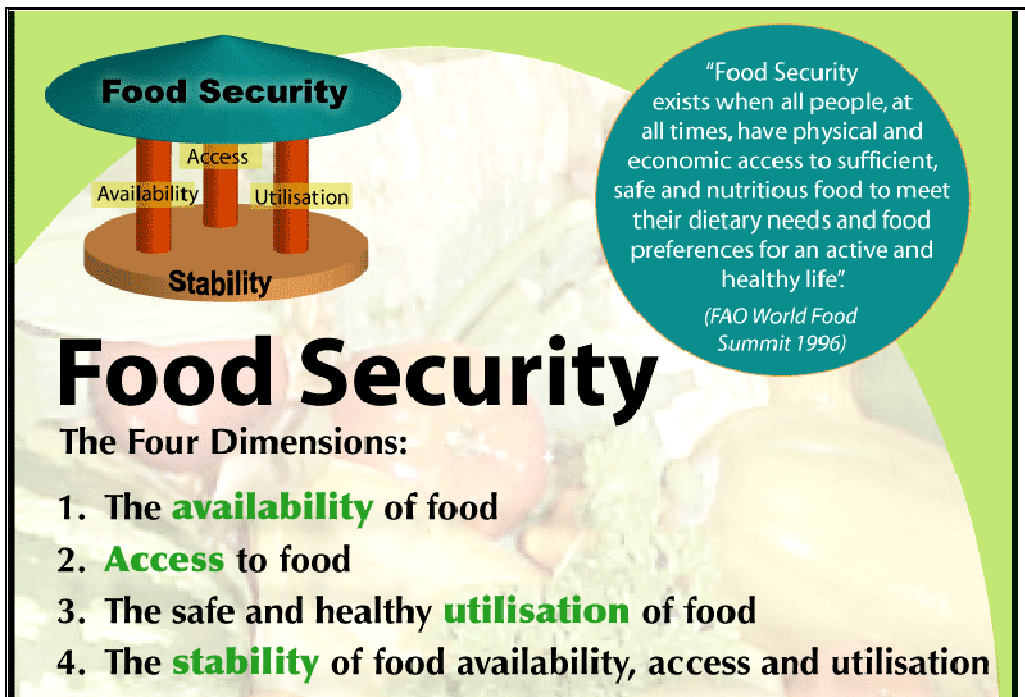
Source: AWSC/KNBS Baseline Survey on Food Security June 2013

1.6 Conceptual Framework

Conceptually, food security is based on three pillars: Availability, Accessibility and

Utilization. The three pillars rest on a fourth dimension of stability as illustrated in Figure 2.

Figure 2: Conceptual Framework of Food Security



Source: FAO, 1996

1.7 Rationale for Adopted Questions

The AWSC decided to focus on hunger as a major manifestation of food insecurity in the country. Hunger is usually understood to refer to the discomfort associated with lack of food. More specifically, the FAO (2010) defines hunger as consumption of fewer than about 1,800 kilocalories a day - the minimum

that most people require to live a healthy and productive life. Achieving adequate food security is a necessary first step towards improved human well-being, the alleviation of poverty, and sustainable broad-based economic growth. The study adopted eight questions to measure the four dimensions of food security as illustrated in Table 2.

Table 2: The 8 Study Questions Grouped According to Food Availability, Accessibility, Utilization and Sustainability

Food security Dimensions	Key Questions
Availability	E3: Did you or any household member eat a limited variety of foods due to lack of choices in the market? E6: Did you or any other household member eat fewer meals in a day because there was not enough food? E8: Did you or any household member go to sleep at night hungry because there was not enough food?
Sustainability	E1: Did you worry that your household would not have enough food?
Accessibility	E4: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food? E5: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough? E7: Was there a time when there was no food at all in your household because there were not enough resources to go around?
Utilization	E2: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?

1.8 Key Research Findings

The research revealed that, on average, 30% of Kenyans are often and always worried about not having food at the household level. The most worried communities were from Turkana (70%), Kisii (59%), Migori (53%), Kwale (47%), Trans Nzoia (42%) and Isiolo (35%) counties. The observation that over 30% of Kenyans worry about hunger has a serious impact on their individual development and the health of their families and communities and ultimately on national

development as a whole. The researchers, therefore, proposed that measures should be put in place to ensure that at least 7.1 million Kenyans are removed from this dehumanizing situation of constantly facing the threat of hunger. Kenya must declare zero tolerance to both hunger and worrying about hunger. Table 3 below ranks the 20 sampled counties from the least to the most food insecure based on the average manifestation of food insecurity as derived from responses to the eight questions.

Table 3: Manifestation of Hunger in the Last Ten Months

County	E01: Did you worry that your household would not have enough food?	E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05: Did you or any household member eat smaller meals in a day because of lack of resources to obtain enough?	E06: Did you or any other household member eat fewer meals in a day because there was not enough food?	E07: Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08: Did you or any household member go to sleep at night hungry because there was not enough food?	Average manifestation of food insecurity for the country
	%	%	%	%	%	%	%	%	%
Kirinyaga	8.3	7.8	6.8	9.4	6.3	4.7	3.1	2.1	6.1
Nakuru	14.0	18.1	7.7	14.0	14.9	14.0	7.2	4.5	11.8
Kiambu	15.9	18.6	6.0	18.6	13.0	11.2	8.4	6.0	12.2
Kajiado	17.6	18.6	22.0	15.5	15.4	12.6	11.0	5.3	14.8
Elgeyo Marakwet	16.7	14.8	11.9	14.3	19.0	18.3	13.8	11.0	15.0
Bomet	22.8	25.5	20.8	18.3	14.7	14.2	6.1	3.6	15.8
Baringo	20.8	18.4	21.2	22.6	19.4	20.4	18.9	15.6	19.7
Taita Taveta	23.3	25.2	18.9	22.6	21.7	20.2	15.7	15.1	20.3
Mombasa	26.0	26.5	20.5	27.4	26.0	25.1	24.3	16.1	24.0
Laikipia	23.1	27.6	23.7	39.2	31.9	25.9	17.2	7.5	24.5
Bungoma	31.0	33.8	18.8	28.3	29.7	25.6	20.2	12.7	25.0
Nairobi	25.7	30.4	18.7	33.6	29.0	26.2	19.6	20.1	25.4
Isiolo	35.8	41.7	27.8	33.0	38.7	36.3	32.5	25.5	33.9
Nandi	30.2	38.1	16.7	36.3	33.0	28.4	23.7	12.6	27.4
Makueni	28.2	37.3	21.4	33.6	33.6	31.5	21.0	17.9	28.1
Kwale	47.1	48.6	25.7	39.0	41.9	43.3	24.8	16.7	35.9
Trans Nzoia	41.7	54.5	35.3	47.6	41.7	35.3	22.0	17.2	36.9
Migori	53.5	55.9	31.2	51.8	47.1	45.8	35.9	31.8	44.1
Kisii	59.1	68.0	62.6	70.7	62.1	62.9	47.0	35.5	58.5
Turkana	70.3	70.9	70.9	73.4	71.5	74.1	59.5	48.1	67.3

Source: AWSC/KNBS Baseline Household Survey on Food Security June 2013

1.8.1 Manifestation of Hunger with Averages of E07 and E08

Table 4 combines the answers of respondents who said they were often hungry and those who said they were always hungry. According to the researchers in this study, the responses to these two questions have been aggregated because they indicate

the highest manifestation of food insecurity. The key research finding is that, on average, 18 per cent of Kenyans reported that they were often or always hungry. The research findings further indicate that the worst hit county in terms of hunger was Turkana County (54%) while Kirinyaga was the least affected (3%). Nairobi County ranked seventh with 20% of the population being affected.

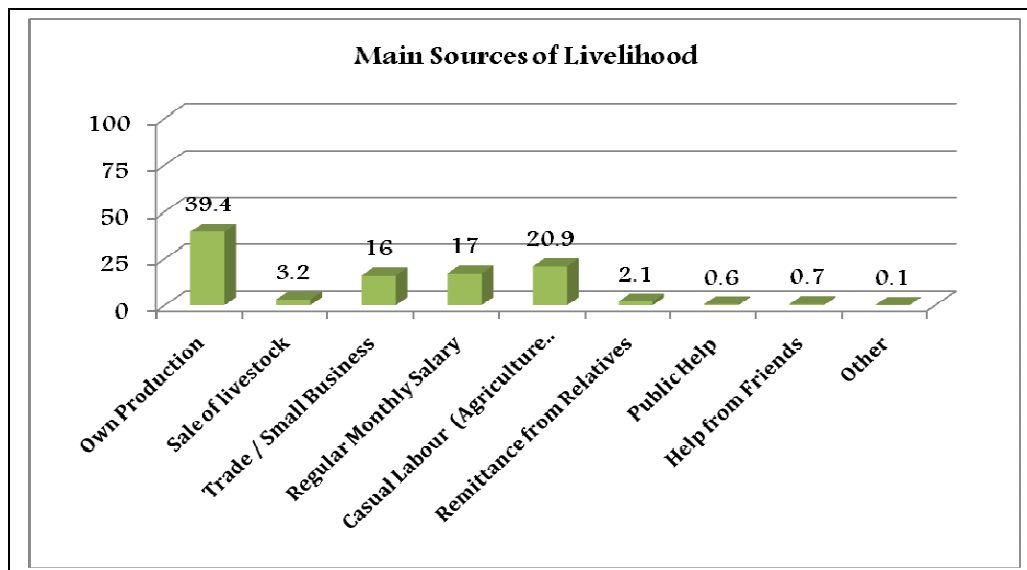
Table 4: Manifestation of Hunger with Averages of E07 and E08

County Name		E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08. Did you or any household member go to sleep at night hungry because there was not enough food?	Average
1	Turkana	59.5	48.1	54
2	Kisii	47.0	35.5	41
3	Migori	35.9	31.8	34
4	Isiolo	32.5	25.5	29
5	Kwale	24.8	16.7	21
6	Mombasa	24.3	16.1	20
7	Nairobi	19.6	20.1	20
8	Trans Nzoia	22.0	17.2	20
9	Makueni	21.0	17.9	19
10	Nandi	23.7	12.6	18
11	Baringo	18.9	15.6	17
12	Bungoma	20.2	12.7	16
13	Taita Taveta	15.7	15.1	15
14	E. Marakwet	13.8	11.0	12
15	Laikipia	17.2	7.5	12
16	Kajiado	11.0	5.3	8
17	Kiambu	8.4	6.0	7
18	Nakuru	7.2	4.5	6
19	Bomet	6.1	3.6	5
20	Kirinyaga	3.1	2.1	3
Total		21.0	15.7	18

Source: AWSC/KNBS Baseline Household Survey on Food Security June 2013.

