



REPUBLIC OF KENYA

**FOOD SECURITY AND NUTRITION
STRATEGY**

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LIST OF ACRONYMS

ASAL	Arid and Semi-Arid Lands
ASCU	Agricultural Sector Coordination Unit
BCC	Behaviour Change Communication
BFHI	Baby Friendly Hospital Initiative
CAADP	Comprehensive Africa Agricultural Development Program
CBS	Central Bureau of Statistics
CSO	Credit Society Organization
ERS	Economic Recovery Strategy for Wealth and Employment Creation
FAO	Food And Agriculture Organization of the United Nations
FBO	Faith Based Organization
FSNS	Food Security and Nutrition Strategy
GDP	Gross Domestic Product
KARI	Kenya Agricultural Research Institute
KEPHIS	Kenya Plant Health Inspectorate Services
KES	Kenya Shilling
KFSM	Kenya Food Security Meeting
KIPPRA	Kenya Institute for Public Policy Research Analysis were involved
IEC	Information, Education and Communication
ISCFN	Inter-ministerial Steering Committee on Food and Nutrition
UNICEF	United Nations Children Education Fund
KNBS	Kenya National Bureau of Statistics
MDG	Millennium Development Goals
MFI	Micro Finance Institutions
MoA	Ministry of Agriculture
MoCDM	Ministry of Cooperatives Development and Marketing
MoE	Ministry of Education
MoENR	Ministry of Environment and Natural Resources
MoH	Ministry of Health
MoF	Ministry of Finance
MoL	Ministry of Lands
MoLFD	Ministry of Livestock and Fisheries Development
MoLG	Ministry of Local Government
MoPND	Ministry of Planning and National Development
MoRPW	Ministry of Roads and Public Works
MoTI	Ministry of Trade and Industry
MoWI	Ministry of Water and Irrigation
MSE	Medium and Small Enterprises
MSME	Micro, Small and Medium Enterprises
MTEF	Medium Term Expenditure Framework

NEPAD	New Partnership for African Development
NFSNP	National Food Security and Nutrition Policy
NFNS	National Food and Nutrition Secretariat
NCD	Non-Communicable Diseases
NCPB	National Cereals and Produce Board
NCST	National Council of Science and Technology
NFSCC	National Food Safety Coordination Committee
NFSNEC	National Food Security and Nutrition Executive Committee
NFSNSC	National Food Security and Nutrition Steering Committee
NGO	Non-Governmental Organization
OP	Office of the President
PLWHA	People Living with HIV and Aids
PRSP	Poverty Reduction Strategy Paper
SFR	Strategic Food Reserves
SGR	Strategic Grain Reserves
SRA	Strategy for Revitalizing Agriculture
STC	Stakeholder Technical Committee
TWG	Technical Working Group
VAT	Value-Added Tax
WFS	World Food Summit

EXECUTIVE SUMMARY

The food and nutrition insecure in Kenya form about a third of the country's total population, currently estimated at 34 million. Ensuring food security and nutrition in Kenya is therefore a critical challenge. Food and nutrition insecurity is closely linked to poverty. About half the Kenyan population fall below the poverty line, some of whom live in extreme poverty. This situation has serious implications on people's food security as the chronically food insecure suffer from extreme poverty.

A growing problem of food and nutrition insecurity in Kenya is linked to the disappointing growth of agricultural production. The country has a majority (about 80%) of its population residing in the rural areas where agriculture dominates. Even though the country has generally experienced positive growth in agricultural output over the last four decades, it has experienced serious declines in the agricultural sector in parts of the 1980s and 1990s and has had several periodic food deficits and acute food shortages.

Kenya's past food policies have had limited success in addressing the country's food and nutrition insecurity due to several reasons. Chief among these are inadequate budgetary allocations, unstable macro-economic conditions, limited involvement of the private sector, inadequate sectoral coordination, lack of monitoring and evaluation systems, limited stakeholder participation, and lack of a clear food and nutrition strategy.

The current Food Security and Nutrition Strategy (FSNS) framework is in line with the new National Food Security and Nutrition Policy (NFSNP), which identifies food security as a basic human right. The framework takes the view that the right to food includes not only sufficient numbers of calories but the right to nutritious foods that guarantee health, growth and development throughout a person's lifecycle. The policy also focuses on the right of every woman and child to share equally or to have greater shares of the available food because of the required needs for growth and development.

As outlined in the NFSNP, the framework for action to achieve food and nutrition security sets the overall goal as being to ensure that all Kenyans throughout their lifecycle enjoy at all times safe food in sufficient quantity and quality to satisfy their nutritional needs for optimal health. The new policy provides an overarching framework covering all the four dimensions of food security—availability, accessibility, stability and meeting nutritional requirements. It also addresses the synergy linking food security and nutrition with poverty reduction. Deriving from the overall goal are four broad objectives: 1) to achieve good nutrition for optimum health of all Kenyans; 2) to increase the quantity and quality of food available, accessible and affordable to all Kenyans at all times; 3) to protect vulnerable populations using innovative and cost-effective safety nets and emergency relief programs linked to long-term development; and 4) to develop implementation arrangements that would achieve the objective of the policy.

The policy on which this strategy is based consolidates relevant sector policies and strategies, initiatives and planning documents, including the Economic Recovery Strategy (ERS), Strategy for Revitalizing Agriculture (SRA) and Vision 2030. The policy is formulated within the context of the international conventions, ratified by the country, and the overall

national development strategy (ERS), whose key objective is to ensure food security in order to reduce the incidence of malnutrition. The ERS is supported by the SRA. The initiatives to revive the economy and revitalize agriculture are in line with the declaration of the World Food Summit (WFS) of 1996, the United Nations (UN) Millennium Development Goals (MDGs), and the Comprehensive Africa Agricultural Development Program (CAADP) of the New Partnership for African Development (NEPAD) of 2002.

This Strategy Paper integrates the major goals, policies and actions related to food security and nutrition into a cohesive whole, and provides a mechanism through which the government will facilitate in a comprehensive and coordinated manner the implementation of strategic actions for food security and nutrition. A number of multidimensional and cross-sectoral programs and sub-programs, identified in a consultative and participatory process, are either on-going and require continued support and strengthening or are new and need to be initiated.

The main goals of the FSNS are: 1) to ensure that all Kenyans have the means to access affordable, nutritious and personally acceptable foods; 2) to guarantee a sustainable, safe and high quality food supply; and 3) to promote food consumption patterns that maximize health and minimize disease. The first goal will be addressed by programs on improved household resource/input productivity, improved national food availability, and improved food access. The second goal will be addressed by improved food safety and quality control program. The third goal will be addressed through improved nutrition in public institutions and among consumers, improved food and nutrition in schools, improved food nutrition in crisis and emergency, and improved food and nutrition information.

Many aspects of the strategy will require implementation to simultaneously target several key sectors of the economy. The strategy therefore recognizes the significant efforts and programs relevant to food security and nutrition that are on-going or are being planned for implementation by other sectors. The aim is to support these initiatives and develop new ones based on the identified cross-sectoral gaps. Measures and actions to be implemented are specified in the strategy, affirming access to nutritionally adequate and safe food as a right of each individual. This calls for a comprehensive multi-sectoral approach that integrates the economy, agriculture and other related sectors. The strategy brings food security and nutrition work into operational link with other past and current key strategies—SRA, ERS, HIV/AIDS, and MDGs. It recognizes that policies without workable and fundable strategies do not have much impact; that food security and nutrition improvement requires much greater collaboration; and that strategies are needed to identify areas where better linkage will work.

A multi-sector organizational arrangement will coordinate and monitor food and nutrition activities at the national, sectoral and local levels. Given the multi-divisional nature of food security and nutrition, an Inter-ministerial Steering Committee on Food and Nutrition (ISCFN) is expected to coordinate and oversee input from relevant ministries and institutions. This will help ensure appropriate linkages among diverse sector and multi-sector policies and that each would contribute to achieving immediate and longer-term food security and nutrition.

With the participation of the Kenya Food Security Meeting (KFSM), the Inter-ministerial Coordinating Committee on Food and Nutrition (ICCFN) and the Agricultural Sector Coordination Unit (ASCU), the government will establish the ISCFN, consisting of a National Food and Nutrition Secretariat (NFNS), a Stakeholder Technical Committee (STC), and

Food and Nutrition Committees at district and division levels, to coordinate and monitor the implementation of all food and nutrition programs in the country. For the purpose of ensuring the implementation of the NFSNP, a Food and Nutrition Act will be enacted to provide for the establishment of the ISCFN and NFNS for the coordination of all food and nutrition activities in the country.

In order to enhance monitoring and evaluation of the NFSNP implementation and its impact, the government, with input from and participation of the private sector and other stakeholders, will, among other actions, put in place a M&E system, including regular surveys at all necessary levels on the progress of policy implementation by identifying and applying appropriate indicators.

This strategy has been developed through consultative and participatory processes that were steered by a Technical Working Group (TWG) under the guidance of the ASCU. The process went through several steps including literature review, consultative strategy workshops, and stakeholder consultative symposia. The aim was to share relevant international, regional and national experiences, and identify both existing and new programs where an improved or new strategy can increase food security or reduce nutrition problems. The participants included technical staff of a number of government ministries, such as those concerned with agriculture, livestock, fisheries, health, education, environment, natural resources, water, irrigation, trade, industry, and planning. Also involved were the national and international universities and research institutions, a number of relevant UN bodies, and international NGOs.

1. BACKGROUND

1.1 INTRODUCTION

The Food Security and Nutrition Strategy (FSNS) is a plan that integrates the major goals, policies and actions related to food security and nutrition into a cohesive whole. As expected, the strategy principally derives from the National Food Security and Nutrition Policy (NFSNP), which provides the rules and guidelines that express the scope within which action should occur. Thus, the FSNS is intended to provide a mechanism through which the government will facilitate in a comprehensive and coordinated manner the implementation of strategic actions to improve and ensure the food security and nutrition of the Kenyan population. This will, in the most part, assist in boosting other spheres of the country's economy and thus contribute to development; because it is only a food and nutrition secure citizenry that can effectively participate in socio-economic activities.

This strategy has been developed by the government through consultative and participatory processes that were steered by a Technical Working Group (TWG) under the guidance of the inter-ministerial Agricultural Sector Coordination Unit (ASCU). The process went through several steps including literature review, consultative strategy workshops, stakeholder consultative symposium, and preparation of the strategy. The aim was to share relevant international, regional and national experiences, and identify both existing and new programs where an improved or new strategy can increase food security or reduce nutrition problems. The participants included technical staff of a number of government ministries, such as those concerned with agriculture, livestock, fisheries, health, education, environment, natural resources, water, irrigation, trade, industry, and planning. Educational and research institutions, including the University of Nairobi, Friedman School of Nutrition of Tufts University (USA), Kenya Agricultural Research Institute (KARI) and Kenya Institute for Public Policy Research Analysis (KIPPRA), were involved. Furthermore, UN bodies such as FAO and UNICEF and International NGOs such as Oxfam, Action-Aid Kenya and SACRED Africa.

1.2 FOOD SECURITY AND NUTRITION

1.2.1 Conceptual Framework

Ensuring food security and nutrition in Kenya is a critical challenge. Food security is understood to exist when all people, at all times, have 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 security encompasses **food availability** through production, storage or imports; and the **access to food** by people through their purchasing power in markets. Access derives from the **entitlements** a household has to food, either through own-production of foodstuffs or through command over food in markets or other circuits, decisions over the amount and kind of food produced or bought, the **internal distribution** of household food amongst residents, and the health of individuals which affects the ability to secure **nourishment from food**. **Figure 1** provides a simple conceptual scheme of food security and nutrition.

The main elements of food security and nutrition, which are understood to include **adequate food availability**, **adequate food access**, and **appropriate food use and nourishment**, are influenced by several national- or household-level attributes. Food availability and access are influenced by farm production and non-farm factors. The farm factors include farm resources (inputs) such as land and capital assets, research, and extension, while non-farm factors include infrastructural development and wage employment. Food security is further seen as a relationship between household food consumption (which depends on availability and access) on the one hand and household structure (attributes), national- and community-level factors, and farm and non-farm linkages on the other.