1.8.2 Main Sources of Livelihood

Figure 3: Shows the main sources of livelihood in the 20 counties visited



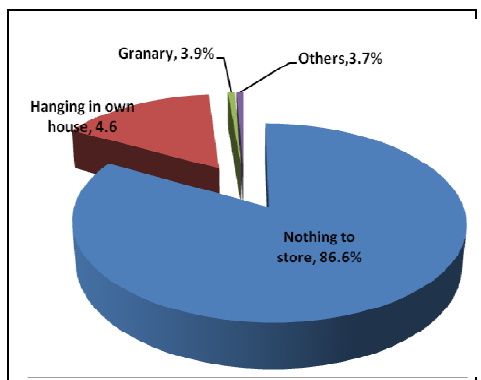
Source: AWSC/KNBS Baseline Survey on Food Security, June 2013

The findings also show that the sources of livelihood for the respondents in the 20 counties were mainly own production (39.4%); casual labor in agriculture and non-agriculture related activities (20.9%); regular monthly salary (17%); trade/small businesses (16%), sale of livestock (3.2%), remittance from relatives (2.1%); help from friends (0.7%) and public help (0.6%). It should, therefore, follow that interventions should centre on improving the output of own production, offer more employment opportunities, and improve infrastructure to enable expanded trade/small businesses. Given these findings, we have made proposals (Section 1.9) on how to improve food security in these three categories.

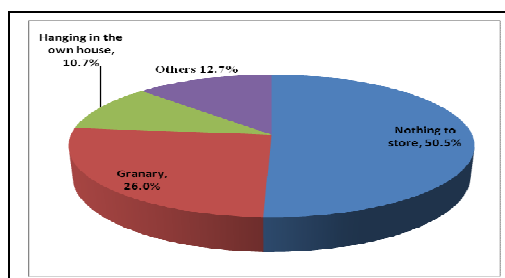
1.8.3 Preservation and Storage Methods

Figure 4 below shows the methods of storing perishable foods such as vegetables, fruits, meat and milk while Figure 5 illustrates the methods of storing non-perishable foods such as cereals, pulses, roots, and tubers.

Figures 4 and 5 reveal that the majority of the respondents indicated that they had nothing to store with 86.6 per cent saying they had nothing perishable to store while 50.5 per cent said they had no non-perishable foods (i.e., cereals and pulses including beans, cow peas, maize, rice and rice) to store.

Figure 4: Methods of food storage (perishable)

Source: AWSC/KNBS Baseline Survey on Food Security Baseline June 2013

Figure 5: Methods of food storage (non-perishable)

Source: AWSC/KNBS Baseline Survey on Food Security Baseline June 2013

1.9 Key Policy and Program Recommendation for the National Food Security

The research findings indicate that at least 7.1 million Kenyans (18%) Kenyans are often or always hungry. These figures have great implications, especially for the development of the potential of children. Therefore, the implementation of Article 43 (1)(c) must be regarded as a priority for Kenyans. Among the key recommendations emanating from

the research carried out in the 20 counties, the AWSC has prioritized seven critical areas that need urgent attention. However, AWSC recognizes that some of these recommendations need long-term planning.

1.9.1 Water for Irrigation and Domestic Use

Over 80 per cent of the land area in Kenya is classified as Arid and Semi-Arid Land (ASAL) because it is affected by moderate to severe land degradation and desertification. About 10 million people (30 per cent of Kenya's population) live in the ASALs with over half of this population living below the poverty line. From our study, most of the respondents from the ASAL areas which included Kwale, Isiolo, Elgeyo Marakwet, Laikipia, Taita Taveta, Makueni, Kajiado, Turkana, and Baringo proposed the introduction or scaling up of irrigation. While appreciating the great effort by the Government, the AWSC proposes the following measure in order to meet the great demand for water by the counties in the ASAL region:

Rain water harvesting: Purchasing of materials and equipment for water harvesting such as tanks, pipes, water pumps, borehole drilling machinery, and gutters to ensure rain water harvesting in schools, health centers, urban centers.

1.9.2 Family Support Program

Given the level of food insecurity in all the counties visited, and the fact that at least 18% of Kenyans or 7.1 million people are often or always hungry, the national government (through the county governments) should establish a family support program for those severely affected by hunger. Following the example of India and Brazil, the Kenya government should focus directly on the affected households to ensure that they have access to food through

either increased production (40 per cent produced their own food), creation of employment for casual laborers (21%) and opportunities for markets and trade (16 per cent who engage in trade and small business).

As in the case of India, in order to ensure efficient and transparent targeting of the food poor households, we recommend the establishment of a clear legal framework to ensure the implementation of a family support program that will address this category of Kenyans and redeem them from the dehumanizing situation while also responding to Article 43 (1)(c) of the Kenyan Constitution. This action will demonstrate that Kenya is truly committed to zero tolerance to hunger and will set the pace for the entire region. We, therefore, propose that within the 2014/2015 budget the government should commit itself to reducing by 10 per cent the population of those who are often and always hungry by undertaking the following measures:

- i. **Targeting own producers** The national and county governments should target each of the households that produce their own food to ensure increased food production. The family support program could ensure that the 40 per cent of households in this category have access to farm inputs, information, and markets for their produce.
- ii. **Stabilizing farmer's income:** County governments should prioritize the buying of food directly from the farmers to ensure minimum guaranteed returns for them.
- iii. **Value addition and markets:** From the research 50.5 per cent of the respondents said they had no non-perishable food while 12.2 per cent stored perishable food. Poor storage and lack of markets were common problems

faced by almost all the respondents. We, therefore, propose the allocation of resources to set up processing plants in all the counties as per the needs assessment of each county. Baringo County, for instance, where a lot of tomatoes go to waste during periods of bumper harvest may require a tomato processing plant. Similarly, Nakuru and Makueni counties may require vegetable canning and mango processing plants respectively.

1.9.3 County Strategic Food and Water Storage

Wastages and losses incurred as a result of diseases and pests attacking the produce, poor weather, destruction of produce by wild animals, and lack of adequate storage facilities during surplus production contribute to the massive food insecurity reported during the survey. We estimate that on average the counties will require 850,000 bags of grain search, that is, about 40 million bags for the entire country. We recognize that Schedule IV of the Constitution gives the responsibilities of health, agriculture and social services among others to the county government. We therefore propose support for the establishment of county strategic food and water reserves in each county.

1.9.4 One Job for Every Poor Household

The government should develop a policy that allows the county and national governments to identify the hungry households and create employment for at least one person in the household for at least 200 days in a year. This arrangement will cater for 21 per cent of the respondents from our study who indicated that they are engaged in casual labor as a source of livelihood. The ultimate objective of this project is to create employment for at least 200 days per year for one person in a

poor family for households that have no one with wage employment. In counties such as Isiolo and Turkana where food insecurity is high, the government should identify and provide employment for two persons per household. The beneficiaries of this program will be engaged in green jobs which include water conservation and water harvesting; drought-proofing (including forestation and tree planting to increase forest cover to 10 per cent of the land mass of Kenya); construction of irrigation canals, including macro and minor irrigation works; and construction and maintenance of roads, government buildings, and other structures.

1.9.5 Cash Transfer

The government has shown commendable efforts towards the allocation of funds to the elderly, orphans and vulnerable children as well as the persons living with disabilities. However, many respondents (86%) registered their dissatisfaction with the management, allocation and distribution of the funds. We, therefore, recommend that the food security county committees proposed herein should be given the responsibility of overseeing the proper targeting of beneficiaries including monitoring and evaluation of the implementation process. In addition, exit strategies should be provided for the beneficiaries.

1.9.6 Drug and Alcohol Abuse

The abuse of drugs and alcohol was a major contributor to food insecurity in the counties visited such as Kiambu, Mombasa, and Kirinyaga. We propose increased support to NACADA to deal with this problem. We also propose the establishment of a fund to cater for the rehabilitation of the affected people, especially the youth.

1.9.7 Increased security

The 2014/2015 national budget allocation for security is high given the current security situation in the country. Research also showed that insecurity was a major contributor to food insecurity across the counties. According to the respondents, insecurity was caused by among other facts, village gangs who terrorize the owners of small businesses. These gangs also target the farmers by milking their cows and stealing their crops and livestock. Increased human-wildlife conflict was another problem raised by the respondents. We, therefore, propose that 15 per cent of the total budget for security should be allocated to initiatives aimed at combating insecurity and maintaining peace at the community level. This action could contribute to ensuring food security in counties such as Isiolo, Turkana, and Mombasa where many of the respondents indicated that insecurity was a threat to food security.

1.9.8 Implementation Mechanism for County Food Security Programs

Given the research findings discussed in detail in this report, we propose the establishment of County Food Security Committees comprising of the county executive officer in charge of agriculture; two social services persons of opposite gender with knowledge and experience in matters related to food security appointed by the Governor; and two persons of opposite gender to represent special interests also appointed by the Governor. These committees will monitor the food security and nutrition situation, evaluate the progress of implementation of the food security programs in the county and provide guidelines for the selection and appropriate targeting of food insecure families and

individuals in the county among other functions.

1.9.9 Economic Empowerment of Youth and Women

The Government's efforts to provide employment, especially for the youth and women, are indeed commendable. The various initiatives such as the Women Enterprise Fund, Youth Enterprise Fund and Uwezo Fund will contribute and make it possible for many youth and women to engage in gainful employment but still a lot more needs to be done. The majority of the youth remain unemployed and some even resort to social ills as a means of livelihood. Our research findings showed that 30.3 per cent of the respondents from our study were youth between the ages of 15-34 years and increased opportunities will make it possible for them to engage in meaningful employment. The Funds should be enhanced and more young people trained on how to

utilize the funds to avoid mismanagement and defaulting on repayment of money from the fund.

1.9.10 Enforcement Mechanism for Ensuring Food Security

The AWSC proposes that a legislative framework should be developed that will enforce food security programs including the family support program, cash transfer, and other initiatives aimed at the implementation of Article 43 (1) (c) of the Constitution. This is in line with best practices in other countries such as Columbia, Mauritius, South Africa and India.

More details of the findings of the research project on the 20 counties can be found in the National Report on Food Security that the counties will receive from the University of Nairobi. The chapters that follow will present the key findings of the research for Nairobi County.

Nairobi County Food Security Research Findings

2.1 Introduction and Context

Nairobi County lies on the Western section of the Athi Kapiti plains and is approximately 140 kilometers south of the Equator. It is located 495 kilometers from Mombasa City and is 338 kilometers away from Kisumu City. To the North and West of the city centre, the landscape is hilly and broken and is generally referred to as the Kikuyu Plateau. The land rises from about 1676 meters above sea level at the city centre to 1905 meters above sea level to the North West of the Central Business District (CBD) (<http://www.countyedition.co.ke>). Towards the East and South of the city centre, the land flattens out to the Athi plains at about 1500 meters above sea level.

Nairobi County is significant for the development of Kenya because it hosts Nairobi City, which is a key political,

economic, social, and cultural hub. Nairobi city has enjoyed a good international reputation and is currently the global centre for UN Habitat. Nairobi metropolis accounts for over 60 per cent of the urban wage employment in Kenya and is a major recipient of most migrants from rural Kenya. It occupies an area of 690 square kilometers and is delimited by satellite towns, which serve as residential areas for some of the migrant workers in Nairobi. According to the Kenya Population Census (2009), Nairobi County had a population of 3.2 million people. Currently, this figure is estimated to have risen to over 4 million people and is projected to reach 5 million by the year 2015. Nairobi has been registering a population growth rate of 4 per cent per year (Kenya National Bureau of Statistics, 2009).

Figure 6: Nairobi County Map



Source: www.gabrielLubale.com

2.2 Research Methodology

Nairobi County was one of the Counties selected from the Urban Counties ecological zone. The research was carried out between 26th June and 2nd July, 2013. The research frame used was the National Sample Survey and Evaluation Program NASSEP V developed by the KNBS which, generally consists of a list of households generated from a number of scientifically selected villages and estates, which ultimately represent other villages in the entire country.

2.2.1 Research Sample

The research was conducted in ten clusters. Twenty two households per cluster were sampled, using the National Sample Survey and Evaluation Program (NASSEP) V frame by the KNBS. Table 5 details the ten clusters that were sampled, in Nairobi County, using the NASSEP V frame by the KNBS.

Table 5: Clusters Sampled by the NASSEP Framework for Household Interviews in Nairobi County

District	Division	Location	Sub Location	EA Name
Nairobi East	Embakasi	Dandora	Dandora 'B'	Dandora Phase II
Nairobi East	Embakasi	Kayole	Kayole	D1/Masimba
Nairobi East	Embakasi	Njiru	Njiru	Spring Valley 'B'
Nairobi East	Makadara	Maringo	Ofafa Maringo	Kunguni
Nairobi North	Central	Ngara	Ngara East	Government Quarters '
Nairobi North	Kasarani	Kahawa	Kiwanja	K.M
Nairobi North	Kasarani	Ruaraka	Mathare North	Memory Computer Service
Nairobi West	Dagoretti	Kawangware	Kawangware	Msalaba
Nairobi West	Kibera	Laini Saba	Laini Saba	Kwa Joseph
Westlands	Westlands	Kangemi	Mountain View	Githungucu

2.2.2 Research Questionnaires

The tools administered for the research in Nairobi County were: household questionnaires, an institutional questionnaire (completed by the County Development Officer), key informant questionnaires and focus group discussions schedules.

i. Household Questionnaire

The data was collected using household questionnaires that were administered to 211 household (HH) heads

ii. Key Informant Questionnaire

The key informant questionnaire was used to interview community leaders on food security issues in their locality. The community leaders were interviewed on a one-on-one basis. These comprised youth leaders, women leaders, religious leaders, political leaders and leaders of persons with disabilities. The ten key informants interviewed were sampled from the Nairobi area.

iii. Institutional Questionnaire

The institutional questionnaire sought to gather secondary data on food security from County Development Officers (CDOs), formerly referred to as District Development Officers. One detailed institutional questionnaire was completed by the County Development Officer

iv. Focus Group Discussion (FGD)

The FGDs were used as a tool for gathering the collective knowledge on food security. Two focus group discussions, with participants drawn from community leaders, who included women, men, youth, and persons with disabilities, were conducted in two areas in Embakasi Constituency, using an FGD guide.

v. Debriefing Meeting

After gathering the data using the various research tools outlined above the research team held a debriefing meeting as a source of information as well as to provide an opportunity for the County and central government officials, community and opinion leaders, civil society organizations and the general populace to have useful discussion about the food security situation in Nairobi County. The debriefing forum was held on Saturday 29th June 2013, at Hotel Mariposa and it brought together representatives from County and central governments, Ministry of Agriculture officials, civil society organizations officials as well as community and opinion leaders selected from the

participants of focus group discussions, and key informant interviews of the integrated research.

2.3 Key Research Findings

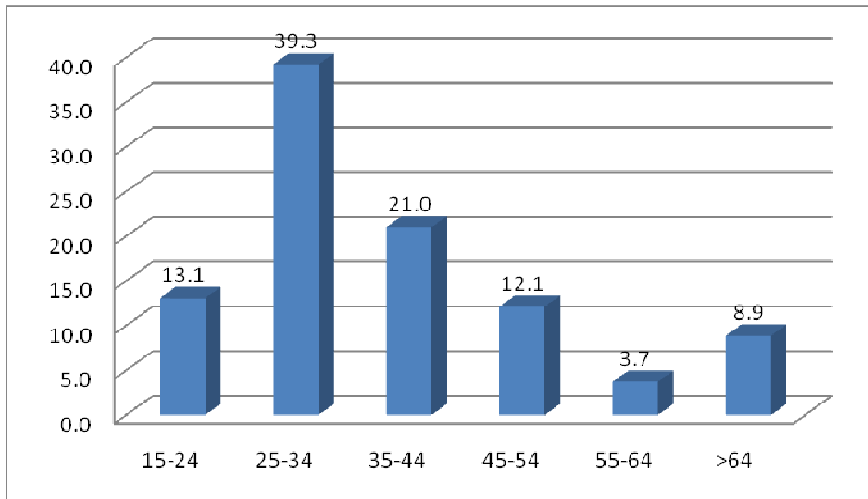
The key findings were organized along the following areas: demographic characteristics of respondents; manifestation of food insecurity in the county; main sources of livelihood, food preservation and storage methods and lastly, government and donor support programs in Nairobi County.

2.3.1 Demographic Characteristics of Respondents

A summary of demographic characteristics of the respondents interviewed during the Food Security Baseline Survey was considered by: age, marital status, level of education, gender and household size of the informants, outlined in the following sub-sections.

i. Age of HH Respondents

The age of the head of the household (HH) was considered to be an important variable in determining the status of the HH's food security. The age of the HH head was documented and the results cross-tabulated and put into broad age groups, starting with children of the age of 14 years and below, the other groups were spaced at a 10 years interval up to 64 years. The last group, representing the elderly comprised of HH heads above 65 years of age. Figure 7 indicates the age groups of the HHHs from Nairobi County.

Figure 7: Age group of the household heads from Nairobi County

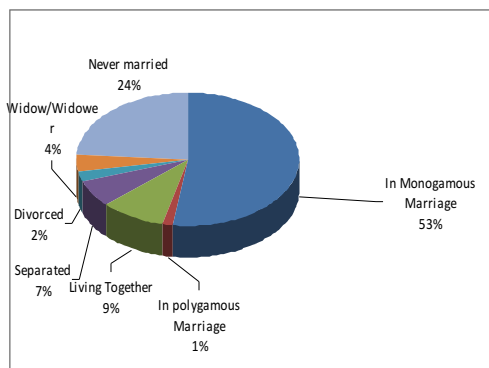
Source: AWSC/KNBS Baseline Survey on Food Security June 2013

The survey findings presented in Figure 7 reveal that in Nairobi County, 13.1 per cent of the households were headed by heads in the age bracket of 15-24 years. The highest percentage (39.3%) of the household heads, were in the age bracket of 25-34 years, followed by the age category of 35-44 years at 21 per cent. The more mature household heads shared the remaining 25 per cent at 12.1 per cent for age bracket of 45-54 years, 3.7 per cent for age bracket of 55-64 years, and 8.9 per cent for those over 64 years. There was no household head in the age bracket of below 14 years. The majority of the household heads in Nairobi County were youthful because they were in the age bracket of 15-34 years rated at 52.4 per cent. 73.4 per cent of all household heads in Nairobi were aged between 15 years to 44

years. This is consistent with the demographic characteristics of urban areas which tend to attract youthful, rural urban immigrants.

ii. Marital Status of the Household Heads

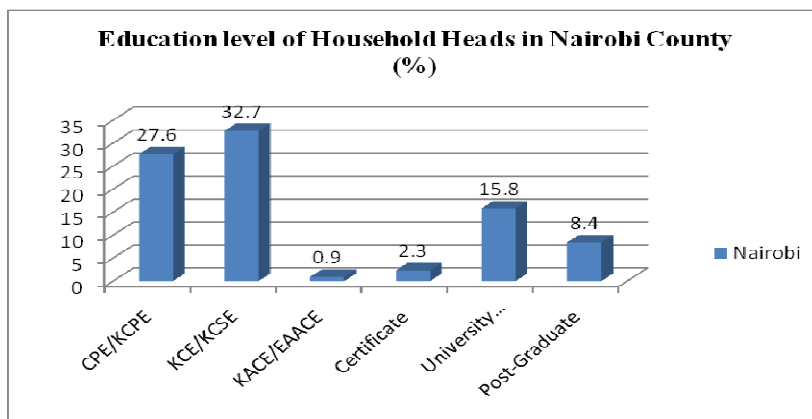
The study adopted the conventional socially accepted marriage categories among the target communities, including monogamy, polygamy, separation, divorce, staying together and never married. The marital status of the HHHs is presented in Figure 8. The figure reveals that 53 per cent of the households are headed by heads who are in a monogamous marriage, 24 per cent never married, 7 per cent are separated, 4 per cent are widowed, 2 per cent are divorced while 1 per cent are in polygamous type of marriage.

Figure 8: Marital status of Household Heads

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

iii. Education Levels of Household Heads

The study examined data on education level of the HH head as it was an important variable in food security. Education improves an individual's opportunities and access to information. The findings on the level of education of respondents from Nairobi County are presented in Figure 9.

Figure 9: Households Heads Levels of Education

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

The majority of household heads in Nairobi County are literate. The largest proportion, at 32.7 per cent of the HHHs had Secondary school education, 27.6 per cent had some form of Primary school education, 3.2 per cent had Tertiary education/certificate and 24.2 per cent had University education.

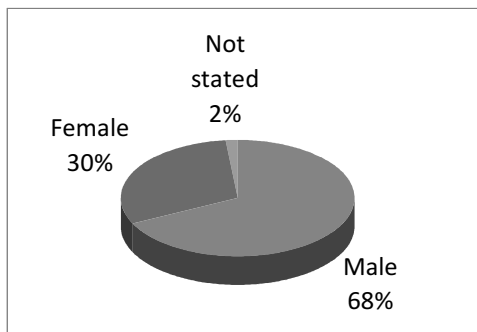
iv. Gender of Household Head

The survey also examined data on biological sex, male or female, of the household head.

Figure 10 presents the findings from Nairobi County.

The analysis of data collected during the research demonstrated that out of the 211 household heads interviewed in Nairobi County, 68 per cent were males and 30 per cent were females while 2 per cent did not state the sex of the household heads.