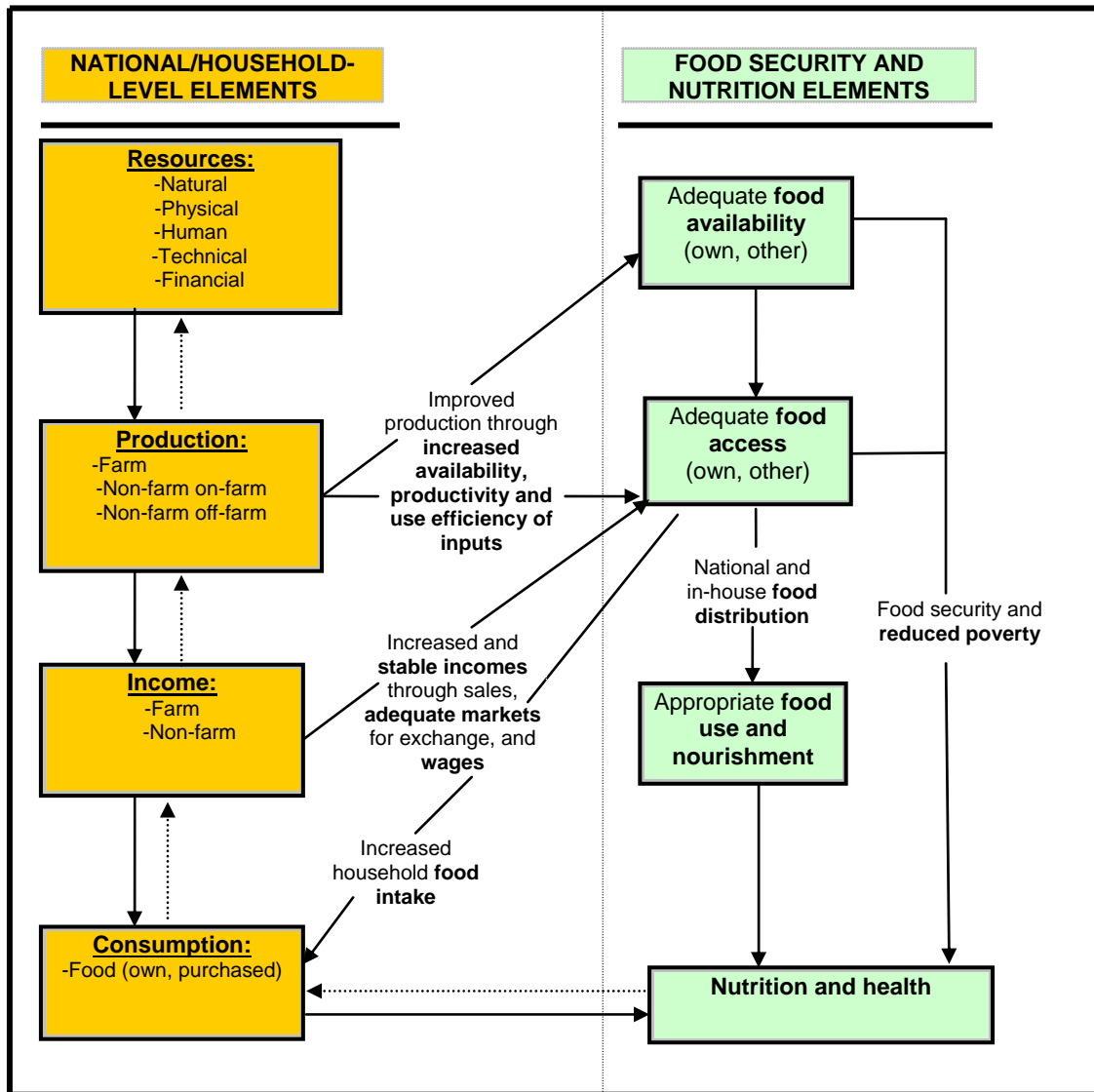


Figure 1: Elements of national and household food security and nutrition

One of the major attributes that determine the ability of a household to acquire adequate food is its ability to produce or purchase food. Implied in this is the ability of the household to use

available resources efficiently. In turn, the resources should be sufficiently productive. Other attributes include the nature and extent of endowment of these resources to the household, production processes, income accrued from production, and the level and methods of consumption.

Household food availability is influenced by own-production, production by other households (which influences the availability of loans and gifts), and food markets. Production levels are, in turn, influenced by the productivity of the resources (inputs) available. The resources may be natural, physical, human, technical and financial.

Another major component of household-level elements of food security is production of farm and non-farm outputs, using the resources available such as land and labour. When land is limited, the labour resource of a household determines the income to be earned from non-farm employment to supplement own-farm production. Households may also be involved in generation of income from farm and or non-farm product sales. In addition to improved production, there should be improved in-house food distribution resulting in appropriate food use and intake and, therefore, adequate food consumption. When improved food availability and access is achieved, and assuming food is appropriately used, it is then likely to realize improved nutrition and health.

Food security can be achieved with or without a country having to produce any of the food itself. Thus, food production by the nation may be important but is not a necessary condition for achieving food security: the nation can achieve food security solely by its citizens producing food from their own fields, it can secure enough food entirely through imports, and it can secure enough food through both own-production and imports.

1.2.2 National Food Security Status

Only about two-thirds of the Kenyan population can be said to be currently food secure. Thus, about a third (10 million) of an estimated 34 million people in Kenya suffer from chronic food insecurity, based on dietary energy supply. Food and nutrition insecurity is closely linked to poverty. About half the Kenyan population fall below the poverty line. Some of these are resident in relatively well-endowed districts and urban areas. Among these are those living in extreme poverty. Chronically food insecure people suffer from extreme poverty and are largely left to their own devices with no access to some of the safety net provisions available to those suffering from acute food shortages in drought and flood prone areas.

1.2.3 National Nutrition Situation

Under-nutrition in Kenya is a serious public health challenge. Chronic and acute malnutrition, micronutrient deficiencies and infectious diseases are prevalent, particularly among the rural populations and the urban poor. The main problems contributing to childhood malnutrition include inadequate household food security, inadequate care giving capacity, and an unhealthy environment coupled with limited access to health facilities, predisposing young children to infections. Nutritional deficiencies of public health significance in Kenya include protein and energy malnutrition, iodine deficiency disorders, iron deficiency anaemia and vitamin A and zinc deficiencies. Nutritional trends in the recent past have shown no significant change in the nutritional status of children under five years of

age. In 1998, for example, 33% of children under 5 years were stunted, 22% underweight and 6% severely malnourished. In 2003, 30% were stunted, 20% underweight and 6% severely malnourished. In 2006, 33% of children were stunted and 21% underweight. Children under five years also have a huge burden of micronutrient deficiency—84% have varying levels of vitamin A deficiency, 73.4% iron deficiency (anaemia), and 51% zinc deficiency. About 55% of pregnant women are anaemic while vitamin A deficiency affects 39% of women. An estimated 31% of adult males suffer from iron deficiency. The prevalence of goitre among school children is 6%.

Nationally, an estimated 1.8 million children (30%) are classified as chronically undernourished. The national per capita calorie supply per day is less than the FAO recommended rates. Even in years of food self-sufficiency, chronic under-nutrition (nutritional stunting) affects 30% of children, indicating insufficient food intake and suggesting the problem goes well beyond national food supplies. Thus, other major constraints to attaining good nutritional status include inadequate awareness and knowledge on nutritionally adequate diets, and limited resource allocation and capacity to support the implementation of comprehensive nutrition programs in the country.

Kenya is also increasingly facing the emergence of diet-related non-communicable diseases—diabetes, heart diseases, hypertension, obesity and gout—especially in urban areas. These are mainly caused by a change in lifestyle characterised by excessive intake of highly refined and high-fat foods, sugar and salt, coupled with limited physical activity especially in urban settings.

Food safety is an important component of food security and nutrition considering that millions of children and adults suffer from the ill-health effects of food-borne diseases.

1.3 AGRICULTURAL PERFORMANCE AND ECONOMIC GROWTH

Economic performance has a direct bearing on the food and nutrition situation of the Kenyan people. In the first two decades after independence, the country witnessed a significant growth and improvement in living standards. However, economic growth was either stagnant or negative (when compared to high population growth rates) in the 1980s and 1990s.

The agricultural sector plays an important role in the overall economy in Kenya. In the years when the agricultural sector has shown impressive growth, so has the gross domestic product (GDP); when the sector has slipped, so has GDP. Currently, the sector directly contributes about 26% of the GDP and an additional 27% through linkages with manufacturing, distribution and service sectors. During the second half of the 1980s decade, for example, the annual growth in GDP peaked in 1986 at 5.5%. In that year, the agricultural sector grew at an impressive rate of 4.9%, similar to that in the early years of independence. In 1991, agricultural output fell by 1.1% and GDP declined to 2.3%. In 1992, it fell by 4.2% and GDP slipped to the lowest level of 0.4% in the post-independence period. Within the period 1980–1990, the average economic growth declined to 3.5%, closely associated with dwindling agricultural performance. In 1990–2000, average economic growth had declined to 1.3% in tandem with the agricultural growth rate, compared to that of 6% during the first two decades after independence.

A growing problem of food and nutrition insecurity in Kenya is linked to the disappointing growth of agricultural production. Kenya has about 80% of its population residing in the rural areas where agriculture dominates. Over the last four decades, the country has generally experienced positive growth in agricultural output and has often managed to achieve national food self-sufficiency despite fast human population growth. However, the country has had several episodic food deficits and, in a number of cases, has faced acute food shortages, so that per capita food availability has declined by more than 10% over the last three decades.

1.4 THE STRATEGY

The main goals of the Food Security and Nutrition Strategy (FSNS) are:

- To ensure that all Kenyans have the means to access affordable, nutritious and personally acceptable foods.
- To guarantee a sustainable, safe and high quality food supply.
- To promote food consumption patterns that maximize health and minimize disease.

As stated, the three main goals of the strategy are broad and do not focus on any specific sector. Furthermore, many aspects of the strategy will require implementation to simultaneously target several key sectors of the economy. The strategy recognizes the significant efforts and programs relevant to food security and nutrition that are on-going or are being planned for implementation by other sectors. The main aim of the FSNS, therefore, is to support these initiatives and develop new ones based on the identified cross-sectoral gaps.

1.4.1 Why a Food Security and Nutrition Strategy?

The purpose of this strategy is to specify measures and actions to be implemented so as to ensure food security and nutrition which affirms access to nutritionally adequate and safe food as a right of each individual living in Kenya. This calls for a comprehensive multi-sectoral approach that integrates the economy, agriculture and other related sectors.

The strategy brings food security and nutrition work into operational link with other past and current key strategies—PRSP, SRA, ERS, HIV/AIDS, and MDGs. It recognizes that policies without workable and fundable strategies do not have much impact; that food security and nutrition improvement requires much greater collaboration; and that strategies are needed to identify areas where better linkage will work. Thus, the strategy aims at strengthening sectoral actions by bringing in information from other sectors and groups.

1.4.2 Rationale for Program Areas in the Strategy

The program areas considered in the strategy for implementation include:

- Household resource productivity.
- National food availability.
- Food accessibility.
- Food safety and quality control.
- Nutrition improvement in public institutions, and among partners and consumers.
- Food and nutrition in schools.

- Food and nutrition in emergency and crisis.
- Food and nutrition information and communication.

The rationale for inclusion of these program areas in the strategy considers the following issues:

- Serious cases of food insecurity for large population groups.
- Weak markets in agricultural sector that threaten food security.
- Low access to high quality foods for many groups in rural and urban areas.
- High levels of protein/energy malnutrition and vitamin and mineral deficiencies.
- Existence of major potential to strengthen food security and nutrition interventions through increased collaboration—interdepartmental, inter-sectoral, development partners, NGOs, and CSOs.

1.5 STRUCTURE OF THE STRATEGY PAPER

This Strategy Paper has six sections. Section 2 highlights the Food Security and Nutrition Policy framework, defining the policy goal and objectives based on the four dimensions of food security and nutrition, contextualizing the policy, highlighting the major policy issues, and providing a glimpse of its implementation arrangements. Section 3 discusses a number of multidimensional, cross-sectoral and sectoral program areas and sub-programs by outlining the objectives of and justification for each sub-program and stating the strategic interventions to address the objectives. Section 4 presents the framework for implementation of the strategy, discussing the institutional and legal arrangements, funding, and providing a detailed implementation matrix. Section 5 gives a sketch of what would involve monitoring and evaluation of program activities, including a discussion on the rationale and objectives, scope and approach, and an example of the processes of selecting relevant M&E indicators. Finally, Section 6 identifies the sources of risk by providing a risk analysis and evaluation matrix, which shows priority listing of the risks and required strategies.

2. FOOD SECURITY AND NUTRITION POLICY FRAMEWORK

2.1 INTRODUCTION

The framework for action to achieve food and nutrition security is outlined in the new National Food Security and Nutrition Policy, which identifies food security as a basic human right. The overall goal of the policy is to ensure that all Kenyans throughout their lifecycle enjoy at all times safe food in sufficient quantity and quality to satisfy their nutritional needs for optimal health. The new policy provides an overarching framework covering all the four dimensions of food security—**availability, accessibility, stability** and meeting **nutritional requirements**—and addresses the synergy linking food security and nutrition with **poverty reduction**. Underlying the overall goal of the policy are the broad objectives: 1) to achieve good nutrition for optimum health of all Kenyans; 2) to increase the quantity and quality of food available, accessible and affordable to all Kenyans at all times; 3) to protect vulnerable populations using innovative and cost-effective safety nets and emergency relief programs linked to long-term development; and 4) to develop implementation arrangements that would

ensure the achievement of the objective of the policy. The policy consolidates relevant strategy and planning documents including the ERS, Strategy for Revitalizing Agriculture (SRA), Vision 2030 and relevant sector policies and strategies.

2.2 POLICY CONTEXT

The current NFSNP is framed in the context of basic Human Rights, Child Rights and Women's Rights, including the Universal Right to Food. The government views the right to food as including not only sufficient numbers of calories but the right to nutritious foods that guarantee health, growth and development throughout a person's lifecycle. In the context of Child and Women's Rights that are fundamental values of the government, the policy also focuses on the right of every woman and child to share equally or to have greater shares of the available food because of the required needs for growth and development.

The likelihood of the current NFSNP succeeding is enhanced by several recent government initiatives and renewed international commitment to end hunger and extreme poverty. The policy is formulated within the context of the international conventions, ratified by the country, and the overall national development strategy (ERS) whose key objective of the recovery program is to ensure food security in order to reduce the incidence of malnutrition. The ERS ranks agriculture highly among the productive sectors, and is supported by the SRA that aims at an average annual growth rate of 4.7% in the agricultural sector during the ten-year period of 2004–2014. One of the six 'fast-track' actions identified by the SRA is to formulate food security policy and programs. The new initiatives to revive the economy and revitalize agriculture are in line with the declaration of the World Food Summit (WFS) of 1996, the United Nations (UN) Millennium Development Goals (MDGs), and the Comprehensive African Agriculture Development Program (CAADP) of the New Partnership for African Development (NEPAD) of 2002.

2.3 SUMMARY OF POLICY ISSUES

In order to ensure a sustained increase in the production of food that is diversified, affordable and healthy, the government will, among others, ensure that funding of the food and agriculture sector increases to the minimum target of 10% of the national budget, and support and promote farming systems that enhance sustainable food production. The government will also support measures that improve security and access to land and water, especially by women, pastoralists and child-headed households, and provide the legal and institutional support to small rural businesses. The government will also regularly review minimum wages to take account of food and nutrition needs, inflation rates and labour productivity.

The food produced in Kenya is lost in large proportions due to post-harvest spoilage and waste. The government will promote storage and processing of agricultural produce through the development and expansion of training channels around safe and effective storage of staple grains, fruits and vegetables at household and community levels, and implement measures and incentives that encourage private sector investment in storage and agro-processing in rural areas.

The Strategic Grain Reserve (SGR) will be transformed into a Strategic Food Reserve (SFR) by including other critical foodstuffs, both in the form of physical stock and cash, to ensure

that the country has sufficient food stocks for handling emergencies. Access to efficient food markets in both rural and urban areas will be ensured by supporting investment in infrastructure to facilitate movement of food products from surplus to deficit areas, and to reduce the cost of transport.