Figure 10: Gender of Household Head in Nairobi County



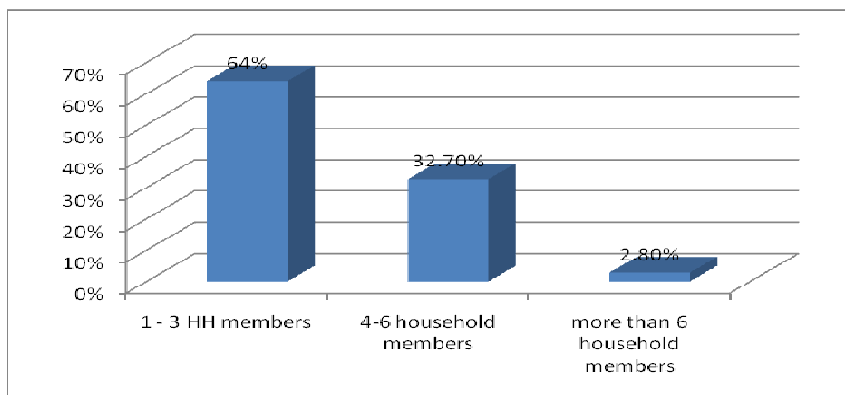
Source: AWSC/KNBS Baseline Survey on Food Security June 2013

v. Household Sizes

The size of the household, based on the number of members was considered an important determinant of HH food security. The HHs were classified into three groups: those with 1-3 members, 4-6 members and the largest HH size being considered as having more than 6 members. The study findings of HH sizes in Nairobi County are presented in Figure 11.

From the findings, the majority of the households, at 64 per cent have 1-3 households members, 32.7 per cent of the households have 4-6 members while only 2.8 per cent have more than 6 households members.

Figure 11: Households Size Distribution



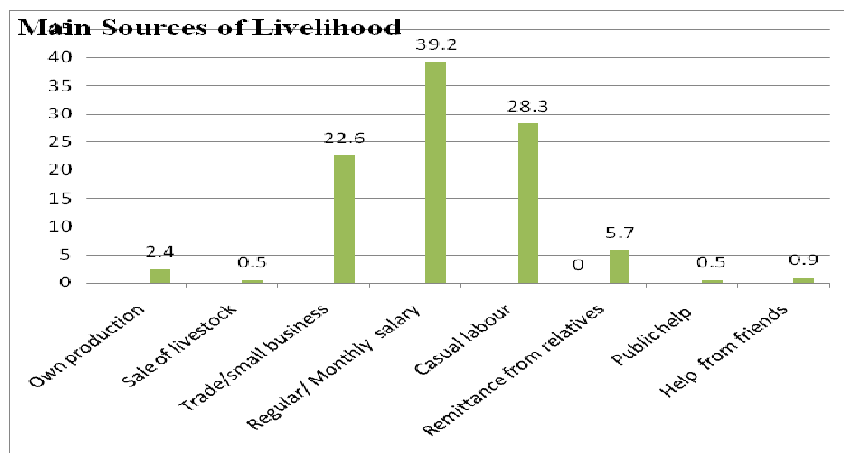
Source: AWSC/KNBS Baseline Survey on Food Security June 2013

2.3.2 Main Sources of Accessing Food

Households are considered to have sustainable livelihoods when they can cope with and recover from the shocks and stress of both high and low food produce and to continue maintaining their capabilities and assets without undermining their natural environment. Sustainable livelihood refers to

people’s capacity to generate and maintain their means of living, enhance their well-being and that of future generations (International Federation of Red Cross and Red Crescent Societies, 2006). Figure 12 reveals the main sources of livelihood for the HHHs interviewed in Nairobi County.

Figure 12: Respondents' Main Sources of Livelihood



Source: AWSC/KNBS Baseline Survey on Food Security June 2013

As revealed in Figure 12, regular monthly salary was the main source of accessing food for the majority of the respondents in Nairobi County (39.2%). Casual labor and small businesses were 28.3 per cent and 22.6 per cent, respectively. The other less significant sources of food included remittance from relatives 5.7 per cent, 2.4 per cent own production and help from friends at 0.9 per cent.

2.4 Food Security Situational Analysis in Nairobi County

This section indicates the findings on the situation of HH food security in Nairobi County in the last 10 months, prior to the Baseline Survey.

2.4.1 Hunger Indicators in Nairobi County in the Last Ten Months

The hunger module was used to determine the status of food security at the household level in Nairobi County 10 months, prior to

the survey. The respondents were asked to rate the status of food security in their households based on eight questions in the hunger module that assesses the four dimensions of food security, namely: availability, accessibility, utilization and sustainability. The hunger module measuring the household's food security used a scale of never, sometimes, often and always which gauge the extent of food security. Never, illustrated food security, sometimes is a low manifestation of food insecurity, often indicated a moderate manifestation of food insecurity and always indicated a high manifestation of food insecurity. Therefore, for each of the eight questions, a high percentage score in the scale of never indicates that a household is more food secure. On the other hand, high percentages in the scales of sometimes, often and always indicate high level of food insecurity. Table 6 illustrates the results of the hunger indicators in Nairobi County.

Table 6: Hunger Indicators in Nairobi County in the Last 10 Months

Hunger Indicators	Never	Sometimes	Often	Alwa ys
	%	%	%	%
E1. Did you worry that your household would not have enough food?	26.6	47.7	15.0	10.7
E2. Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	15.0	54.7	24.3	6.1
E3. Did you or any household member eat a limited variety of foods due to lack of choices in the market?	56.5	24.8	14.0	4.7
E4. Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	22.9	43.5	27.6	6.1
E05. Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough?	34.6	36.4	24.8	4.2
E06. Did you or any other household member eat fewer meals in a day because there was not enough Food?	36.4	37.4	22.9	3.3
E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	58.9	21.5	17.3	2.3
E08. Did you or any household member go to sleep at night hungry because there was not enough food?	58.9	21.0	15.9	4.2

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

From the findings, 17.3 per cent and 2.3 per cent of the respondents said often and always, respectively, there was no food at all in the household because there were not enough resources to go around. And 15.9 per cent and 4.2 per cent, of the respondents said often and always, respectively, that they go to sleep at night hungry because there was not enough food. These are the categories that are said to be experiencing chronic food insecurity.

2.4.2 Chronic Hunger Module for the Last Ten Months (with Often and Always Scale Combined)

The study investigated the extent of chronic hunger in Nairobi County by combining and

averaging of the HHs that were often and/or always hungry based on questions E07 and E08. The combined results of respondents from Nairobi County who said they were either often or always hungry in the last 10 months are displayed in Table 7 and reveal that 19.6 per cent often and/or always had no food at all in their household because there were not enough resources to go around while 20.1 per cent of the respondents said they or members of their HHs often/always slept at night hungry because there was not enough food. An average of 19.8 per cent were suffering from chronic food insecurity

Table 7: Severe Manifestations of Hunger in Nairobi County: E07-E08

E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08. Did you or any household member go to sleep at night hungry because there was not enough food?	Average
Often and Always scale combined	Often and Always scale combined	Often & Always
%	%	%
19.6	20.1	19.8

Source: AWSC/KNBS Baseline Survey on Food Security, June 2013

i. Hunger indicators by Age of the Household Head

The age of the household head was considered to be an important factor related to food security. From the findings it appears that on average, households headed by heads who are 45-54 years, are more hunger stricken as compared to other households rated at 36.5 per cent while households headed by those who are 25-44 years are least hunger stricken rated at 20.1 per cent as shown on Table 8.

Household heads in the age bracket of 55-64 years were the most worried of not

having enough food in their households rated at 37.5 per cent while households headed by heads who are in the age group 25-34 were the least worried that their households will not have enough food rated at 20.1 per cent.

Households headed by heads in the age bracket 45-54 years had the highest proportion that were not able to eat the kinds of foods they preferred because of lack of resources rated at 38.5 per cent. While households headed by Household heads in the age bracket 25-34 years had the lowest frequency of not being able to eat the kinds of foods they preferred because of lack of resources rated at 23.8 per cent.

Table 8: Manifestations of Hunger According to Age of the household head

Age	E01: Did you worry that your household would not have enough food?	E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough	E06: Did you or any other household member eat fewer meals in a day because there was not enough Food?	E07: Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08: Did you or any household member go to sleep at night hungry because there was not enough food?	Average
	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	E1-08
	%	%	%	%	%	%	%	%	
15-24 years	25.0	25.0	17.9	32.1	32.2	28.6	17.9	17.9	24.8
25-34	20.1	23.8	11.9	25.0	25.0	22.6	15.5	16.7	20.1
35-44	26.7	35.6	17.8	37.7	28.9	26.7	22.2	24.5	27.5
45-54	34.6	38.5	30.8	42.3	38.4	38.4	34.6	34.6	36.5
55-64	37.5	37.5	37.5	50	50	37.5	25	12.5	35.9
Above 64	26.4	31.6	21.1	42.1	21.1	15.8	10.5	10.5	22.4

Source: AWSC/KNBS Baseline Survey on Food Security, June 2013

Households headed by heads in the age group 55-64 had the highest proportion that ate limited variety of food due to lack of choices in the market (37.5%) while the households headed by the heads in the age group 25-34 rated at 11.9%.

Most of the households in Nairobi County ate food they preferred not to eat due to lack of resources to obtain other types of food but the Households headed by heads in the age bracket 55-64 had the highest proportion rated at 50 % while households headed by

heads who are in the agegroup 25-34 years had the lowest proportion that ate the food they preferred not to eat due to lack of resources to obtain enough, rated at 25 per cent.

With respect to the proportion of the respondents who ate smaller meals in a day due to lack of resources to obtain enough, half of the respondents from the households headed by heads in the age group 55-64 reported to have been in this situation while

only a quarter of the respondents' in the age group 25-34 reported on the same.

Regarding the households that had a time when they ate fewer meals in a day because there was not enough food, households headed by heads in the age bracket of 45-54 years had the highest frequency rated at 38.4 per cent while household headed by Household heads above 64 years had the least frequency rated at 15.8 per cent.

Responding to whether there was a time when there was no food at all in the households because there was not enough resources to go around, households headed by heads who are in the age group 45-54 years had the highest proportion (34.6%) while households headed by Household heads above 64 years had the lowest proportion at 10.5 per cent.

Finally, in respect to whether there was a time when any of the household members went to bed hungry because there was not enough food, the results showed that households headed by heads who are 45-54 had the highest proportion of the households that had any member of the household having gone to bed hungry rated at 34.6 per cent while households headed by Household

heads who are above 64 years had the least proportion (10.5%).

ii. *Hunger Indicators by Marital Status of the Household Head*

Results of the effect that the marital status of household heads has on food security are presented in Table 9. It appears that those who are separated from their spouses worry the most about not having food rated at 75 per cent. On the other hand, household heads in monogamous marriages were, at 10.9 per cent, the least worried about not having enough food while polygamous were not worried. Households headed by polygamous heads had the highest frequency of not being able to eat the kinds of foods they preferred because of lack of resources rated at 100 per cent while those headed by monogamous household heads, 15.4 per cent, had the least worry. Monogamous households had the least frequency of rating for eating a limited variety of foods due to lack of choices in the market, rated 6.4 per cent and households where heads were separated had the highest frequency rated at 75 per cent.

Table 9: Hunger Indicators by Marital Status of the Household Head

Marital Status	E01: Did you worry that your household would not have enough food?	E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough food?	E06: Did you or any other household member eat fewer meals in a day because there was not enough food?	E07: Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08: Did you or any household member go to sleep at night hungry because there was not enough food?	Average
	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	E01-08
	%	%	%	%	%	%	%	%	%
Monogamous	10.9	15.4	6.4	20	14.5	13.6	7.3	9.1	12.2
Polygamous	66.7	100	33.3	100	33.3	33.3	33.3	0	49.9
Separated	75	75	75	75	85	80	85	85	79.4
Widow or Widower	35.7	35.7	7.1	35.7	35.7	35.7	28.6	28.6	30.4
Never married	40	40	60	60	60	40	20	20	42.5

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

Monogamous household heads had the least frequency of eating food that they preferred not to eat because of lack of resources to obtain other types of food rated at 20 per cent and while polygamous families had the highest frequency, rated at 100 per cent. Separated household heads had the highest frequency of eating smaller meals in a day because of lack of resources to obtain enough food, rated at 85 per cent and monogamous heads had the least frequency rated at 14.5 per cent.

Separated household heads had the highest frequency of eating fewer meals in a

day because there was not enough food, rated at 80 per cent and monogamous household heads registered the lowest frequency rated at 13.6 per cent. Monogamous household heads had the least frequency of occasions when there was no food at all in their households because there were not enough resources to go around rated at 7.3 per cent while the separated heads had the highest frequency of 85 per cent. Polygamous household heads had the least frequency going to sleep at night hungry because there was not enough food rated at 0 per cent and separated household heads had the highest

frequency, rated at 85 per cent. Overall, household heads in monogamous marriages were the least food insecure, rated at 12.2 per cent while separated household heads were the most food insecure rated at 79.4 per cent.

iii. Hunger Indicators by Level of Education of Household Head

Furthermore, the research investigated the relationship between the level of education of the HHHs and food security. The findings on the status of food security by Educational Level are as indicated in Table 10. Generally, the Table reveals that the proportion of the households being often and always in the situation of the hunger indicators, used by AWSC E01-E08, decreased with an increase in the level of education of the household head.

The results revealed that the proportion of the households that were worried that their households would not have enough food decreased with the increase in the level of education of the household heads. Households headed by heads without any education were the most worried (35.7%) while none of the households that were headed by heads with university diploma were worried that their households will not have enough food.

Table 11 also reveals that households headed by heads with primary level of education had the highest proportion (42.4%) of household members not able to eat the kind of food they preferred because of lack of resources, while none of the households headed by those with university

diploma reported any household member eating the kinds of foods they did not prefer due to lack of resources.

It was revealed that the proportion of the households that had any household member having eaten limited variety of food due to lack of choices in the market also increased with the decrease in the level of education of the household heads. Households headed by heads with no education had the highest proportion of respondents or any member of the household eating a limited variety of foods due to lack of choices in the market, while those with degree-post graduate level of education had the lowest proportion, 42.9 per cent and 5.6 per cent respectively.

Households headed by heads with primary education were four times more likely to have members eating the kind of foods they did not prefer because of lack of resources than households headed by heads that had attained a degree/postgraduate level of education (44.1 per cent and 18.2 per cent respectively). In respect to any respondent or any member of the household having eaten smaller meals in a day because of lack of resources to obtain enough food, the proportion was highest among households headed by heads with low level of education i.e. none and primary with 50 per cent and 40.7 per cent respectively. None of the households headed by heads with university diploma had either respondents or any member of the household reporting eating smaller meals because of lack of resources to obtain enough food.

Table 10: Hunger Indicators by Level of Education of Household Head

Level of Education	E01: Did you worry that your household would not have enough food?	E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough food?	E06: Did you or any other household member eat fewer meals in a day because there was not enough food?	E07: Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08: Did you or any household member go to sleep at night hungry because there was not enough food?	Average
	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	
	%	%	%	%	%	%	%	%	
None	35.7	28.6	42.9	42.8	50	42.8	28.5	35.7	38.4
Primary	33.9	42.4	20.4	44.1	40.7	39	25.4	25.4	33.9
Secondary	23.6	29.8	19.4	31.9	27.8	23.6	20.9	20.9	24.7
Non-University Diploma	16	16	8	28	16	12	12	12	15
University Diploma	0	0	7.1	7.1	0	0	0	0	1.8
Degree-Post Graduate	11.2	11.1	5.6	11.1	11.2	11.1	5.6	5.6	9.1

Source: AWSC/KNBS Baseline Survey on Food Security June 2011

Table 10 further reveals that the proportion of households headed by heads who have no education and have any member or the respondent having eaten fewer meals in a day because there was not enough, was almost four times the proportion of households headed by heads who have degree-post graduate level of education, rated at 42.8 per cent and 11.1 per cent respectively. With respect to a household experiencing a time when there was no food at all, the proportion still decreased with an

increase in the level of education indeed none of the household headed by heads with university diploma stated that there was a time there was no food at all in the household.

Finally, the Table 10 reveals that the proportion of the households that had either the respondent or any household member going to sleep at night hungry because there was not enough food also decreased with the increase in the level of education of the household heads, with the proportion of

households with heads with no education being 6 times more the proportion of the households with degree-post graduate level of education (35.7per cent and 5.6per cent respectively).

iv. *Hunger Indicators by Gender of the Household Heads*

The Study considered the gender of the HH head as a key determinant given the different roles played by men and women in regard to food security. Table 11 presents the findings of the status of HH food security based on the gender of the head of the household.

Table 11: Hunger Indicators by Gender of the Household Head

Gender	E01: Did you worry that your household would not have enough food?	E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough food?	E06: Did you or any other household member eat fewer meals in a day because there was not enough food?	E07: Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08: Did you or any household member go to sleep at night hungry because there was not enough food?	Average
	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	E01-E08
	%	%	%	%	%	%	%	%	%
Male	25.5	30.3	20	33.1	28.9	26.9	21.4	26.6	26.6
Female	4.6	29.2	16.9	35.4	29.2	24.6	15.4	22.2	22.2

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

The findings reveal that 25.5 per cent of the male household heads worried about not having food while only 4.6 per cent of female household heads did so. Male household heads also had a higher frequency of not being able to eat the kinds of foods they preferred because of lack of resources, rated at 30.3 per cent as compared to 29.2 per cent of the female household heads.

Female-headed households also had a lower frequency of eating a limited variety of foods due to lack of choices at the market rated at 16.9 per cent while the male-headed ones had the highest frequency rated at 20 per cent. Male headed households had the least frequency of eating food that they preferred not to eat because of lack of resources to obtain other types of food rated at 33.1 per

cent while female headed ones had a higher frequency rated at 35.4 per cent.

At 29.2 per cent female household heads had the highest frequency of eating smaller meals in a day because of lack of resources to obtain enough while male household heads were rated at 28.9 per cent. Male household heads had the highest frequency of eating fewer meals in a day because there was not enough food, rated at 26.9 per cent and female household heads registered a lower frequency at 24.6 per cent. Female household heads had the least frequency of a time when there was no food at all in their households because there were not enough resources to go round, rated at 15.4 per cent and the male-headed houses had a higher frequency of 21.4 per cent.

At 4.8 per cent, male-headed households had a lower frequency of going to sleep at

night hungry because there was not enough food, while the female heads were rated at 13.8 per cent. Overall, female-headed households were at 22.2 per cent were less food insecure than the male headed households which were rated at 26.6 per cent.

v. Hunger Indicators by Household Size

Table 12 indicates that when the Nairobi County respondents, when asked whether there was a time when they had no food at all because there were not enough resources, the average responses for often or always were 19 per cent for respondents with 1-3 persons in the household, 17.1 per cent for households with 4-6 persons, and 66.6 per cent for households with more than 6 members.

Table 12: Hunger indicators by household size

Household Sizes	E01: Did you worry that your household would not have enough food?	E02. Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	E03. Did you or any household member eat a limited variety of foods due to lack of choices in the market?	E04. Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?	E05. Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough food	E06. Did you or any other household member eat fewer meals in a day because there was not enough food?	E07. Was there a time when there was no food at all in your household because there were not enough resources to go around?	E08. Did you or any household member go to sleep at night hungry because there was not enough food?
	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always	Often and Always
	%	%	%	%	%	%	%	%
1 - 3 Persons	27.8	32.9	20.4	35	30.6	26.3	19	19.7
4-6 Persons	15.7	22.9	12.9	28.6	22.8	22.9	17.1	18.6
More than 6 persons	66.6	66.7	50	66.6	66.7	66.7	66.6	50

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

Responding to the question whether they or their households slept hungry because there was not enough food, 19.7 per cent of households with 1-3 members answered in the affirmative while 18.6 per cent responded for households with 4-6 members, 50 per cent of households with more than 6 members, affirmed having slept hungry.

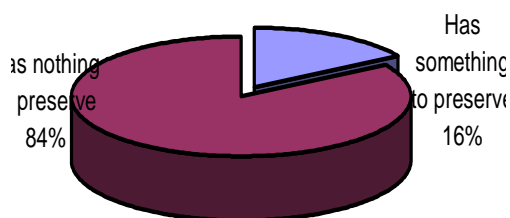
2.5 Food Preservation and Storage Methods

Preservation of post-harvest surpluses of seasonal food crops such as cereals, fruits and vegetables is an important aspect of food security, as it makes the food available and affordable during off seasons. According to FAO (1997), better home and community food processing, preservation and storage and access to marketing facilities can contribute to household food security by alleviating seasonal shortages in food supply and stabilizing market prices. Poor preservation and storage of post-harvest surpluses results in post-harvest wastage and food insecurity at the household level. The sub-section presents the findings on preservation and storage of post-harvest surpluses in Nairobi County.

2.5.1 Surplus of Non-Perishable and Perishable Foods Available for Storage

The study investigated the preservation of food/s by the target HHs of excess non-perishables and perishables. The non-perishable foods comprised cereals such as maize and beans while the perishable foods comprised fruits, vegetables, milk and meat products. The findings on the availability or non-availability of perishable and non-perishable foods to preserve are presented in Figures 13 and 14.