In order to address the challenges of food trade and ensure a predictable supply of commercial food import, the government will facilitate the competitiveness of Kenya's agricultural sector, promote local and regional food trade, and control import surges and/or dumping of subsidized foods.

With the intention of achieving the objective of improving lifecycle nutrition, the government will, among other ways, expand and strengthen actions to ensure pregnant and lactating women have access to and are knowledgeable about the important need for them to have adequate and nutritious diet; develop systems to implement the right to proper nutrition and healthcare for all children as per the Children Act; establish institution feeding standards and regulations for schools; and develop nutrition care strategies and support community-based feeding and health services for the elderly. The government will also develop nutrition and related training strategies focused on HIV/AIDS patients, orphans and children infected and affected by HIV/AIDS at health facilities, and on preventing malaria and tuberculosis and supporting patients infected by or recovering from these diseases.

With respect to food safety and quality, the government will develop a strategy to bring the major processors and producers of food into partnership with those organizations responsible for regulatory and food safety inspection to substantially increase areas of food production and processing, quality control and safety; and provide guidelines on production and utilization of genetically modified products.

To put in place effective relief and safety nets, the approaches to be adopted will include replacing food relief in-kind with cash transfers to improve efficiency and reduce costs, and linking transfer-based schemes with long-term development through predictable and guaranteed programs. Public works programs will also be used to support the improvement and maintenance of social and market infrastructure in areas with high vulnerability; and put in place mechanisms for replacing food-for-work with cash/voucher-for-work programs where food markets are developed.

In order to support the protection and management of livestock in ASAL areas, the government will channel increased resources towards ASAL development, and support communities to establish fodder/pasture banks through financial and technical assistance. The government will also earmark 30% of resources traditionally used for emergencies to address the long-term development needs of vulnerable populations, and make investments that encourage the private sector to promote alternative means of livelihood in these areas.

The government will enhance the quantity, quality and timeliness of food and nutrition information through promoting and strengthening information networking among institutions involved in food and nutrition; establishing and strengthening the coordination of food, health and nutrition databases; enhancing capacity in terms of human, equipment and finances; and strengthening and expanding a system to effectively feed back information in appropriate forms on health and nutrition to priority audiences including policy makers, sector staff working on nutrition and food, and the public. The government will also enhance

nutrition education and capacity through, among others, ensuring that adequate nutrition content is included and entrenched in education curricula.

2.4 POLICY IMPLEMENTATION

Kenya's past food policies have had limited success in addressing food and nutrition insecurity in the country. Some of the factors that have hindered the successful implementation of the food policies include inadequate budgetary allocations, unstable macro-economic conditions, limited involvement of the private sector, inadequate sectoral coordination, lack of monitoring and evaluation systems, and limited stakeholder participation.

One of the factors underpinning the success of the NFSNP is the assumption that a multi-sector organizational arrangement would coordinate and monitor food and nutrition activities at the national, sectoral and local levels. Given the multi-divisional nature of food security and nutrition, an Inter-ministerial Steering Committee on Food and Nutrition (ISCFN) is expected to coordinate and oversee input from relevant ministries and institutions. This would help ensure appropriate linkages among diverse sector and multi-sector policies and that each would contribute to achieving immediate and longer-term food security and nutrition.

The government, in consultation with the Kenya Food Security Meeting (KFSM), the Inter-ministerial Coordinating Committee on Food and Nutrition (ICCFN) and ASCU, will establish the ISCFN with a National Food and Nutrition Secretariat (NFNS), a Stakeholder Technical Committee (STC), and Food and Nutrition Committees at district and division levels to coordinate and monitor the implementation of all food and nutrition programs in the country. For the purpose of ensuring the implementation of the NFSNP, a Food and Nutrition Act will be enacted to provide for the establishment of the ISCFN and NFNS for the coordination of all food and nutrition activities in the country. In order to enhance monitoring and evaluation of the NFSNP implementation and its impact, the government will, among other actions, put in place a M&E system, including regular surveys, at all levels; and continuously seek input on the progress of policy implementation from the private sector and other stakeholders to ensure their participation in monitoring and evaluation.

3. PRIORITY AREAS FOR FOOD SECURITY AND NUTRITION

3.1 INTRODUCTION

This Strategy has been developed to address three main goals that would achieve improved and stable food security and nutrition. A number of multidimensional and cross-sectoral programs and sub-programs that are either on-going and require continued support and strengthening or are new and need to be initiated were identified in a consultative and participatory process. These programs are detailed in the next sections.

As shown in **Figure 2**, the first goal—improved (nutritious) food availability and access—will be addressed by three programs, namely, improved household resource/input productivity, improved national food availability, and improved food access. The second goal—improved

quality and safety of food—will be addressed by improved food safety and quality control program. The third goal, which is improved food consumption for maximum health and minimum disease, is expected to be achieved through four main programs: improved nutrition in public institutions and among consumers; improved food and nutrition in schools; improved food nutrition in crisis and emergency; and improved food and nutrition information.



Figure 2: Schematic representation of the NFSNS

3.2 HOUSEHOLD RESOURCE PRODUCTIVITY

3.2.1 Accessibility to Productive Resources for Rural Agriculture and Livestock

High levels of rural poverty in the country have exacerbated food insecurity and vulnerability problems. At the household level the problem is one of poverty and includes, other than just inadequate incomes, factors such as poor access to productive resources like land (including pasture), seeds, water, technology and affordable credit facilities. There is unequal access to control and management of productive resources across gender. The need to address equity in access to and control over productive resources is therefore imperative. Other limitations relate to inadequate knowledge on existing agricultural and livestock support services. Poor organisation of farmers and their institutions have further

compromised their ability to advocate and demand for the services. HIV/AIDS pandemic has also impacted negatively on agricultural labour and service delivery, compounding the problem of erosion of productive resources.

The objectives are to improve equity in access and control of productive resources across genders; harness the existing potential of productive resources; empower the vulnerable groups to actualize their full potential in food production at the household level; and enhance provision of agriculture and livestock services for improved household food security.

Strategic interventions:

- Development of an Agriculture Land Use Master Plan to provide information regarding various land use systems in different agro-ecological zones and topography, and to define the optimal land sizes for various agro-ecological zones.
- The creation of an efficient and easily accessible land registry system.
- Adoption of participatory approaches to rural development and sustainable management of productive resources.
- Promotion of equitable access to, control and management of productive resources across gender.
- Training and capacity building of small scale producers across the commodity value-chains.
- Capacity building of rural agricultural and livestock communities on participatory rural development methodologies to enhance their adaptability to changing needs and environmental and socio-economic conditions.
- Promotion of technical and social options for improvement of productivity and incomes in marginal areas and other fragile ecosystems.
- Improvement of information flow and networking among stakeholders.
- Enhance accessibility and affordability of productive resources.
- Foster optimal use of local productive resources.
- Facilitate benefit sharing from wildlife conservation in order to ensure that communities benefit from wildlife conservation.

3.2.2 Sustainable Intensification and Diversification of Agricultural Production Systems

The growth rate in per capita food production has not kept pace with population growth rate in the country. High population density in high and medium agro-ecological areas has placed too much pressure on land leading to sub-divisions into non-economical units and encroachment into fragile ecosystems. In addition, over-reliance on rain-fed agriculture, and unsustainable water, pastures and land use management practices has exacerbated this problem. High costs of inputs and limited diversification in terms of production of nutrient-rich foods have increased the risks of livelihood failure and health challenges. Increased productivity of small land units and marginal ecosystems can be ensured through intensification of the production processes and diversification for adaptability to various agro-ecological zones.

The objectives are to promote agricultural intensification through sustainable and efficient use of productive resources; enhance diversification for adaptability, sustained productivity

and production of nutrient rich foods; and reduce the risks of livelihood failure and nutritional health challenges amongst agriculture and livestock producing households.

Strategic interventions:

- Promote intensified and sustainable agriculture, livestock and fisheries production systems through:
 - Strengthening and scaling up Farmers' Field Schools/Food Security Field Schools, Common interest Groups and other models to enhance farmers', pastoralist and fisher-folk skills.
 - Harvesting of livestock feed and fodder during times of surplus and value-addition, and storage for intensified production and use during scarcity.
 - Supporting access to affordable credit and reliable supply of quality farm inputs.
- Harness water resources for irrigation development, livestock, fisheries and domestic use.
- Promote diversification and production of nutrient rich foods through:
 - Promotion of adaptable livestock and crop enterprises.
 - Support of production of nutrient rich foods.
 - Support of tree-crops, agro-forestry, afforestation, and re-afforestation for broader livelihoods support base and supply of environmental services.
- Strengthen research-extension-farmer linkages to enhance flow and utilisation of technical information appropriate for intensified and diversified agricultural production systems.
- Support development of a training manual/guide for promotion of intensification and diversification of livestock, fisheries and agricultural production systems.
- Promote reduced cost of production through:
 - Research and development interventions targeting increased productivity.
 - Development and implementation of mechanisms for reducing the cost of pesticides, fertilizers, seed, and credits.
 - Development of special programs to support the poor and food insecure through targeted subsidization of critical production inputs.
 - Develop integrated models of production that are based on complementarities of farm level enterprises including use of wastes and by-products.

3.2.3 Urban and Peri-Urban Agriculture

Although urban and peri-urban areas have generally very small land holdings, there exists substantial potential for agricultural and livestock (poultry and dairy) production. However, the urban by-laws discourage any agricultural activities within municipalities. There are instances where raw sewage, including waste products from industries, is used to grow crops in urban and peri-urban areas. Keeping animals in urban and peri-urban areas can also be a public nuisance particularly in congested areas. There is need to develop guidelines which clearly stipulate where and what type of agricultural activities should be carried out in urban and peri-urban areas. The objective is to improve household food security through urban and peri-urban agriculture.

Strategic interventions:

- Develop guidelines for urban and peri-urban agriculture that clearly stipulate where and the type of agricultural activities that may be practised in urban and peri-urban areas.
- Review the regulatory framework to be in line with the developed guidelines.
- Carry out targeted training of farmers and other stakeholders in peri-urban areas on the guidelines and appropriate farming practices.
- Strengthen monitoring and surveillance system to ensure conformity with safe food production guidelines in urban and peri-urban areas.

3.2.4 Food Storage, Preservation and Value-addition

The post harvest losses at household level as a result of poor storage facilities and handling practices are high, ranging from 30% - 40% of maize produced in the country, 50% of fresh produce and 95 million litres of milk per annum. There are also high levels of post harvest contamination that pose health risk to consumers. Effective preservation and processing of food is hindered by factors such as access to and limited knowledge on storage and preservation techniques and fluctuations in output due to seasonality and over-reliance on rain-fed agriculture. There is need to enhance use and application of modern cost-effective food and forage storage and preservation technologies at household level for the realization of food security and nutrition.

The objectives are to minimize post harvest losses at house-hold level; enhance technical knowledge of rural house-holds in food and forage storage, preservation and processing (value addition); improve food safety at household level; and promote the identification and scaling up of best practices in traditional knowledge base on storage, processing and preservation methods.

Strategic intervention:

- Promote research and development of appropriate methods of food/forage handling, preservation value-addition and storage.
- Enhance capacity and training of households on appropriate safe handling, preservation, value-addition and storage techniques.
- Build capacity of households on indigenous technical knowledge on safe handling, preservation, value-addition and storage of food products.

3.3 NATIONAL FOOD AVAILABILITY

3.3.1 Food Trade (Domestic, Regional and International)

Kenya has increasingly become dependent on imports for its food requirements owing to declining per capita food production and self-sufficiency, urbanisation and globalisation trends and changing feeding habits. While consumers may have benefited from cheap food imports, reliance on these imports and food aid from external sources have to some extent reduced local production. Cross-border trade with Kenya's neighbours in the region has been on the increase, facilitating the assurance of regional food self-sufficiency, though with some displacement effects on local production. A major challenge for Kenya is to increase

productivity, efficiency in production and marketing with a view to reducing the cost of production for enhanced competitiveness. Although some parts of the country occasionally experience instances of surplus production, poor infrastructural network has hampered food distribution from surplus to deficit areas.

The objectives include improvement of competitiveness and efficiency of Kenya's food production and marketing systems; promotion of strategic liberalization of food trade as a means of ensuring food security; improvement of the food distribution systems including information net works; strengthening involvement of communities, private sector and producer organizations in marketing; and developing safeguard measures critical to food security, livelihood support and rural development.

Strategic interventions:

- Review and harmonize food related trade policies and regulations that are scattered in various government ministries/departments with a view to developing a coherent trade policy. This will entail:
 - Instituting mechanisms and measures to control import surges and/or dumping of subsidized/sub-standard foods.
 - Developing a schedule of identified sensitive and special products, which shall be annexed in the Sessional Paper/legal framework on food security and nutrition policy.
 - Safeguarding sensitive/special products and sectors for the purpose of seeking special treatment in the wake of rapid liberalisation agenda in trade negotiations.
- Increase the competitiveness of Kenya's agricultural produce by addressing the cost of production including infrastructural constraints.
- Promote domestic, regional and international food trade.
- Support efforts geared towards harmonization of food safety and quality standards and regulations regionally and internationally.
- Institutionalize multi-sectoral food and agricultural trade policy making, harmonization and negotiations.
- Continually negotiate for the removal of trade distorting subsidies by Kenya's trade partners.

3.3.2 Agro-Processing and Value-Addition

The returns to agricultural and livestock production are relatively low as most of it is sold in primary form. Small scale farmers remain confined at the lower levels of the commodity value-chain with low profit margins owing to their inability to engage in cottage industry or farm level type of agro-processing and value-addition. Whereas most of Kenya's high quality agricultural produce, such as tea and coffee, is widely used for blending relatively low quality produce from other countries, the additional proceeds from the resultant products do not benefit the Kenyan producers. Kenya has not adequately promoted the use of appropriate technology for value-addition by micro and small enterprises. This has been exacerbated by inadequate infrastructure and insufficient access to sources of credit and knowledge on type and sources of appropriate technology.

The objectives are to increase the level of value-addition for Kenya's agricultural produce meant for domestic and export markets, and to enhance product shelf-life and net returns from agricultural produce.

Strategic interventions:

- Provide tax incentives to promote value-addition and agro-processing industries both in rural and urban areas. Such incentives will include removal of import duties on equipment, machinery, packaging materials and VAT on locally processed products.
- Establish a fund to support SMEs involved in agro-processing and other means of value-addition.
- Facilitate the youth and women to utilize youth and women development funds for promotion of value-addition, cottage type industries and agro-processing development.
- Develop key infrastructure such as roads, power and water both in rural and urban areas to stimulate development of value-addition processes.
- Support capacity building of agro-processors, particularly SMEs, to meet international quality and safety standards.

3.3.3 Storage

During periods of sufficient rainfall, Kenya often realises surplus harvests of many food commodities, particularly maize, milk and pasture/fodder. However, a significant proportion of Kenya's produce is lost due to inadequate storage facilities, poor storage practices for food and lack of deliberate initiatives to harvest, dry and store surplus pasture/fodder. It has been estimated that post-harvest losses for various products range from 30 – 40% for maize, up to 50% for fruits and about 7% for milk per annum. Although the country generally lacks storage capacity, there are pockets of surplus capacity spread across the country under the management of National Cereals and Produce Board (NCPB). Out of the total NCPB storage capacity of 28 million bags (2.52 million tonnes), only about 15% of this is currently utilized. Farmers are at times forced to dispose of their produce at very low prices during glut periods due to lack of appropriate storage facilities.

The objectives will be to promote appropriate storage practices, promote storage of livestock fodder/pasture, expand utilization of public storage food facilities, and encourage private sector investment in these facilities.

Strategic interventions:

- Build capacity for development and management of appropriate storage facilities.
- Implement measures that facilitate renting or disposal of underutilized public storage facilities.
- Build capacity for harvesting and storage of fodder/pasture.

3.3.4 Strategic Food Reserve

Currently, the strategic reserve, which is managed by NCPB, comprises mainly maize grain. Maize is not the main staple food for those communities often facing hunger and famine. Although the Strategic Grain Reserve Fund is meant to cushion farmers from depressed

market prices during glut periods and to provide a first line of protection for coping with food emergencies, NCPB is often not able to make prompt purchases of maize for strategic reserve owing to insufficient funds and delays in release of the funds by the Exchequer. The objectives of this sub-program, therefore, are to attain sufficient and diversified nutritious food throughout the year, and to stabilize food prices.

Strategic interventions:

- Transform the Strategic Grain Reserve (SGR) into a Strategic Food Reserve (SFR) by expanding the SGR to include other critical foodstuffs such as sorghum, millet, rice, pulses, milk, meat and livestock feeds.
- Determine appropriate stock and cash levels for establishment of the SFR and provide additional funding for establishment of the SFR. The stock and cash levels will be periodically reviewed based on demographic, economic, climatic conditions.
- Strengthen institutional arrangement for the management and distribution of the food reserves.

3.3.5 Commercialization of Agriculture

The vision of the government is to transform Kenya's agriculture into a profitable commercially oriented and internationally and regionally competitive activity that provides gainful employment for Kenyans. Currently, the major hindrances to commercialization of agriculture include low profitability of the agricultural sector due to high cost of production, poor access to agricultural support services, multiple taxation, and market failures. Thus, the objective of this sub-program is to increase net incomes from farming activities.

Strategic interventions:

- Build capacity of farmers, MSE, cooperatives to undertake farming as a business.
- Strengthen support services including extension and provision of credit facilities for purchase of farm inputs.
- Support marketing of agricultural produce and products both locally and internationally.
- Promote consumption of locally produced agricultural products.
- Promote and/or strengthen the commodity value-chain development and linkages.
- Strengthen linkages between supply and market demands.

3.4 FOOD ACCESSIBILITY

3.4.1 Improvement and Expansion of On-Farm and Off-Farm Employment

Currently, crop and livestock enterprises provide the bulk of employment to the rural population. However, income levels in these areas are generally low with high unemployment rates. This has exacerbated rural-urban migration putting pressure on the services and resources in urban centres. The high unemployment rates and low incomes have been due to limited access to productive resources, low technology uptake, inadequate marketing infrastructure, low value-addition initiatives and inadequate regulatory frameworks. In this regard, the objective will be to support measures that would enhance rural employment opportunities as a means of increasing the level of food security and

nutrition. The target of the government is to increase on-farm employment at a rate of 5% per year on a sustainable basis and double the share of off-farm employment with respect to on-farm employment. Additionally, the government will collaborate with other stakeholders in the creation of on-farm and off-farm jobs.

Strategic interventions:

- Support measures that improve security and access to land, water and technologies especially by women, pastoralists and child-headed households.
- Support cooperatives, out-grower schemes and fair trade policies to increase the share of small producers in the production and export of high value crops and livestock.
- Review minimum wages regularly to take account of food and nutrition needs, inflation rates and labour productivity.
- Simplify business registration, licensing and regulation through the introduction of multi-user licences and operationalization of the Single Business Permit in all Local Authorities.
- Provide legal and institutional support to small rural enterprises, particularly with regard to training, business development services, institutional support, marketing and information.
- Address problems of weak technology and enhance linkages with training institutions by diversifying technological innovations, research and development to cater for the needs of MSEs.
- Strengthen business linkage opportunities by encouraging the establishment of agro-processing enterprises.
- Support investment in rural access road and locally generated renewable energy to lower production and marketing costs.

3.4.2 Improvement and Expansion of Urban and Peri-Urban Employment

In urban and peri-urban areas, poverty and chronic food insecurity is of major concern to the government and other actors. Moreover, past policies and strategies did not adequately address the food and nutrition needs of urban and peri-urban poor. In the recent past, however, government has taken some measures to provide a favourable environment for urban traders. In urban areas, the main sources of livelihood are employment and trade. The un-employment rates in these areas are high. Even though the informal sector provides the bulk of employment here, the wages are generally low. The government will therefore direct its efforts towards employment creation activities for enhanced household incomes.

Strategic interventions:

- Fast-track implementation of the micro, small and medium enterprises (MSME) policy.
- Strengthen and streamline regulatory frameworks governing urban formal and informal sectors particularly micro and small enterprises, with a focus on employment creation and poverty alleviation.
- Support and promote capacity building to enhance small businesses and entrepreneurial skills.

- Provide an appropriate working environment and suitable zones for the informal sector through provision of workspace for hawkers and other small and medium businesses.
- Support small business enterprises to access affordable financial resources.
- Support activities that enhance the income generation capacity of people with special needs or disadvantaged such as the physically challenged, street families and the poor.

3.4.3 Improvement of Access and Functioning of Markets

Efficient and effective markets are a pre-requisite for optimum benefit for producers, intermediary traders, processors and consumers. There are on-going government efforts for infrastructure enhancement geared to address inadequate access to markets for producers and consumers. The key market infrastructure includes roads, power, telecommunications, work spaces, water and sanitation, among others. Furthermore, poor market information systems have significantly contributed towards poor functioning of the markets. The objective is therefore to improve market infrastructure and information systems, and marketing skills of market operators.

Strategic interventions:

- Build roads linking producers to markets.
- Increase the number of power and water connections to markets.
- Expand telecommunication network in rural areas and informal settlements.
- Facilitate the expansion and improvement of information systems.
- Sensitize and develop training programs for food traders.
- Improve governance of local authorities and allocation of resources for development and modernization of markets.
- Improve the physical planning capacity of local authorities.
- Enhance the flow of information among market players.

3.4.4 Cultural, Social and Political Aspects in Food Access

Cultural, social and political factors play a key role in food production, distribution, storage and consumption. Culture is known to influence intra-household food access. It is therefore important to mainstream cultural, social and political considerations in the food security and nutrition strategies and activities with particular attention to vulnerable groups (for example, women, children and PLWHA).

Strategic interventions:

- Entrench the human rights to food approach, particularly for women and children, in the constitution.
- Strengthen the Kenya National Commission for Human Rights to advocate for the enforcement of the right to food.
- Sensitize communities to discard retrogressive cultural practices with regard to access to food.

- Promote active involvement of men in agricultural activities (to be included in availability).

3.5 FOOD SAFETY AND QUALITY CONTROL

3.5.1 Improving and Harmonizing Institutional and Legislative Framework

Incidences of food and feed poisoning, and water contamination are on the increase in the country due to chemical and drug residues; poor handling, processing and storage practices; and zoonotic diseases (transmissible between man and animals). The legislative regulations describe food safety and quality characteristics requirements and are used for inspection, surveillance, enforcement and licensing. There are many regulatory and certification institutions involved in food safety and quality in the country, a situation that has resulted in lack of one-stop-shop in services relating to certification and regulation. This has led to overlap of mandates with associated negative impact of increased cost of compliance and doing business. Moreover, some of the regulations are not in conformity with the current international standards. The country has also not fully domesticated some international conventions, standards and guidelines pertaining to food safety control (e.g., OIE and CODEX).

The objectives are to assure food and feed quality and safety control at national and international levels, and to develop capacity of the facilities and expertise in both private and public sector for assured quality services in food safety.

Strategic interventions:

- Review and harmonize food safety and quality regulatory and institutional framework to improve coordination and enforcement.
- Enhance private sector and civil society engagement in food safety and quality assurance.
- Develop mechanisms for domestication of relevant international conventions, standards and guidelines.
- Provide guidelines and sensitize the public on production and utilization of genetically modified products.
- Develop capacity of the general public to demand their rights in food safety and quality through awareness creation on basic aspects of food safety, such as certified standards and inspection certificates for food products.

3.6 NUTRITION IMPROVEMENT

3.6.1 Lifecycle Approach to Nutrition Improvement

There is widespread food insecurity and inadequate dietary diversification in Kenya as a result of poverty. There are changing nutritional needs at the different physiological states and life cycle stages. The lifecycle approach focuses on the health needs of individuals through the six stages of the human lifecycle, namely, pregnancy and newborn, early childhood, late childhood, adolescence, adulthood and the elderly. Using the lifecycle approach will ensure that nutritional needs of different age groups and stages of life are addressed appropriately.

The objectives are to improve women's nutrition throughout their lifecycle; promote optimal infant and young child feeding practices; promote appropriate nutrition for school children and adolescents; promote healthy lifestyles across the population; and improve nutrition care and support for the elderly.

Strategic interventions:

- Promote consumption of diversified and nutritionally adequate diet across the lifecycle.
- Promote technologies aimed at reducing work-load for women.
- Strengthen monitoring of maternal nutritional status.
- Support enactment, implementation and monitoring of the code for marketing of breast milk substitutes.
- Revitalize the Baby Friendly Hospital Initiative (BFHI) and institutionalize community support, protection and promotion of appropriate infant and young child feeding.
- Develop and implement a national communication strategy on infant and young child feeding.
- Strengthen growth monitoring and promotion at health facilities and community levels.
- Institutionalise routine assessment and monitoring of the nutritional status of school children and adolescents and create awareness on healthy diets.
- Strengthen and support community based nutrition programs for the elderly.

3.6.2 Micronutrient Deficiency Prevention and Control

There is a high prevalence of micronutrient deficiencies among groups with sufficient food in terms of protein and energy. The most affected are children under five years who comprise 84% with varying levels of vitamin A deficiency, 73% suffering from iron deficiency and 51% from zinc deficiency. About 55% of women have iron deficiency while 39% suffer from vitamin A deficiency. There is need to focus on micronutrients since they contribute to the overall development and wellbeing of an individual. A number of strategies for alleviating micronutrient deficiencies are in place. These include short term strategies such as supplementation and long-term ones such as dietary diversification, fortification and public health measures. Micronutrient guidelines with interventional strategies have been developed.

The objectives are to reduce vitamin A deficiency, iodine deficiency disorders and iron deficiency anaemia in children and women of reproductive age; develop and implement programs to reduce other emerging vitamin and mineral deficiencies; promote increased consumption of micronutrient rich foods; and strengthen prevention and control of parasitic infestations.

Strategic interventions:

- Strengthen routine and therapeutic micronutrient supplementation (vitamin A, iron and folate) for children and women and identified vulnerable groups.
- Strengthen salt iodization program to ensure the population accesses adequately iodised salt.

- Develop a program to promote and facilitate fortification of widely consumed foodstuffs such as maize, wheat flour, cooking oils and composite flours.
- Promote consumption of micronutrient rich foods.
- Support interventions to prevent and control emerging vitamin and mineral deficiencies.
- Develop and implement a comprehensive national micronutrient deficiency control strategy.
- Scale up interventions to prevent and control parasitic infestations like hookworm and schistosomiasis.
- Promote malaria prevention and control strategies.

3.6.3 Nutrition Promotion

There is inadequate nutrition knowledge and awareness among the general public about good nutrition required to lead healthy active lives. Therefore there is need to mount awareness campaigns using a multimedia approach to reach all Kenyans in order to influence informed decision making and behaviour change for healthy lifestyles. A mechanism should be put in place to regulate the dissemination of nutrition messages to ensure that they are harmonized and are appropriate for the various target groups.

The objective is to improve knowledge, skills and change attitude of the population for enhanced nutrition and healthy lifestyles. Further to this, there is need to develop a comprehensive communication and advocacy strategy for identified priority nutrition issues; create awareness on key nutrition issues to individuals, families and communities; and to strengthen nutrition education through service delivery points.

Strategic interventions:

- Develop and implement a national nutrition communication/advocacy strategy.
- Develop and disseminate a nutrition advocacy tool for use at all levels.
- Support the development and dissemination of Information, Education and Communication (IEC) materials on appropriate diets and lifestyles.
- Develop and implement Behaviour Change Communication (BCC) approach to fast-track implementation of nutrition interventions through the community health strategy.
- Strengthen provision of nutrition education and counselling.
- Promote utilisation of appropriate energy and time saving technologies.

3.6.4 Nutrition and Infection

Infection compromises the nutritional status of people, particularly those that are vulnerable, including children, pregnant and lactating women, and the elderly. It is estimated that 36% of child mortality in Kenya is caused by malnutrition as measured by underweight. This is the single greatest underlying cause of child mortality.