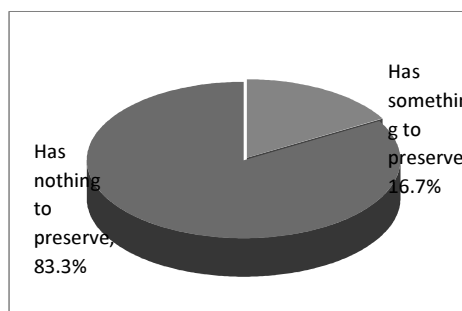
Figure 13: Preservation of non-perishable foods



Source: AWSC/KNBS Baseline Survey on Food Security June 2013

According to the findings of this study, 84 per cent of the household heads did not have non-perishable food to preserve compared to 16 per cent who had some food to preserve. As for perishable foods, 17 per cent of the household heads had some food to preserve, while 83 per cent had nothing to store.

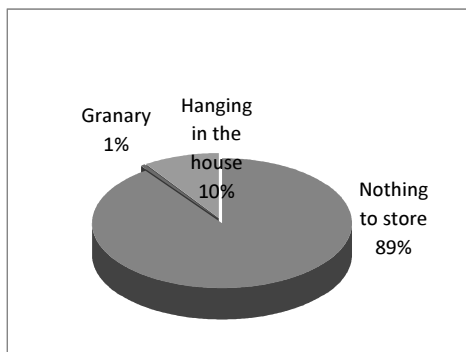
Figure 14: Preservation of perishable foods



Source: AWSC/KNBS Baseline Survey on Food Security June 2013

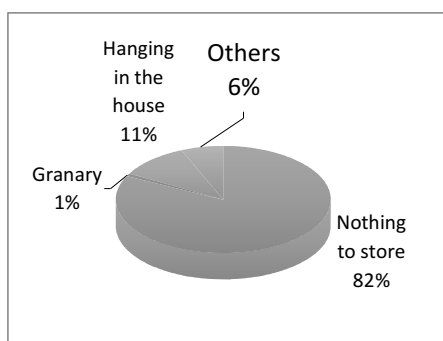
2.5.2 Storage Methods of Perishable and Non Perishable Foods

The study investigated the various methods used to store excess, perishable and non-perishable foods. These methods are illustrated in Figures 15 and 16.

Figure 15: Methods of storing perishable foods

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

As indicated in Figure 15, 89 per cent of the respondents in Nairobi County had no perishable foods to store while 10 per cent indicated they had something to store. The results further reveal that 10 per cent of the respondents store their excess perishables by hanging in the house while 1 per cent store in the granary.

Figure 16: Storage of non-perishable food in Nairobi County

Source: AWSC/KNBS Baseline Survey on Food Security June 2013

Figure 16 indicates that most of the respondents (82%) have nothing to store and only 18 per cent had something to store. Of those who have something to store, 11 per

cent store their non-perishables by hanging in their houses, 6 per cent use other non-specified methods while 1 per cent use a granary.

2.6 Government and Donor Support Programs in Nairobi County

There were various social protection programs offered by development agencies, including the Kenyan Government as well as local and international donors, with the aim to promoting the household resilience to food insecurity of people who lack access to sufficient food supplies, so as to meet their daily needs. The programs target vulnerable categories of the society, among them orphans and vulnerable children (OVCs), people living with HIV/AIDS, persons with a disability and the vulnerable elderly. The programs were implemented through relief food and/or through cash transfer. None of the respondents in Nairobi County were beneficiaries of cash transfer Programs or any other government/donor support Programs, save 0.5 per cent who said they were recipients of food rations.

2.7 Challenges to Food Security in Nairobi County

As illustrated in the research findings, Nairobi County was found to be one of the Counties that are food insecure, with an average of 19.8 per cent who often or always experience chronic food insecurity. The study participants cited various challenges that contributed to food insecurity in the County. Some of the key factors highlighted by respondents included the following:

- Few well planned and accessible food markets in Nairobi which limits food availability.
- High levels of unemployment among the youth.

- Lack of capital for the youth to start businesses.
- Limited access to social security services, especially for the elderly persons and the physically challenged.
- Lack of special programs to address child headed households.
- County security officers tend to extort illegal fees from food distributors and traders, leading to high food prices.
- Mismanagement of the few available government food relief services by the leaders in charge so that the services do not reach people in need.

2.8 Information on Food Security Issues from Women and Men from among the Key Informants

This section presents information on food security, gathered from the key informants who included community opinion leaders comprising youth leaders, women leaders, religious leaders, political leaders and leaders of persons with disabilities.

2.8.1. Main Livelihood Activities

The major livelihood activities in the Nairobi County were small retail businesses and casual employment. In this County the proportion of women and men reporting to be involved in casual employment and small retail business was equal at 50 per cent.

2.8.2 Main Food and Consumption Patterns

When the key informants in Nairobi were asked what their main food was, more men (62.5%) than women (37.5%) indicated *ugali* as their main food. A hundred percent of the women indicated *githeri* as their main food. When asked what they ate their main meal with, 50 per cent of the women and 50 per cent of the men indicated that they ate their

main food with green vegetables. Women also said they ate the main meal with legumes while men said they ate the main meal with meat. Foods consumed in Nairobi included: meat, rice, legumes, tubers, chapatti, milk and bananas.

2.8.3 Challenges in Engaging in Livelihood Activities

A hundred percent of the women key informants cited lack of markets, unemployment (67%), and lack of finances (40%) as the major challenges in engagement in livelihood activities. On the other hand, sixty percent of the men cited lack of finances, unemployment (33%), drug and alcohol abuse (100%) and general insecurity (100%), as the major challenges.

2.8.4 Access to Food

A similar proportion (50%) of female and male respondents indicated that they mainly purchased their food.

2.8.5 Coping Strategies

From the key informants it was evident that women and men use different coping strategies to deal with food shortage. A similar proportion (50%) of female and male respondents said they did casual labor, while 33 per cent of women and 67 per cent of men borrowed food, as a coping strategy. Women also said they skipped meals (100%) and sometimes adults ate less so that children could feed. Men, on the other hand, said they received relief food (100%).

2.8.6 Access to Land and Use

When the informants were asked if men and women had equal access to land, more women (55.6%) said yes as compared to men (44.4%).

Asked what they used the land for, and if they had access, women and men informants mentioned crop farming or building of rental houses. The proportion of men and women who said they used land for construction of rental houses was similar. Some women also indicated that they used land for crop farming.

2.8.7 Availability of Markets

The respondents were also asked if there were markets to buy food from or sell produce. All of the women said that markets were available as compared to none response of the men. On availability of markets to buy food 67 per cent of women said yes compared to 33 per cent of the men.

2.8.8 Access to Government Food Programs

Asked how they accessed government food support related programs, 67 per cent of the women and 33 per cent of the men indicated that they accessed support through the provincial administration. Women also said that they accessed food through relevant government ministries charged with provision of foodstuffs to the needy.

2.8.9 Suggestions to Improve Government Food Support Programs

When asked about how to improve government support programs, the women respondents said making the Program accessible to all was the most important. Men, on the other hand, suggested increasing the amount of support and called for transparency in the identification of the beneficiaries.

2.8.10 Opinion on Community Involvement

When the key informants were asked their opinion on community involvement in addressing food insecurity, a similar

proportion (50%) of women and men respondents rated the community as being *very actively involved*. Forty three percent of the women rated the community as being *just involved* with 57 per cent of the male respondents voicing the same opinion.

2.8.11 Socio-Economic Factors Hindering the Attainment of Food Security

When the respondents were asked about the economic and social related issues that hinder achievement of food security, 100 per cent of the women respondents indicated unemployment and lack of income. Men, on the other hand, mentioned lack of income (55.6%) as the major economic hindrance. On social issues, both women and men cited general insecurity as one social issue that hinders the attainment of food security.

2.8.12 Options that could be used to Ensure the Attainment of Food Security

The key suggestions of most women were access to credit and financial facilities, creation of employment, forming of co-operatives and capacity building in agriculture. Men suggested the provision of education, forming of co-operatives, capacity building in agriculture and improved infrastructure.

2.9 Summary of the Research Findings

The findings indicate that Nairobi County is food insecure. There are 19.6 per cent of people who often and/or always had no food at all in their households because there were not enough resources to go round while 20.1 per cent of the respondents or members of their HHs, often and/or always went to sleep at night hungry, because there was not enough food.

The majority (39.2%) of the respondents from Nairobi County relied on regular

monthly salary while another 28.3 per cent relied on casual labor as their main sources of accessing food. The other main sources of accessing food for Nairobi residents were trade/small business at 22.6 per cent, and remittances from relatives at 5.7 per cent. In total, an average 19.8 per cent of the respondents were suffering chronic food insecurity. It is worth noting that female

headed HHs were more likely to be food insecure, although male headed HHs were more likely to suffer chronic food insecurity. This means that to achieve County level food security, it will be important to address various challenges to food security, while at the same time, strategically targeting the needs of the individual food insecure households.

Discussions and Analysis

This Chapter discusses the key findings of the Baseline Survey in Nairobi County on food availability, access, sustainability and utilization. The focus is on the crucial issues raised by participants from Nairobi County during the Household Survey, namely: demographic data; sources of accessing food; general issues relating to food security such as availability, access, consumption and sustainability that were raised by participants from Nairobi County.

3.1 Demographic Data and Hunger

3.1.1 The Relationship between Age and Hunger

The research findings in Nairobi County revealed that age is an important factor related to food insecurity. Households headed by heads who are 35-44 years, are more food insecure as compared to households headed by heads in all other age categories. The results revealed that on average, households headed by those who are 35-44 years had the highest proportion that is often and always hunger stricken. This may be a reflection of the high unemployment in the County, as results indicated that most of the people in Nairobi County rely on regular salaries to access food. Households headed by heads in the same age group (35-44), also had the highest proportion that often and always experienced a no food at all in the household and slept hungry because there

was not enough food in the household, rated at 34.6 per cent respectively.

3.1.2 Marital Status and Hunger

According to the study findings, households headed by heads in monogamous marriages were the least food insecure, rated at 12.2 per cent which is four times less than the percentage of households headed by heads in polygamous marriages, rated at 49.9 per cent. This could be attributed to the fact that household heads in polygamous marriages require more resources to buy enough food and other basic household needs because they often have larger household sizes compared to those in monogamous families. Separated household heads were the most food insecure rated at 79.4 per cent. This situation could be attributed to the fact that household heads who are separated are in most cases are overburdened with family responsibilities and cannot access enough resources to purchase enough food for their households. The research findings also indicated that households with separated heads had the highest proportion of experience of a time when there was no food at all in the household rated at 85 per cent. With respect to the proportion that experienced a time when any member of the household or the respondent went to bed hungry because there was not enough food in the household, observed the highest in the same households headed by heads in

separated type of marriages, also rated at 85 per cent.