Treatment of infections and adherence to long-term therapy is often compromised due to lack of adequate nutrition. Major areas of co-morbidity (i.e., malnutrition and infection) nationally include HIV/AIDS, TB/respiratory infections, malaria, measles and diarrhoeal

diseases. While there have been global efforts to target major causes of infectious diseases (e.g., HIV/AIDS, Malaria, etc.), there is need to strengthen an integrated approach for nutritional care and support into national program and service delivery efforts. Thus, the objective is to improve nutritional care and support with a view to prevention, control and management of infections and diseases for optimal health.

Strategic interventions:

- Integrate nutrition and infection issues into curricular of relevant training institutions.
- Integration of national standards of nutritional care into various programs for key areas of infection into national inter-sectoral models of support.
- Develop and implement standards for nutritional care for people with infections.
- Strengthen nutritional care and support for people with infections.

3.6.5 Diet Related Non-Communicable Diseases

There is an increase in the incidence of Non-Communicable Diseases (NCDs) such as diabetes, obesity, heart disease, some cancers, kidney and liver diseases. This is largely attributed to dietary transition reflected in the consumption of foods low in fibre and refined food high in fat, sugar, and salt. These changes have been occasioned by changing lifestyles due to increased urbanization and globalization. There is limited awareness in the population about the effects of these lifestyle changes. There is an urgent need to determine the magnitude and effect of these diseases and to address their prevention, control and management modalities. The objective is to reduce the incidence and prevalence of diet related NCDs and enhance their control and management.

Strategic interventions:

- Promote healthy diets and lifestyles including physical activity.
- Support programs to create awareness on the importance of individual routine health and nutritional assessments.
- Promote consumption of wholesome indigenous foods in households and eating outlets.
- Promote research and monitoring system focused on prevalence and trends of NCDs.
- Develop comprehensive programs on prevention and management of diet related NCDs.

3.6.6 Institutional Feeding

There is need to review and harmonize guidelines for institutional feeding to achieve adequate nutrition in schools, hospitals, institutions for higher learning, prisons, children's homes, and homes for the elderly. In addition, there is need to strengthen regulatory mechanisms to monitor public health aspects in these institutions. The objective is to ensure adequate nutrition of individuals in institutional feeding setups.

Strategic interventions:

- Review, harmonize and disseminate institutional feeding guidelines.

- Build capacity of service providers on institutional feeding.
- Build capacity of institutions to provide nutritionally adequate diets.
- Promote establishment of institutional gardens for production of diverse foods.
- Institutionalise nutritional assessment.

3.7 FOOD AND NUTRITION IN SCHOOLS

3.7.1 Improving Nutrition in School Feeding

Currently, school feeding is undertaken in a few schools such as those in the ASAL districts, *Njaa Marufuku* Kenya program and those fully supported by the parents' contribution. The food commodities are usually of low nutritional value and in small quantities. It is also known that many children leave home without breakfast and snacks to eat during the day which leads to under-nutrition and affects concentration and learning, resulting in poor performance, absenteeism and dropouts. It has been proven that school feeding programs contribute to alleviating hunger, improving enrolment and retention in schools. The objective, therefore, is to improve nutritional status of school children to enhance attendance and performance.

Strategic interventions:

- Expand school feeding program to all schools including children in pre-school.
- Review and implement harmonized standards and guidelines for school feeding to promote adequate nutrition.
- Promote the establishment of school gardens/livestock.
- Promote income generating activities to enhance institutional capacity to access nutritionally adequate foods.
- Mobilize strategic partners for accelerated scale-up of school feeding programs
- Develop guidelines and tools for routine health and nutritional assessment in schools and preschools.
- Promote time and energy saving technologies.

3.7.2 Food and Nutrition Education in Schools

There is inadequate awareness in schools on the importance of appropriate nutrition. The current curriculum for primary and secondary schools, and institutions of higher learning does not treat nutrition as a core subject. As a result, a significant proportion of the school population is not adequately sensitized on nutrition. This has immediate and long-term effects in that choices on which foods to consume are not influenced by informed decisions. More immediately, malnutrition and unsafe foods are the main concerns, while in the long run lack of knowledge might affect the decision making on nutrition by future adults and parents. Nutrition education is known to have a significant effect in fostering healthy eating habits. Therefore, the objective is to provide appropriate knowledge to school children on the importance of good nutrition for a healthy and active life.

Strategic interventions:

- Integrate nutrition education in school curricula at all levels.

- Strengthen the nutrition component in the pre-service and in-service training of teachers.
- Capacity building of school administrators on early identification of health and nutrition problems and timely referral for appropriate action.
- Develop and disseminate IEC materials with key messages on nutrition in the lifecycle.
- Promote the establishment of young farmer or 4K clubs for demonstration of production of nutrient rich foods.

3.8 FOOD AND NUTRITION IN CRISIS AND EMERGENCY

3.8.1 Crisis Mitigation and Emergency Preparedness

The main catastrophes that lead to emergencies in Kenya are droughts, floods, fires and landslides. Poorly developed distribution networks and information flow often aggravate emergency response. In the recent past, there have been increasing incidences of drought and floods that result in loss of human lives, livestock and livelihood support systems. Cases of human to human and human to wildlife conflicts also abound during emergencies. Droughts and floods contribute to food and nutrition crisis in affected areas, eliciting emergency interventions. Since the droughts and floods are predictable they can be planned for with a view to reducing their adverse impact. The objective is to reduce vulnerability to food insecurity and malnutrition occasioned by catastrophes, thus preventing crises from developing into emergencies.

Strategic interventions:

- Strengthen food and feed distribution networks from surplus to deficit areas.
- Empower communities to participate in emergency preparedness and demand for their food and nutrition rights.
- Promote public-private sector involvement in the identification and prompt response to crises and emergencies.
- Facilitate a social protection scheme for the chronically food insecure population groups.
- Protect productive resources such as soils and breeder livestock from decimation based on early warning.
- Link emergencies to recovery and long-term development to ultimately enable communities and individuals to override the shocks of emergencies.

3.8.2 Emergency Management

Emergency interventions during crisis are costly. For example, it is estimated that the emergency interventions during the 2005/2006 drought cost US\$ 450 million (KES 32 billion). The response to crisis has generally been weak due to lack of an effective emergency response system. The decision making processes have been top-down leading to the distribution of provisions otherwise considered inappropriate for recipients. Some communities have for instance expressed the need for fodder for their livestock instead of the relief food, while others prefer cash transfers to food relief. Poor and untimely response

in many cases has in the past led to an increase in malnutrition and the loss of livelihoods and lives amongst the affected.

The objective is to have all persons affected by catastrophes receive appropriate assistance to maintain nutritional levels above the emergency threshold and avoid loss of livelihood support base.

Strategic interventions:

- Provide budgetary allocations for prompt response to droughts and other natural catastrophes.
- Decentralize and devolve decision making on acquisition, targeting and distribution of resources for mitigating catastrophes.
- Promote emergency intervention programs that provide nutritious foods according to different physiological and regional needs.
- Promote timely de-stocking, emergency off-take, and disease control activities for sustenance of livelihood support systems through the support of both private and public sectors.
- Develop guidelines for transfer entitlements with a view to harmonising coordination and synergy building among actors.
- Harmonise guidelines for management of targeted feeding programs for populations in severe distress or with specific nutrition needs.
- Strengthen financial and technical capacity of grassroots institutions such as District Steering Groups to respond to crisis.
- Develop an effective monitoring system for the assessment of food distribution.

3.8.3 Recovery and Long-Term Development

Traditionally, most emergency response interventions have no inbuilt mechanisms for recovery and linking with long-term development strategies. As a result recovery from emergency situations has been poor leading to cumulative loss of livelihood assets. It is therefore necessary to plan for interventions that link emergency to recovery and long-term development to ultimately lift people out of vulnerability.

Strategic interventions:

- Sensitize communities, development partners, NGOs and the private sector on the need to support long-term interventions.
- Promote conditional cash/food/voucher transfer based entitlements during emergencies.
- Promote public works schemes geared towards sustainable development and management of productive resources such as water points, irrigation canals, and community fodder/pasture banks.
- Support targeted feeding programs for populations with specific nutrition needs.
- Promote livelihood diversification in environmentally fragile areas.
- Support programs for re-stocking of decimated livestock.
- Enhance school enrolment and completion rates among food insecure households.

3.9 FOOD AND NUTRITION INFORMATION

3.9.1 Data Collection and Management on Food and Nutrition

There are many organizations, both government and non-governmental, involved in the collection of food and nutrition information. The information systems in place include Crop Early Warning System, Market Information System, Remote Sensing, Population and Housing Census, Drought Early Warning System, National Household Welfare Monitoring System, Health Management Information System, Kenya Demographic Health Surveys, and Vulnerability Assessment and Mapping. However, the current data collection and management system is not well coordinated leading to duplication of effort and wastage of resources. Some of the available data are not wide in scope and depth. Further, the feedback mechanisms are not adequate to facilitate widespread utilization of the same. There is need for coordination of food and nutrition information systems including data collection, analysis, documentation, packaging and dissemination.

Strategic interventions:

- Improve coordination of food and nutrition information systems.
- Conduct information needs assessment for both short and long-term decision making.
- Conduct inventory/diagnosis of data collection and management systems.
- Conduct assessment of needs and opportunities for standardization and harmonization of data sets in various institutions for improved data sharing.
- Review existing legislation on data sharing to enhance access and transparency of data.
- Develop a systematic data collection and management system.

3.9.2 Cross-Sectoral Data Analysis on Food and Nutrition

Most analyses in food and nutrition are usually conducted for specific purposes by different stakeholders. The analyses are fragmented and segmented in most cases. Further, analyses at local, district and provincial level are limited and capacity for cross-sectoral analysis of food security and nutrition is not adequate. Therefore, there is need to enhance capacity for cross-sectoral data analysis.

Strategic interventions:

- Strengthen capacity of the relevant institutions in cross-sectoral data collection and analysis at all levels.
- Strengthen cross-sectoral management and sharing of information.

3.9.3 Information, Education and Communication

Although food and nutrition information is available from various sources, the awareness of its existence among the population is low. Information generation and dissemination are not demand driven at the moment. The general packaging and medium of communication are

also not always appropriate to the needs of the users. There is, therefore, a need to link appropriately packaged information to potential users at all levels.

Strategic interventions:

- Strengthen the capacity to collect, collate and disseminate food and nutrition information among all users.
- Develop communication strategy on food and nutrition information.
- Support dialogue between generators and users of information.

4. IMPLEMENTATION FRAMEWORK

4.1 INTRODUCTION

Past food policies in Kenya have not been very successful in addressing food and nutrition insecurity in the country mainly because of lack of a strategy and an effective implementation framework. Other factors that have contributed to inadequacies in implementation include inadequate budgetary allocations, unstable macro-economic conditions, limited involvement of the private sector, inadequate sectoral coordination, lack of monitoring and evaluation systems, and limited stakeholder participation.

This chapter sets out the implementation framework consisting of institutional arrangements, structures and an implementation matrix. The framework takes into consideration the wide range of actors and participants who will be involved in the implementation of the FSNS. The chapter thus provides a coordinated framework for effective management of resources, by building on the existing structures to implement programs and projects. However, to successfully implement the specified strategic programs and sub-programs requires a parallel advocacy plan based on principles of social justice and equity, environmental sustainability, and health as they relate to issues of nutrition and food.

4.2 INSTITUTIONAL AND LEGAL ARRANGEMENTS

The improvement of food security and nutrition requires multidimensional interventions since existing problems related to food production, food safety, nutrition, employment, purchasing power are multidimensional and multi-sectoral. However, the current structures do not effectively address the coordination and linkages of these initiatives. As a result, there are gaps in dealing with implementation of food security and nutrition policies and programs at national and sub-national levels. It is therefore important to put in place institutional structures and arrangements that utilize the relevant departments, ministries and other institutions for implementation of the FSNS and that create an enabling environment to facilitate the full participation of the private sector, civil society and communities.

To establish a functional organizational and legal framework to address food security and nutrition, certain initial steps must be taken. These include:

- Finalizing the NFSNP and the NFSNS.
- Establishing the National Food and Nutrition Secretariat (NFNS) with sufficiently empowered head, TWG and core officers.

- Establishing a functional institutional arrangement for joint operations by lead ministries and collaborative stakeholders.
- Activating and making effective district and divisional committees on food and nutrition.

Thus, similar to the approach adopted for the implementation of the NFSNP, it is assumed that a multi-sectoral arrangement would coordinate and monitor the implementation of the NFSNS. Since many divisions and departments will be involved, an Inter-ministerial Steering Committee on Food and Nutrition (ISCFN) is expected to coordinate and supervise the participation of relevant ministries and institutions in the implementation of all food and nutrition programs in the country. This would help ensure appropriate linkages among diverse sectors so that each would contribute to achieving immediate and longer-term strategic objectives. The establishment of an ISCFN with a strong National Food and Nutrition Secretariat (NFNS), a Stakeholder Technical Committee (STC), and Food and Nutrition Committees at district and division levels is thus envisaged through consultative and participatory processes. This would be done in consultation with the Kenya Food Security Meeting (KFSM), the ICCFN and ASCU. A Food and Nutrition Act will be enacted to provide for the establishment of the ISCFN and NFNS for the coordination of all food and nutrition activities.

Figure 3 shows the FSNS implementing institutional structure as discussed in this chapter. At the top is the National Food Security and Nutrition Executive Committee (NFSNEC), which comprises the Cabinet and chaired by the President. Following this is the National Food Security and Nutrition Steering Committee (NFSNSC) to be chaired by the Head of Public Service and Secretary to the Cabinet and composed of Permanent Secretaries of implementing/line ministries and senior relevant technical personnel. The NFNS to be headed by a Secretary will then fall under the NFSNSC.