3.1.3 Gender and Hunger

The research findings for Nairobi County indicated that male headed households are on average more food insecure, when compared to households headed by females rated at 26.6per cent and 22.1per cent respectively. The proportion of male headed households that had experienced a time when there was no food at all in their household, is also higher, as compared to female headed households (21.4per cent and 15.4per cent respectively). Also, in terms of the households that had any of their members or the respondent going to sleep hungry because there was not enough, the male headed households still had the highest proportion as compared to female headed households rated at 26.6 per cent and 22.1 per cent respectively.

3.1.4 Relationship between Education and Food Security

The findings of this Study have revealed that education influences the household food security in the sense that households headed by educated individuals are more food secure than those headed by heads who are uneducated or have low level of education. The proportion of food insecure households decreased with the increase in the level of education of the household head. For instance, the proportion of households that had experienced a time when there was no food at all in their household was highest among households headed by heads with no education which was more than five times the percentage of those heads that had a university degree (28.5% and 5.6% respectively). More so, the proportion of

the respondents that had any of the household members or the respondent going to sleep hungry was more than six times higher among the households headed by heads with no education than the proportion of households with post graduate degree (35.7 % and 5.6 % respectively). Education strengthens people's abilities to meet their basic needs and those of their families by increasing their productivity and potential to achieve higher standards of welfare which includes food and nutrition security. Education has also been noted as one of the most valuable means of achieving gender equality and empowerment of women. Furthermore, education inculcates the knowledge and skills needed to improve the income earning potential and, in turn, the quality of life. This means that educating boys and girls, men and women can improve a number of other human development indicators, including health, nutrition, household income, among others (Republic of Kenya, June, 2008). Since education and food security are closely related, the government should improve the education sector since learning improves the ability of people to diversify resources and activities, increase output and income, promote resilience and competitiveness, access information on health and sanitation, and strengthen social cohesion. These are all essential elements to ensure food security in the country.

3.1.5 Relationship between Household Size and Hunger

The research findings indicated that there is a relationship between the number of household members and food insecurity. Households with more than six people were found to have the highest proportion

that reported a time when there was no food at all in the household rated at 66.6 per cent. Furthermore, fifty percent of the households with more than six persons when asked if any of its members or the respondent had ever gone to sleep without food gave a positive response. This may be attributed to the fact that the larger the family size, the higher the consumption rate because large household sizes require a lot of food since they have many more members. Large households strain family resources and tend to have a negative effect on food security. The interrelated problems of large family sizes and food insecurity often lead to a dependency syndrome on food aid.

3.2 Manifestation of Hunger along the Four Dimensions of Food Security

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2010). Household food security implies applying this concept to individuals within the household. Conversely, food insecurity exists when people do not have adequate physical, social or economic access to food (FAO, 2010). Chronic hunger is also a sign of food insecurity and thus why the hunger module was used to determine the status of food security at the household level, in the twenty sampled counties. The researchers assessed the status of food security at the household level in the ten months prior to the survey in June 2013. The eight questions in the hunger module were designed to assess the four dimensions of

food security, that is, availability, accessibility, utilization and sustainability and household heads were hence asked to rate the status of food security in their households based on these questions.

Both the quantitative data collected from the HHHs and the qualitative data collected using the key informant guide, the institutional guide, the FGD guide and the debriefing meeting, illustrate that Nairobi County is food insecure.

3.2.1 Food Availability

Food availability, which deals with the supply side of food security, and is determined by the level of food production and food stored, was measured by questions E03, E06 and E08 of the Food Security Module. Unavailability was illustrated in various ways. In the next section we present respondents answers to the three questions related to food availability.

Question E03: Did you or any household member eat a limited variety of foods due to lack of choices in the market?

The findings revealed that 18.7 per cent of respondents ate a limited variety of foods due to lack of choices in the market. Eating a limited variety of food implies that members of a household may have food but, it is not diversified, which signifies food insecurity given that food utilization is a significant dimension of food security which is determined by the quantity and quality of dietary intake. In the key informant interviews and focus group discussions, opinion leaders observed that most households ate a limited variety of food due to insufficient income high food prices and lack of food diversity at the markets.

Lack of food diversity often leads to health challenges, especially malnutrition and diet-related diseases hence high percentage of households eating limited variety of food may point to a high level of malnutrition.

Question E06: Did you or any other household member eat fewer meals in a day because there was not enough food?

Eating fewer meals is not synonymous with eating smaller meals. The former refers to missing some meals due to inadequate food to cater for all meals. Eating fewer meals, therefore, refers to missing some meals owing to the inadequate amount of food to cater for all meals. Findings from the Study revealed that 26.2 per cent of the respondents ate fewer meals in a day because there was not enough food. Skipping meals is a more serious manifestation of food insecurity and poverty, than eating smaller meals since households that have little income can at least afford to eat smaller meals, but they do not skip meals. Opinion leaders in the integrated research stated that whenever there is not enough food, households skipped some meals to facilitate the preparation of one meal that would be enough for all members of the household which is a more serious manifestation of food insecurity and poverty.

Based on the research findings, food insecurity adversely affects households in the low income category because they have to forego other important non-food expenditures, such as health care and education in order to buy food. The most cited reasons for eating small meals were lack of adequate resources to buy

enough food, and inadequate food where some households rationed the little food they had to avoid starvation. Eating small meals is a coping mechanism for food security and reveals that there is under-utilization/under consumption of food which is an indicator of food insecurity.

During focus group discussions and key informant interviews during the integrated research, the research team learnt that middle income households spend a large proportion of their income on food and are at risk of falling into the poor category.

Question E08: Did you or any household member go to sleep at night hungry because there was not enough food?

Going to sleep hungry implies that members of a household do not have an evening meal to partake due to the limited availability of food or lack of access to food. The study indicated that 20.1 per cent of the households in Nairobi County slept hungry because there was not enough food.

The opinion leaders in the integrated research during focus group discussions and key informant interviews cited the reason why households sleep hungry is because they did not have food surpluses, because they produced very little food, is enough only for immediate consumption. This has the implication that households that sleep hungry have high chances of not having any food. The opinion leaders also stated that this situation is occasioned by low food availability, as a result of poor food production, due to output fluctuations influenced by a number of factors, including: animal human conflict, small

parcels of land, lack of ready markets for cash crops, erratic rainfall, poor quality seeds, high cost of inputs, especially fertilizer, poor producer prices, as well as pests and diseases.

3.2.2 Food Accessibility

Food accessibility deals with the supply side of food security and is determined by the level of food production and food stored, it was measured by questions E04, E05 and E07 of the Food Security Module. Lack of resources to obtain other types of food is a situation whereby financial constraints hinder the access to a variety of foodstuffs, and often leads to food insecurity.

Question E04: Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?

Eating food that is not ones preference, but is occasioned by lack of resources to obtain other types of food is a situation whereby, financial constraints hinder access to a variety of foodstuffs, which and leads to food insecurity. In this Study, 33.6 per cent of the respondents said that they ate food that they preferred not to eat because of a lack of resources to obtain other types of food. During focus group discussions and key informant interviews the most cited reasons for households eating foods that they preferred not to eat, included poverty and lack of money to purchase the food of their preference.

Question E05: Did you or any other household member eat smaller meals in a day because of lack of resources to obtain enough food?

Eating smaller meals refers to a situation whereby members of a household eat small quantities of food for breakfast, lunch and dinner, but they do not skip any of the three basic meals. The Study revealed that 29 per cent of the households eat smaller meals in a day because of lack of resources to obtain enough food. During focus group discussions and key informant interviews, the opinion leaders revealed that eating small meals is as a coping mechanism in food security. This reveals that there is under-utilization and/or under consumption of food which is an indicator of food insecurity. The most cited reasons for eating small meals were: poverty, lack of adequate resources to purchase enough food and inadequate food in the household such that households ration the little food they have to avoid starvation.

Question E07: Was there a time when there was no food at all in your household because there were not enough resources to go round?

Based on the Hunger Module, lack of food in the household is a high manifestation of food insecurity because it indicates that there is serious starvation in those households. In Nairobi County 19.6 per cent of the respondents said that there was a time when there was no food at all in their households because there was not enough resources to purchase food. During the focus group discussions and key informant interviews during the integrated research, the opinion leaders

cited some factors which contribute to food insecurity in the county including poverty due to few employment opportunities and poorly paid casual jobs. Thus, there is not enough income to purchase food. Similarly, business activities in the County are not thriving due to lack of capital to expand the businesses, and thus traders do not have sufficient income to buy enough food.

3.2.3 Food Utilization

Food utilization, which deals with the supply side of food security, is determined by the level of food production and food stored. This was measured by question E02 of the Food Security Module. The findings are outlined below.

Question E02: Were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?

Eating food of one's preference is an important aspect of food security. However, 30.4 per cent households eat foodstuffs they do not prefer to eat due to various reasons including lack of sufficient income to buy the food of their preference. Information gathered during focus discussions and key informant interviews with opinion leaders and cited in the integrated research, is that they ate foods they did not prefer to eat due to reasons such as poverty and lack of sufficient income to buy the food of their preference. Apart from insufficient income, the high market price of certain types of foods is also a barrier to accessing the food of choice for many households in Nairobi County.

3.2.4 Food Sustainability

Food sustainability was measured in question E01 of the Food Security Module.

Question E01: Did you worry that your household would not have enough food?

The research findings revealed that 25.7 per cent of households in Nairobi County worried that their household would not have enough food. The impact of worrying that the household may not have sufficient amount of food, is referred on the individuals development, health of the family and the community, and therefore, on the national development. During focus group discussions and key informant interviews during the integrated research, opinion leaders cited several reasons as to why people worried about not having enough food for their households; including lack of income to buy sufficient food, poor transport networks which affects food distribution, fluctuations in food prices, and bribes and harassment from City Council *askaris*.

3.3 Main Sources of Livelihood

Livelihood is the means of making a living and in the food security context it refers to people, their capabilities, their assets, their incomes and activities needed to sustain a means of living, which includes obtaining food. Households have *sustainable livelihoods* when they can cope and maintain their capabilities and assets without undermining their natural environment. Sustainable livelihood, on the other hand, refers to people's capability to generate and maintain their means of living, enhance their well-being

and that of future generations (International Federation of Red Cross and Red Crescent Societies, 2006). Although a regular monthly salary is the main source of livelihood at 39.2 per cent, the research findings reveal that in Nairobi County casual labor is at 28.3 per cent, small businesses at 22.6 per cent and remittances from relatives at 5.7 per cent. Own production (crop farming) and livestock recorded a negligible 2.4 per cent and 0.5 per cent respectively due to lack of land to practice farming as most of the population lives in rental houses.