The mandates of the NFNS will be to:

- Promote broad, multi-sectoral coordinating mechanisms and response to food security and nutrition issues.
- Ensure the integration of the response to emergency food insecurity problems with response to chronic food insecurity.
- Oversee national plans, programs and projects that promote food security and nutrition.
- Guide an effective and efficient mechanism for monitoring the implementation of the NFSNP, ensuring a two-way (bottom-up and top-down) free flow of information.
- Serve as an advisory body to the government on issues relating to food and nutrition and how to meet its international commitments.
- Provide guidelines for planning, implementing and evaluating the National Food and Nutrition Action Plan.
- Undertake coordination with stakeholders and provide all the necessary information to stakeholders.
- Receive and review monitoring reports of food security programs and projects.
- Create and manage a databank on food security and nutrition interventions.
- Prepare quarterly reports on the implementation and progress of the NFSNP and report to the NFSNSC.

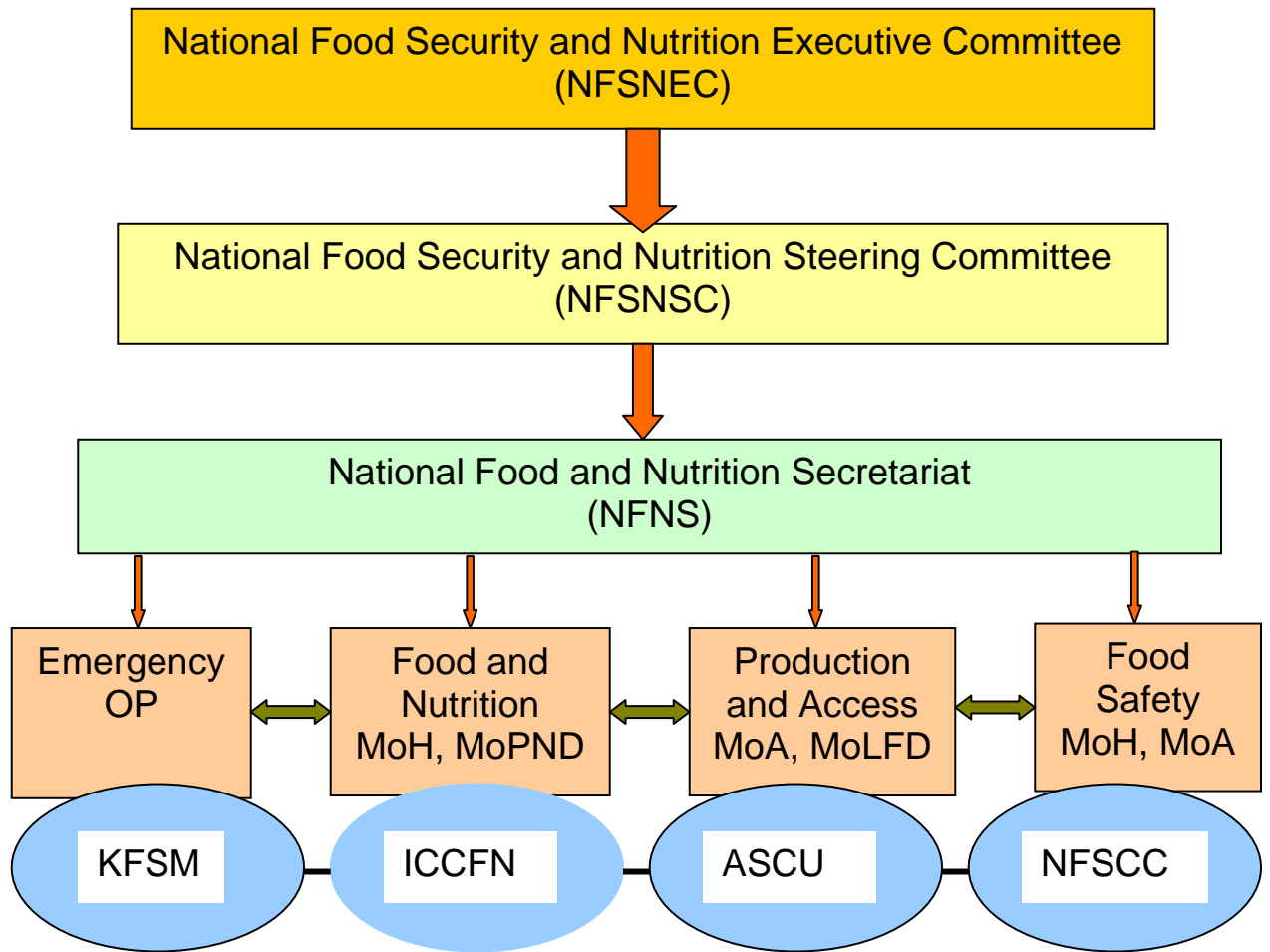


Figure 3: NFSNS implementing institutional structure¹

The NFNS will have four desks—Emergency, Nutrition, Food Availability and Access, and Food Safety. As shown in **Figure 3**, the lead ministries will be the Office of the President (OP) to deal with Emergency; Ministries of Agriculture (MoA), Health (MoH), and Planning and National Development (MoPND) to deal with Food and Nutrition; Ministries of Agriculture, and Livestock and Fisheries Development (MoLFD) to take charge of Food Availability and Access; and MoH and MoA to lead in Food Safety. There will be a number of collaborating institutions and stakeholders. These would include relevant ministries—Ministries of Environment and Natural Resources (MoENR), Water and Irrigation (MoWI), Education (MoE), Trade and Industry (MoTI), Roads and Public Works (MoRPW), Local Government (MoLG), and Science and Technology (MoST)—CBS, KEPHIS, universities and research institutions, NGOs, consumer organizations, coalitions and alliances, UN bodies, among others.

¹ Ministry names used are as were known before the Coalition Government was formed in April 2008. The departments concerned may have been shifted from one ministry to another but are expected to remain relevant.

In line with the policy of decentralization, district and division level authorities, local communities and other stakeholders will be actively involved in implementing the NFSNP. Each district and division will have its own Food and Nutrition Committee chaired by the District Commissioner and the District Officer respectively. The role of the district and division committees will be to coordinate and monitor all food and nutrition activities in their respective geographical areas. Division committees will report to the district committees, which in turn will report to the National Food and Nutrition Secretariat. It is proposed that district and division committees be established in a few selected areas on a pilot basis initially. Lessons from the pilot areas will then be used when expanding to all districts and divisions of the country.

4.3 FUNDING THE NFSNS

There has been limited linkage between planning priorities and budgets. There has also been little awareness of the MTEF (Medium Term Expenditure Framework) process and various sources of finance. Awareness and commitment must be improved to ensure adequate resources are allocated to food and nutrition activities across sectors. Budgetary allocations to food and nutrition should therefore be increased. This increase is expected to be supported by NGOs, Development Partners, CSOs and private sector. To ensure that this is achieved, ASCU should undertake advocacy activities by developing a clear advocacy strategy. This will be done by establishing an Advocacy and Resource Mobilization Desk at the NFNS.

All funding arrangements will be approved by the NFSNSC. The NFNS will have its own budget for coordination, administration and operational purposes. The FSNS funding mechanism will integrate the government budgetary provisions, the component of the Development Partners and the contribution of the private sector and NGOs.

A summary of indicative budgets for the FSNS implementation based on the MTEF cycle are shown in **Table 1**, as part of the FSNS Implementation Plan. Detailed budgets on specific sub-programs are provided in the Appendix. The indicative budgets will have to be refined and detailed on an annual basis by the NFNS as the coordination office, in consultation with stakeholders.

Table 1: Summary of indicative budgets for NFSNS implementation (Million KES)

Program areas	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
1. Household resource productivity	15,881.0	15,871.0	15,868.0	15,842.0	15,842.0	15,842.0	95,146.0
2. National food availability	20,577.5	20,574.5	20,537.0	20,529.0	20,529.0	20,529.0	123,276.0
3. Food Accessibility	203.2	207.2	196.7	196.7	181.7	181.7	1,167.0
4. Food safety and quality control	27.8	27.8	17.7	17.7	14.0	0.0	105.0
5. Nutrition improvement	434.5	414.5	389.5	389.5	376.0	309.0	2,313.0
6. Food and nutrition in schools	3,066.5	3,046.5	3,044.0	3,044.0	3,029.0	3,029.0	18,259.0
7. Food and nutrition in crisis and emergency	2,251.5	2,186.5	2,095.5	2,095.5	39.0	39.0	8,707.0
8. Food and nutrition information	47.0	10.0	10.0	10.0	10.0	10.0	97.0
9. Institutional Framework	30.0	30.0	30.0	30.0	30.0	30.0	180.0
GRAND TOTAL	42,519.0	42,368.0	42,188.4	42,154.4	40,050.7	39,969.7	249,250.0

4.4 IMPLEMENTATION MATRIX

A summarized implementation matrix is presented in the Appendix. The matrix indicates the critical interventions or actions that must be undertaken according to the specified time-frames in order to successfully implement the NFSNS. The matrix is informed by the NFSNP, ERS, PRSP, among others. For each intervention and/or action, lead ministries/agencies are identified (highlighted in the table in the Appendix) together with the main link agencies. However, detailed work-plans and the accompanying budgets will be prepared by the Secretariat.

5. MONITORING AND EVALUATION

5.1 INTRODUCTION

The overall framework for developing the National Monitoring and Evaluation (M&E) system is provided by the ERS with its Implementing Program (IP) so as to give feedback on the effectiveness of the implementation of the IP-ERS. The coordination of the National M&E function is under the MoPND. The FSNS will support and adopt this system.

It has been observed that there is inadequate linkage between policy and implementation in food and nutrition matters. Likewise, there is lack of monitoring and evaluation to check on the implementation of sectoral plans and activities. There is need therefore to develop and agree on priorities and measurable targets for food security and nutrition. Thus, all the key monitoring activities need to be put in place.

5.2 RATIONALE AND OBJECTIVES

The rationale for putting in place food security and nutrition monitoring systems is to provide information about developments in food security and nutrition which would form the basis for program design and intervention. Monitoring helps to improve program design and delivery and to provide a basis for timely corrective interventions in case of program failures. The objectives will be to institutionalise an effective M&E system for food security and nutrition and to institute participatory M&E system. This is to allow for active participation of the stakeholders in order to ensure that all the information needed is collected and analysed for improved planning and implementation. Before new data are collected, the already available data should be fully utilized. There should be an effort to make data collected simple and easily interpretable and understandable.

5.3 SCOPE AND APPROACH

An appropriate M&E system should be developed at the national and local levels. Early warning systems may be used at the national level to monitor food security, but would be used to a less extent for nutrition monitoring at this level. The national level monitoring would lay emphasis on cereals and animal products particularly in relation to availability and access. The local level monitoring would, however, go beyond this by collecting and analyzing information on household food availability, access and actual consumption, including household food distribution and intake.

To enhance monitoring and evaluation of the NFSNS implementation and its impact, the government will, among other actions, put in place a M&E system that includes regular surveys at all levels, and that continuously seeks input on the progress of implementation from the private sector and other stakeholders to ensure their participation in the process. This will be done by the lead Ministry of Agriculture through ASCU in the short term and will be taken over by the Office of the President through the NFNS. Linkages to ensure successful M&E will be forged by the Ministry of Agriculture through ASCU with ICCFN, KFSM, NFNS, the National M&E system, Development Partners, universities and research institutions.

The National M&E system envisages a situation where the MoPND and the line/lead ministries in the implementation of the NFSNS will agree on the indicators to be used by the system on a sector-wide basis. Reports which will be key benchmarks on the progress of the implementation of the NFSNP as well as the NFSNS will be produced. The reports will enable the key operators to make sure that implementation is taking place and the programs are fully funded.

The Office of the President and the Ministry of Agriculture will sensitise communities, ministries and the private sectors to be interested in the implementation of the NFSNP and NFSNS and its governance and to provide feedback on its implementation. The M&E indicators for policy and impact assessment will be established at national, district, division and household/community levels. (Some of these are highlighted in the next section.) Periodic stakeholder review workshops will be organized at the national and local levels. All these activities will require huge amounts of financial resources that will have to be allocated to ASCU and subsequently to the NFNS to undertake them.

5.4 M&E INDICATORS

The selection of indicators should take place at the design stage of each of the food security and nutrition program and sub-program areas. The indicators should consider the objectives, outputs, activities and inputs. Outcome or impact indicators measure the effect of activities in respect of the extent to which they meet the set objectives. On the other hand, process and output indicators measure how activities are planned and implemented. Careful selection of indicators at all levels is thus important in monitoring and evaluation. Some indicators are global or national/country while others are local in nature. The latter should be identified by farmers and community members. The selection process should therefore take into consideration the group of people being targeted. The process of determining stakeholder involvement at different stages of program activities would generally follow the example presented in **Table 2**. It is, however, important to note that the table is not necessarily exhaustive.

The elements of food security and nutrition as illustrated in **Figure 1** and the goals and programs of the FSNS shown in **Figure 2** provide a framework for determining the major categories of indicators related to the four dimensions of food and nutrition security—improved food availability, increased food access, increased stability in food production (reduced vulnerability), and nutritional adequacy. These indicators include increased food production, improved/efficient food markets, increased income of households and individuals, and increased employment opportunities. Others are stable food production, increased food

stocks, increased food intake, more appropriate food use, and increased nourishment. However, the precise indicators and measures will depend on the aspect of food security the program is to address, taking into account the specific nature of target groups such as pastoralists in arid areas, women, children and PLWHA.

Table 2: An example of stakeholder involvement in selection of M&E indicators

Intervention	Activity level	Stakeholders	Indicator selection
Promotion of intensified, diversified and sustainable rain-fed agriculture	Household and community	Farmer groups, extension workers, community, health workers, nutritionists and NGOs	<ul style="list-style-type: none"> Indicators are identified by community and discussed by farmers and extension workers. Indicators represented by proxies to reflect broad issues are selected by communities.
	Stakeholder workshops for review	Key informants, community representatives, program staff and government administrators	<ul style="list-style-type: none"> Indicators in the form of a checklist are identified. Structured workshops to allow broad-based views are conducted.
	Assessment of impact and analysis of policy	Evaluation team, government representatives, development agents and NGOs	<ul style="list-style-type: none"> Selection of global indicators is done. Stakeholders discuss and select policy-level indicators. Indicators for evaluation of impact are discussed among stakeholders.

To monitor and evaluate policy change on food security and nutrition would require and consider long-term measurement of indicators of change at the international (global) level and or national/sectoral level goals and objectives. It is important to monitor the impact of policy to receive feedback for policy makers and other stakeholders on the outcomes of the interventions.

6. RISK ASSESSMENT

The overall process of risk analysis and evaluation is referred to as risk assessment. Risk analysis is a systematic use of available information to determine how often specified events may occur and the magnitude of their consequences. The process used to determine risk management priorities by comparing the level of risk against predetermined standards or target risk levels is risk evaluation.

Traditionally, government ministries carry out their functions with minimal sector-wide approach to development. The implementation of FSN Strategy, however, requires a multi-sectoral approach to its implementation. This is a very complex process that requires high level policy guidance and commitment. There is also a risk of ministry seconding officers to the FSNS without much thought about their competence.

Considering that Kenya has successfully implemented the emergency aspect of food security through the KFSM and KFSG, the institutional memory of the two organs of food security will provide a foundation for the FSNS. In effect KFSG will be expanded with respect to its staff and functions to take into account the four dimensions of food security and nutrition. Furthermore, the consultative process through which the policy and strategy were developed provides an opportunity for the harmony and therefore efficiency within the implementing ministries and other collaborators.

A priority listing of risks is given in **Table 3**. **Table 4** applies the risk priority listing and provides a risk analysis and evaluation matrix.

Table 3: Priority listing of risks

Likelihood	Impact	Risk priority
High	High	5
High	Medium	4
Medium	High	4
High	Low	3
Medium	Medium	3
Low	High	3
Low	Medium	2
Medium	Low	2
Low	Low	1

Table 4: Risk analysis and evaluation matrix

Risk event	Risk consequence	Likelihood	Impact	Risk priority	Strategy	Responsibility
Inadequate political support	Inadequate funding affecting implementation	Low	High	3	<ul style="list-style-type: none"> Adapt FSNS to changed political landscape, identifying new key stakeholders and frameworks in which they operate Stakeholder advocacy to maintain momentum for implementation. Empowerment of rural communities in the development process. 	FSN Secretariat, development partners
Inadequate funding	<ul style="list-style-type: none"> Activities slowed or halted. Implementation linkages and relationships disrupted. 	Low	High	3	<ul style="list-style-type: none"> Maintain dialogue with development partner funders to facilitate funding forecasts. Identify possible alternative funding streams. Identify and adopt contingency plans based on priority activities at reduced level. 	FSN Secretariat, development partners
Mechanisms for financial management and external funding not consolidated	Timely implementation of activities disrupted	medium	High	4	Streamline financial management system with a view to reducing red-tape	FSN Secretariat, development partners
Disasters (drought, floods, landslides, fires, earthquakes)	<ul style="list-style-type: none"> Unable to timely achieve certain objectives or interrupted implementation, and therefore unable to reach FSNS goals. Safety risk. 	Low	High	4	<ul style="list-style-type: none"> Monitor situation and develop contingency plans. Institute mitigation plans. Mainstream climate change considerations in all plans. 	FSN Secretariat, OP development partners
Deterioration in security	<ul style="list-style-type: none"> Interruption of implementation activities and disruption of community structures. Interruption of transport and communication systems. Safety risk. 	Low-Medium	High	3	Monitor situation and develop contingency plans	FSN Secretariat, OP, development partners
Inadequate adherence to financial agreements and excessive procurement procedures and bureaucracy	<ul style="list-style-type: none"> Ineffective and inefficient program implementation. Accountability and credibility of FSNS programs and development partners are compromised. 	Medium	Medium	3	<ul style="list-style-type: none"> Work with all stakeholders to promote accountability as part of program sensitization and ensure transparent procedures. Ensure monitoring systems in place with appropriate mechanisms for enforcing compliance consistent with legislative requirements. Enhance feedback mechanisms 	FSN Secretariat, development partners

Risk event	Risk consequence	Likelihood	Impact	Risk priority	Strategy	Responsibility
					between implementers and accounting officers.	
Resistance to collaboration initiatives by key stakeholders	<ul style="list-style-type: none"> Fragmentation and duplication of development activities with community groups. Confusion and mistrust and lack of the social capital required for effective rural development. 	Medium	High	4	<ul style="list-style-type: none"> Initiate regular dialogue with stakeholders at all levels. Raise awareness of operational strategic planning and stakeholder consultation procedures embodied in existing strategies. Ensure reporting and briefings on the programs are widely disseminated. 	FSN Secretariat, development partners
Poor absorption and responsive management capacity of the local partners	<ul style="list-style-type: none"> Resource wastage. Support constricted. FSNS objectives unrealised to the detriment of beneficiaries. 	Medium	Medium	3	<ul style="list-style-type: none"> Criteria for participation of eligible organisations are designed to identify those with demonstrated financial and project management capacity. Local field support to augment capacity and monitoring. 	FSN Secretariat, development partners

APPENDIX

Implementation matrix—Strategic objectives and implementation actions

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
1. HOUSEHOLD RESOURCE PRODUCTIVITY						
1.1 Accessibility to productive resources for rural agriculture and livestock	<ul style="list-style-type: none"> - To improve equity in access to and control of resources to users across genders. - Enhance food production at household level by vulnerable groups. 	<ul style="list-style-type: none"> - Agriculture land use Master Plan. - Efficient and readily accessible land registry system developed. - Increased accessibility to productive resources. - Increased benefit sharing from wildlife conservation. 	Develop agricultural Land Use Master Plan	75	2008/09 – 2010/11	<ul style="list-style-type: none"> - Ministry of Agriculture. - MOLFD, MOCMD, KENFAP, UN agencies, research institutions, regulatory bodies, civil societies, media, consumer associations.
			Reviewing and restructuring the existing land registry systems	20	2008/09 – 2009/10	
			Sensitize the vulnerable groups on available opportunities	30	2008/09 – 2013/14	
			Support information sharing and networks	30	2008/09 – 2013/14	
			Development of the institutional capacity for farmers	12	2008/09 – 2013/14	
			Enhance credit access by farmers	20,000	2008/09 – 2013/14	
			Develop benefit-sharing mechanisms for wildlife conservation			
1.2 Sustainable intensification and diversification	<ul style="list-style-type: none"> - To promote agricultural intensification through sustainable and efficient use of productive resources - To enhance diversification in production of and access to nutrient-rich foods. 	<ul style="list-style-type: none"> - Increased output per unit resource. - Diversified sources of nutritious food. - Increased farmer incomes. - Training manuals. 	Promote intensified, diversified and sustainable rain-fed agriculture	900	2008/09 – 2013/14	<ul style="list-style-type: none"> - Ministry of Agriculture. - MOLD, UN agencies, regulatory bodies, civil societies, media, consumer associations, research institutions, NGOs, international agencies, consumer organizations, private sector.
			Harness water resources for enhanced irrigated agriculture	66,000	2008/09 – 2013/14	
			Strengthen research-extension-farmer linkages	90	2008/09 – 2013/14	
			Development of training manuals/guidelines	3	2008/09 – 2009/10	
			Promote reduced cost of production	18	2008/09 – 2013/14	
			Special programmes for targeted subsidization of production inputs	6,000	2008/09 – 2013/14	
1.3 Urban and peri-urban agriculture	<ul style="list-style-type: none"> - To improve household food security through urban and peri-urban agriculture 	<ul style="list-style-type: none"> - Revised legal and regulatory framework. - Developed guidelines. - Increased production of safe food. 	Review of the legal framework	4	2008/09	<ul style="list-style-type: none"> - Ministry of Local Government. - MOA, MOLFD, AG chambers, ASCU, research institutions, Members of Parliament, local authorities, NEMA, UN agencies, universities, research
			Development of guidelines	2	2009/10	
			Targeted training of farmers and other stakeholders	60	2008/09 – 2013/14	
			Strengthen monitoring and surveillance system	30	2008/09 – 2013/14	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
						institutions, civil societies, media, consumer associations.
1.4 Food storage, preservation and processing	<ul style="list-style-type: none"> - Minimise post harvest losses at house hold level. - Enhance technical knowledge on preservation and processing. - Improve food safety at household level. 	<ul style="list-style-type: none"> - Reduced post-harvest losses. - Increased small scale processing and incomes. - Improved food safety. 	Support research and development of appropriate methods of food/forage handling, preservation, value addition and storage	60	2008/09 – 2013/14	<ul style="list-style-type: none"> - Ministry of Agriculture. - OP, MOLFD, MOCMD, research institutions, NGOs, private sector, media, civil society.
			Enhance capacity of households on appropriate technologies	12	2008/09 – 2013/14	
			Support small scale processing and value addition	1,800	2008/09 – 2013/14	
Sub-total				95,146		
2. NATIONAL FOOD AVAILABILITY						
2.1 Food trade (domestic, regional, international)	<ul style="list-style-type: none"> - Improve competitiveness of food production, distribution and marketing systems. - Promote strategic liberalization of food trade as a means of ensuring food security. - Develop measures for safeguarding the country's food security. 	<ul style="list-style-type: none"> - Increased availability of affordable and nutritious food at the national level. - Increased competitiveness of Kenya's produce. - List of special and sensitive products. - Improved distribution and information networks established. 	Review and harmonize the existing food and related trade policies to ensure coherency	5	2008/09 – 2009/10	<ul style="list-style-type: none"> - Ministry of Trade and Industry. - MoA, MoLFD, MoCD, MoF, MoPND, private sector, civil societies, trade promotion agencies, universities and research institutions.
			Increase the competitiveness of agricultural produce and products, including infrastructure	90,000**	2008/09 – 2013/14	
			Improve food distribution and trade including information networks at the domestic level	18**	2008/09 – 2013/14	
			Harmonize and enforce food safety and quality standards and regulations	5	2008/09 – 2009/10	
			Enhance regional and international trade without compromising the country's food security	3	2008/09 – 2013/14	
			Develop safeguard mechanisms for ensuring food security	3	2008/09 – 2009/10	
			Strengthen trade negotiation capacity and negotiate for removal of unfair trade practices	12	2008/09 – 2013/14	
2.2 Agro- processing and value-addition	<ul style="list-style-type: none"> - Increase the level of value-addition for agricultural produce for domestic and export market 	<ul style="list-style-type: none"> - Higher incomes for producers, processors and traders. - Expanded market outlets for farmers' produce. - Increased shelf-life for agricultural products. 	Provide tax incentives	Tax revenue loss	2008/09 – 2009/10	<ul style="list-style-type: none"> - Ministry of Trade and Industry. - MoA, MoLFD, MoF, KEBs, private sector (KAM, KEPSA, Jua Kali Association), civil society, manufactures associations, universities and research institutions (KIRDI,
			Establish a fund to support SMEs in agro-processing & value addition	900	2008/09 – 2013/14	
			Utilize existing development funds (e.g. CDF, Youth and women funds) for agro-processing and value addition	1,200	2008/09 – 2013/14	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
			(10%)			KARI, etc).
			Development of key technologies (infrastructure) for value-addition especially in rural areas	120	2008/09 – 2013/14	
			Capacity building of agro-processors, particularly SMEs, other institution involved in and standards development and enforcement	6	2008/09 – 2013/14	
2.3 Storage	- Promote appropriate storage practices for food/pasture. - Expand utilization of public storage food facilities.	- Stable food and feed supply and prices. - Reduced post-harvest losses.	Building capacity for development and management of appropriate storage facilities	2	2008/09 – 2009/10	- Ministry of Agriculture - OP, MoLFD, MoF, private sector, manufacturers associations, development partners.
			Facilitate renting or disposal of underutilized public storage facilities	1	2008/09	
			Build capacity for harvesting and storage of fodder/pasture	18	2008/09 – 2010/11	
2.4 Strategic Food Reserves	- Attain sufficient and diversified food over periods of deficits. - Stabilize food prices.	- Diversified strategic food reserve. - Stable food supplies and prices.	Expand the Strategic Grain Reserve into Strategic Food Reserve (SFR) by including other foodstuffs	30,000	2008/09 – 2013/14	- Ministry of Agriculture - OP, MoLFD, MoF, private sector, manufacturers associations, development partners.
			Determine appropriate cash and stock levels for the SFR	2	2008/09	
			Strengthen institutional arrangements for the management and distribution of food reserves	3	2008/09 - 2013/14	
2.5 Commercialization of agriculture	Increase net incomes from farming	Improved net farm incomes	Build capacity of farmers, SMEs, cooperatives and other farmer organizations to undertake farming as a business	6	2008/09 – 2010/11	- Ministry of Agriculture. - MoLFD, MoF, MoCDM, MoW, MoTI, MoPND, MLG, farmers institutions, private sector, civil society, manufacturers associations, universities, research institution.
			Strengthen support services including extension services	900	2008/09 – 2013/14	
			Promote consumption of local agricultural produce and products	12	2008/09 – 2013/14	
			Strengthen information flow/networks on farm inputs and output markets	60	2008/09 – 2009/10	
Sub-total				123,276		
3. FOOD ACCESSIBILITY						
3.1 Improve and expand on-farm and off-farm employment	To increase incomes for improved livelihoods and nutrition choices	- On-farm employment increased at a rate of 5% per year. - The share of income from off-farm employment increased.	Support measures that improve security and access to land, water and technologies	30	2008/09 - 2013/14	- Ministry of Agriculture. - MoLFD, MoTI, MoL, MoF, MoPND, DAOs, farmer organizations and communities, DDOs, DT and IOs, District Labour Officers,
			Support cooperatives, out-grower schemes and fair trade policies to increase the share of small producers	120	2008/09 - 2013/14	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
			of high value and value-added crops and livestock.			KEPSA, KENFAP, NGOs.
			Review minimum wages regularly to take account of food and nutrition needs, inflation rates and labour productivity	3	2008/09 - 2013/14	
			Sensitise and operationalise single licensing business registration.	6	2008/09 - 2013/14	
			Capacity build on small rural enterprises, business development services, institutional support, marketing and information	12	2008/09 - 2013/14	
			Enhance technology and linkages with training institutions by diversifying technological innovations, research and development to cater for MSEs.	180	2008/09 - 2013/14	
			Strengthen business linkage opportunities by encouraging the establishment of agro-processing enterprises	3	2008/09 - 2013/14	
			Strengthen linkages to Micro Finance Trust Fund	3	2008/09 - 2013/14	
3.2 Improve and expand urban and peri-urban employment	To increase incomes of rural and peri-urban populations through creation of employment opportunities	<ul style="list-style-type: none"> - Expanded employment. - Increased incomes. - Increased food security. 	Fast-track implementation of the micro, small and medium enterprises (MSME) policy	3	2008/09 - 1009/10	<ul style="list-style-type: none"> - Ministry of Trade and Industry. - MoLG, MoA, MoLFD, MoTI, MoL, MoF, MoPND, DAOs, MSGCSS, farmer organizations and communities, DDOs, DT and IOs, District Labour Officers, KEPSA, KENFAP, NGOs, consumer organizations, jua kali associations, development partners.
			Strengthen and streamline regulatory frameworks governing urban formal and informal sectors particularly micro and small enterprises	3	2008/09 - 2013/14	
			Support and promote capacity building to enhance small businesses and entrepreneurial skills	12	2008/09 - 2013/14	
			Provide an appropriate working environment and suitable zones for the informal sector through provision of workspace for hawkers and other SMEs	10	2008/09 - 2013/14	
			Support activities that enhance the income generation capacity of people with special needs or disadvantaged	60	2008/09 - 2001/12	
3.3 Better access and	- To increase incomes.	- Improved main and rural	Improve infrastructure in rural and	600	2008/09 -	- Ministry of Local