Key informants stated that the majority of Nairobi residents derive their livelihoods from employment in small business. It is evident that both formal and informal employment are the major livelihood activities in Nairobi County. However, most of the employment opportunities were for casual labor and temporary contracts, which were not reliable sources of income. Since many workers relied on their daily wages to buy food, failure to secure daily contracts, automatically led to food insecurity in their households. Most of the key informants and participants in the focus group discussions noted that most of the permanent jobs were not well paying. Therefore, it is evident that in Nairobi County there is a correlation between availability of employment and food security.

Households that earned their living by running small businesses noted that small restaurants were the most popular businesses, especially in residential areas because many people. The participants in the focus group discussions cited high cost of fuel, food, and cooking ingredients as the reasons why many households resorted to eating in restaurants. The

respondents engaged in small businesses highlighted constant harassment and demand for bribes by the city council officials as the main challenge to their businesses. For instance, the city council officials demanded daily bribes of not less than fifty shillings and traders who declined paying the bribe were either arrested and/or their business equipment confiscated. Many of the participants engaged in small businesses stated that they were not food secure because the meagre proceeds they got could not sufficiently meet their food security needs and other basic household requirements.

3.4 Food Preservation and Storage

Food storage and preservation is a key factor in determining household food security as it ensures reduced wastage, availability of food for later use, and preparedness for catastrophes and emergencies in periods of scarcity. Storage is an aspect of the post-harvest system through which food goes through on its way from the field to the consumer (USAID, 2011). From the foregoing discussions it is apparent that the majority of the respondents did not have food to store, indicating lack of food surplus at the household level which is a clear manifestation of food insecurity in most households in the County. In addition, it is also clear from the research findings that the majority of the respondents did not have reliable preservation methods for non-perishable and cooked foods and use conventional methods of food storage which are not reliable. Most of them purchase what is enough for a day due to low income. During the focus group discussions, some participants noted that they avoided cooking because it was more

expensive than eating in food kiosks in their neighborhoods. This was due to lack of enough money to purchase fuels such as charcoal and kerosene; the use of electricity is much more expensive in cooking food. In addition, it is also clear from the research findings that the majority of the respondents did not have reliable preservation methods for non-perishable and cooked foods; hence, they use traditional methods of food storage, which are not dependable, for sustainable food security.

3.5 Consumption Patterns

Staple food crops are significant sources of both food security and earnings for most of the households in Kenya (USAID, 2010). Maize is the staple food crop in Kenya and has always been taken to be equivalent with household and nationwide food security. Maize in Kenya is essentially used in the form of maize flour to prepare maize meal (*Ugali*). In addition, dry maize grain is often mixed with other foodstuffs such as potatoes, beans and vegetables to prepare *githeri* and *muthokoi*. The Kenya National Food and Nutrition Security Policy (FNSP 2011) states that in Kenya food availability has over time been understood in terms of cereal supply and food security in terms of having enough maize. Opinion leaders views collected from key informant interviews and focus group discussions in the integrated research revealed that *Ugali*, and *Githeri* were the main staple food consumed by residents of Nairobi County and that they are consumed with foods such as fish, vegetables (more specifically *mchicha*, *kunde*, *sukuma wiki*, cabbage, etc.), meat and legumes.

Over-dependence on *ugali* as the main source of food has led to increase in food insecurity because when there is a shortage of maize supply, people are not used to replacing it with other foods. There is need to raise awareness and sensitization on diversifying food consumption and to establish regular periodic government-private sector consultations to coordinate decision making on stocks and imports. Ultimately, there is need to emphasize strategies that will reduce the cost of producing and distributing maize locally such as the improvement of roads and railway infrastructure. Further, there is need for measures that reduce the cost of producing and distributing foods locally such as subsidizing key farm inputs (seeds and fertilizers). These incentives would indirectly ensure that the farmers' products have market access and compete fairly with imported maize. This will encourage the farmers to adopt strategies that ensure their produce meets the safety standards. The residents should also diversify from maize as the only food crop and embrace other foodstuffs.

3.6 Government/Church/ Donor Support Programs

Conditional Cash Transfers (CCT) is a government program that provides cash to poor households and can be designed to promote a wide range of benefits which include immediate poverty alleviation, improved health, nutrition and education outcomes, economic productivity and growth, empowerment (particularly for women) and social cohesion. In Kenya, the government has been implementing cash transfer programs targeting orphans and vulnerable children since 2004 in

addition to implementing several social protection interventions.

Although quite a number of households in Nairobi County are food insecure, none of the respondents affirmed that they receive cash transfer services from the government. This may be attributed to the fact that most of the support programs are still being piloted; hence, they only targeted few individuals. However, most of the participants during the focus group discussions complained

that the few available support programs are not properly administered; consequently the deserving beneficiaries do not benefit much from them.

Also the quantitative results revealed that only 0.5 per cent of the respondents were recipients of food rations but none of them received any other government/donor support. The respondents noted that these services were inadequate and of poor.

Proposals, Recommendations and Conclusion

This chapter covers proposals, recommendations and conclusions based on the findings of the research study conducted in Nairobi County as outlined in Chapter 2 as well as literature review on best practices worldwide. From the research findings, it is clear that different households will require different strategic interventions to enable them to become food secure. Therefore, policy and program interventions should be tailored in such a way as to target the different individual needs of the various food insecure households.

4.1 Recommendations

This section presents some of the key policy and programmatic recommendations for ensuring food security in Nairobi County, derived from both the Baseline Survey quantitative data from the household questionnaires and the qualitative data from the FGDs, institutional representatives and oral testimonies from the debriefing meetings on food security, held with the stakeholders. The findings indicate that the main source of livelihood in the County is regular salaries, casual labor and trade. Therefore, the AWSC proposes that the food security situation in this County can be addressed by: initiating several interventions as suggested here.

- i. **Cold storage market facilities for the perishable foods:** Considering that the majority of small scale traders in Nairobi buy their food from markets such as Wakulima, Kangemi, Korogocho and Ruai markets, Nairobi County should invest in the construction of accessible food markets with cold storage facilities to cater for the perishable foods and thus stabilize food prices as well as help the 22.6 per cent of the respondents whose main source of food is through trade/small businesses.
- ii. **Decentralization and digitization of rates payment systems:** The County government should decentralize and digitize payment of rates at convenient areas where payments may be made efficiently at all major markets and at each constituency.
- iii. **Enhancement and expansion of social protection Programs:** We recommend that School Feeding Program be expanded to cover all the children from the food poor households, particularly those living in the slums. We propose that the County should set aside funds for this program to support feeding of school going children from food poor households.
- iv. **Enforcement mechanism for ensuring food security:** The AWSC proposes that a legislative framework be developed to reinforce Food Security Programs that the County adopts and thus ensure the

implementation of Article 43 (1) (c) of the Constitution. The development of the legislative framework and implementation strategy should be participatory and include committees at the constituencies that will be coordinated from the Governor's office.

- v. **Centralized Feeding Program:** The County government should initiate a centralized feeding program to cater for the households whose heads are below 24 years; this will also cater for the street families.

4.2 Key Policy and Program Proposals

The following are some key proposals by the AWSC based on recommendations by participants from Nairobi County and literature review on best practices from countries that have implemented programs and legal frameworks for enhancing food security. The research findings from Nairobi County revealed that an average 19.8 per cent of the respondents are either often or always hungry. This situation requires strategic interventions to ensure that such households become food secure.

Food insecurity has been shown to have negative implications, especially for children as it impedes the development of their potential. Therefore, implementation of Article 43(1) (c) of the Constitution, which guarantees every person the "right to be free from hunger, and to have adequate food of acceptable quality", must be a development priority for Kenyans.

The research also reveals that 39.2 per cent of the respondents rely on a regular monthly salary; 28.3 per cent rely on casual labor and another 22.6 per cent are small scale traders, while 5.7 per cent receive remittances from relatives, as their main sources for purchasing food. Therefore, the

AWSC proposes that the county government looks at the salaries of the County employees and other stakeholders and negotiate for salaries that can ensure food security.

Alongside this, the Centre also proposes the following interventions:

- i. **One job for every poor household:** The Government should develop a policy that allows the County and National Governments to identify the hungry households and create employment for at least one person in the household for 200 days a year. This will cater for 28.3 per cent of the respondents from Nairobi who said they are engaged in casual labor. The ultimate objective of this project is to create employment for at least 200 days per year for one person in a poor family for households with no family member with wage employment. They could be engaged in the management of markets, the control of tariffs, collection of fees and other useful activities.
- ii. **Economic empowerment of youth and women:** The government's effort to provide empowerment, especially for the youth and women is indeed commendable. The various initiatives such as the Women Enterprise Fund, Youth Enterprise Fund, the revitalized National Youth Service and *Uwezo* Fund will contribute and make it possible for many youth and women to engage in gainful employment. The majority of youth remain unemployed and some even convert to social ills as a means of livelihood. Our research findings indicated that 52.4 per cent of the respondents from our study in Nairobi County were youth between the ages of 15-34 years and increasing the funds will make it possible for them to engage in meaningful employment.

- iii. **Provision of adequate/ready markets and value addition for agricultural produce:** The county government should invest in the establishment of small scale organic food processing plants and non-traditional crop production units that can be run by county residents to transform agricultural commodities to other products to increase incomes earned from the produce.
- iv. **Provision of security for small traders and other business owners** in order to ensure a 24 hour day trading for the people of Nairobi.
- v. **Expanded social protection programs** should focus on food poor households.
- vi. **Expansion of school feeding programs** to cover children of all food insecure households.
- vii. **Water for irrigation and domestic use:** Subsidize materials needed to facilitate rain water harvesting in schools, health Centers, urban Centers and equipment/materials for water harvesting such as tanks, pipes, water pumps, borehole drilling machinery and gutters.
- viii. **Enforcement mechanism for ensuring food security:** The AWSC proposes that a legislative framework be developed that will enforce food security programs aimed at the implementation of Article 43(1) (c) of the Constitution. In this framework it is proposed that a Food Security Authority be established and the Governors take responsibility at the

County level. This is in line with best practices in other countries such as Columbia, Mauritius, South Africa and India.

4.3 Conclusion

The statistics generated from the research findings indicate clearly that Nairobi County is experiencing high level of food insecurity (20%) and it is of paramount importance that immediate intervention to ensure food security in the County be put in place. "It is possible to attain sustainable food security in the county." Article 43 (1) (c) of the Constitution gives the right of access to adequate food and of acceptable quality. Research and practices in other countries show that it can be done. The need to focus and target the food poor persons cannot be over-emphasized.

The existing trends to close any gaps in developing a food secure society must be followed; otherwise the idea of food security will remain a mirage in Nairobi County. Development and implementation of the appropriate interventions will ensure that every resident of Nairobi County is food secure. This will go a long way towards the realization of MDG 1, the Kenya development blue print Vision 2030, and above all, the Constitution of Kenya, Article 43 (1) (c) that guarantees every person the "right to be free from hunger, and to have adequate food of acceptable quality". If we all declare zero tolerance to hunger, this dream will become a reality.

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