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
functioning of markets	<ul style="list-style-type: none"> - To improve market information systems. - To improve marketing skills. - To reduce the incidence of chronic food insecurity. 	<ul style="list-style-type: none"> access roads. - Markets supplied with utilities e.g. water and sanitation facilities, power, telephone lines etc. - Better marketing techniques and skills. - New modern markets established. 	urban markets		2013/14	Government. - MoA, MoLFD, MoCDM, MoTI, MoWI, MoENR, MoF, MoPND, Ministry of energy, traders, District Physical Planning Officers, District Works Officers, DDOs, telecommunication companies, Water Services Boards, KPLC, KEPSC, KAM, KENFAP, NGOs, jua kali, associations, development agencies.
			Facilitate the development of information, sensitization and training programs for food traders	60	2008/09 - 2013/14	
			Improve governance of local authorities and allocation of resources for development and modernization of markets	0	2008/09 - 2013/14	
			Improve the physical planning capacity of local authorities	30	2008/09 - 2013/14	
3.4 Cultural, social and political aspects in accessing food	<ul style="list-style-type: none"> - To ensure equal access to food for all people. - To reduce the incidence of malnutrition and food insecurity. - To increase productivity of workers. 	<ul style="list-style-type: none"> - Reduced cases of stunting and malnutrition. - Reduced cases of infant mortality and maternal death. - Higher school enrolment rates. 	Establish a complaint system for marginalized groups.	10	2008/09 - 2009/10	<ul style="list-style-type: none"> - Ministry of Gender, Sports, Culture and Social Services. - MoA, MoH, FAO and other international agencies, religious organizations, NGOs, community organizations, relief distribution agencies, public administration.
			Entrench the Human Right to Food particularly for women and children in the constitution: support KNCHR to advocate for right to food	4	2009/10	
			Sensitize communities to discard retrogressive cultural practices with regard to access to food	12	2008/09 - 2013/14	
			Promote active involvement of men in agricultural activities (to be included in availability)	6	2008/09 - 2013/14	
Sub-total				1,167		
4. FOOD SAFETY AND QUALITY CONTROL						
4.1 Improving and harmonizing institutional and legislative framework	<ul style="list-style-type: none"> - To develop an effective national food and feed safety control system. - To harmonize the roles of the food safety and quality control organizations. - To conform to local and international trade requirements. 	<ul style="list-style-type: none"> - Effective national food and feed safety control system. - Food safety regulations that are in conformity with local and international trade requirements. - Quality and safety of food improved for Kenyan and international consumption. - Harmonized mandates of food safety regulatory institutions. - Enhanced working relationship between public 	Review and harmonize food safety and quality regulatory and institutional framework to improve coordination and enforcement.	12	2008/09 - 2009/10	<ul style="list-style-type: none"> - Ministry of Health. - NFSCC, KEBS, KEPHIS, private sector, Standing Committee on Bio-safety, NCST, African Biosafety Stakeholders Forum, NEMA, Ministry of Agriculture African Agrotechnology Foundation, MOTW, MOWI, MENR (Kenya Forestry Service), development partners, communities, manufacturers of packaging materials, quality testing and certification
			Enhance private sector and civil society engagement in food safety and quality assurance	15	2008/09 - 2011/12	
			Develop mechanisms for domestication of relevant international conventions, standards and guidelines	8	2008/09 - 2009/10	
			Provide guidelines and sensitize the public on production and utilization Improved productive, testing, packaging and storage facilities for	10	2008/09 - 2012/13	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
		and private sector stakeholders involved in food Improved productive, testing, packaging and storage facilities for assured food safety. - Enhanced capacity of the personnel in both private and public sector for proper quality control, inspection and/or certification for assured food safety. - Safety issues.	assured food safety Enhance capacity of the personnel in both private and public sector for proper quality control, inspection and/or certification for assured food safety of genetically modified products Develop capacity of the general public to demand their rights in food safety and quality through awareness creation on basic aspects of food safety, such as certified standards and inspection certificates for food products	40 20	2008/09 - 2012/13 2008/09 - 2012/13	agencies, safety regulation institutions, civil society (consumer rights organizations), international development partners, food vendors.
Sub-total				105		
5. NUTRITION IMPROVEMENT (PUBLIC INSTITUTIONS, PARTNERS AND CONSUMERS)						
5.1 Life cycle approach to nutrition improvement	- To improve women's nutrition throughout their lifecycle. - To promote optimal infant and young child feeding practices. - To promote appropriate nutrition for school children and adolescents. - To promote healthy lifestyles across the population. - To improve nutrition care and support for the elderly.	- Improved nutritional status among pre-pregnant, pregnant and lactating women that protects their own health and the health, growth and development of the children they bear. - Reduced malnutrition among infant and young children through improved breastfeeding and complementary feeding practices. - Positive eating habits adopted by the Kenyan population. - Nutrition care and support strategies for the elderly developed and implemented.	Promote consumption of diversified and nutritionally adequate diet across the lifecycle Promote technologies aimed at reducing work-load for women Strengthen monitoring of maternal nutritional status Support enactment, implementation and monitoring of the code for marketing of breast milk substitutes Revitalize the Baby Friendly Hospital Initiative (BFHI) and institutionalize community support, protection and promotion of appropriate infant and young child feeding Strengthen growth monitoring and promotion at health facilities and community levels Develop and implement a national communication strategy on infant and young child feeding Institutionalise routine assessment and monitoring of the nutritional status of school children and adolescents and create awareness on healthy diets	See 5.3 60 60 60 300 60 12 90	2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14	- Ministry of Health. - MOA, MOCSS, MOL, MOE, Help Age International, NGOs, KEBS, FBOs, private sector media, development partners, institutions of higher learning.
5.2 Micronutrient	- To provide vitamin A	- Updated micronutrient	Strengthen routine and therapeutic	50	2008/09 -	- Ministry of Health.

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
deficiency prevention and control	and multiple micronutrient supplementation to children under 5 using existing guidelines. - To provide folate, iron, vitamin A and multiple micronutrient to women using existing guidelines. - To promote the consumption of micronutrient rich foods including fortified foods. - To promote fortification of foods with micronutrients of public health importance. - To develop a monitoring and evaluation system.	supplementation guidelines made available and in use. - Increased awareness on preparation and consumption of micronutrient rich foods and fortified foods. - Widely consumed foods are fortified. - M&E system in place. - Comprehensive strategy for micronutrient deficiency control developed and implemented.	micronutrient supplementation (vitamin A, iron folate and multiple micronutrients) for children and women and identified vulnerable groups.		2012/13	- MOH, MOA, KEBS, MoTI, MOE, MoIT, Media, MOPND NMDCC, NFA (National Fortification Alliance), development partners, private sector, civil society organizations, communities, institutions of higher learning.
			Strengthen salt iodization program to ensure the population accesses adequately iodised salt.	25	2008/09 - 2012/13	
			Develop a program to promote and facilitate fortification of widely consumed foodstuffs such as maize, wheat flour, cooking oils and composite flours.	100	2008/09 - 2012/13	
			- Promote consumption of micronutrient rich foods; Support interventions to prevent and control emerging vitamin and mineral deficiencies. - Develop and implement a comprehensive national micronutrient deficiency control strategy. - Scale up interventions to prevent and control parasitic infestations like hookworm and schistosomiasis. - Promote malaria prevention and control strategies. - Support interventions to prevent and control emerging vitamin and mineral deficiencies. - Develop and implement a comprehensive national micronutrient deficiency control strategy. - Scale up interventions to prevent and control parasitic infestations like hookworm and schistosomiasis. - Promote malaria prevention and control strategies.	100	2008/09 - 2012/13	
5.3 Nutrition promotion	- To develop a comprehensive communication strategy for identified priority nutrition issues.	- Communication strategy developed and implemented. - Communication/advocacy tools developed. - Awareness on nutrition	Develop and implement a national nutrition communication/advocacy strategy	60	2008/09 - 2011/13	- Ministry of Health. - MOE, MOA, MOI, ALL ministries, NMDCC, private sector, Population Service International (PSI), civil
		Develop and disseminate a nutrition advocacy tool for use at all levels	10	2008/09 - 2009/10		

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
	<ul style="list-style-type: none"> - To create awareness on key nutrition issues to families and communities. - To strengthen nutrition education through maternal and child health clinics and other entry points. - To promote utilization of energy and time saving technologies. 	<ul style="list-style-type: none"> among families and in families increases. - Increased consumption of healthy foods by families. - Appropriate energy and time saving technologies adopted. 	Support the development and dissemination of Information, Education and Communication (IEC) materials on diets and lifestyles	60	2008/09 - 2013/14	society organizations, media, institutions of higher learning, development partners, communities.
			Develop and implement Behaviour Change Communication (BCC) approach to fast-track implementation of nutrition interventions through the community health strategy	12	2008/09 - 2013/14	
			Strengthen provision of nutrition education and counselling- including staffing	780	2008/09 - 2013/14	
			Promote utilisation of appropriate energy and time saving technologies for all		2008/09 - 2013/14	
5.4 Nutrition and infection	To improve nutritional care and support with a view to prevention, control and management of infections and diseases for optimal health	<ul style="list-style-type: none"> - National curriculum developed and disseminated for key areas of focus on nutrition and infectious diseases (e.g. HIV/AIDS, TB, and Malaria). - National guidelines and training manuals developed and utilized for key areas of focus on nutrition and infection). - Standards for nutritional care for people with infections are developed and utilized. - Report and recommendations on the analysis of acceptable and affordable food / nutrition products used during periods of illness and malnutrition produced and disseminated. 	Integrate nutrition and infection issues into curricular of relevant training institutions	40	2008/09 - 2009/10	<ul style="list-style-type: none"> - Ministry of Health. - MOA, MOLFD, MOE, MOW, MOGSS, all ministries, Institutions of higher learning, development partners, NGOs/FBOs/CBOs, private sector, media, communities.
			Develop and implement standards for nutritional care for people with infections	20	2008/09	
			Integrate national standards of nutritional care for key infections. into various programs	12	2008/09 - 2013/14	
			Strengthen nutritional care and support for people with infections	96	2008/09 - 2013/14	
			Analyse and create national standards of acceptable and affordable food and nutrition products for periods of malnutrition and illness	24	2008/09 - 2011/12	
5.5 Diet related non-communicable diseases	- To promote comprehensive programs on prevention and management of diet related Non-	<ul style="list-style-type: none"> - Prevalence rates of NCDs established. - Prevention and management programs formulated and implemented. 	Promote the consumption of healthy foods and physical activity	See 5.3'	2008/09 - 2013/14	<ul style="list-style-type: none"> - Ministry of Health. - MOA, MOE, MOGSS, NACADA, NGOs, KEBS, KEMRI, institutions of higher learning, FBOs, private sector, development
			Support programs to create awareness on the importance of individual routine health and nutritional assessments	See 5.3'	2008/09 - 2013/14	
			Promote consumption of diversified	24	2008/09 -	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
	Communicable Diseases (NCDs). - To establish the prevalence of diet related NCDs at national level.		and wholesome indigenous foods in households and eating outlets Develop comprehensive programs on prevention and management of diet related NCDs, this includes actions against drug and substance abuse Promote research and monitoring system focused on prevalence and trends of NCDs	120 42	2013/14 2008/09 - 2013/14 2008/09 - 2013/14	partners., communities.
5.6 Institutional feeding	To ensure adequate nutrition of individuals in institutional feeding setups	- Institutional feeding nutrition guidelines harmonized, disseminated and implemented. - Nutritionist/dieticians recruited to support institutional feeding. - Institutions providing nutritionally adequate foods. - Institution's compliance to the institution feeding guidelines assessed twice yearly and reports and recommendations acted on.	Review, harmonize and disseminate nutrition institutional feeding guidelines Build capacity of service providers on institutional feeding Assess the compliance to the institutional feeding guidelines by the institutions Formalize institutional nutrition routine assessment Promote establishment of institutional gardens for production of diverse foods Build physical capacity of institutions to provide nutritionally adequate diets	4 2 6 20 4	2008/09 - 2011/12 2008/09 - 2011/12 2008/09 - 2013/14 2008/09 - 2011/12 2008/09 - 2013/14 2008/09 - 2011/12	- Ministry of Health. - MOE, Ministry of Home Affairs, NGOs/FBOs/ CBOs, hotel industry, all ministries, private hospitals, institutions of higher learning, private sector, development partners, communities.
5.7 Nutrition research	To ensure effective research on nutrition is carried out in research institutions and universities	Institutional research enhanced	Build capacity of universities and research institutions to do effective research on nutrition	60	2008/09 - 2013/14	- Ministry of Education. - MOH, Home Affairs, NGOs/FBOs/ CBOs, hotel industry, all ministries, private hospitals, institutions of higher learning, private sector, development partners., communities.
Sub-total				2,313		
6. FOOD AND NUTRITION IN SCHOOLS						
6.1 Improving nutrition in school feeding programs	- To improve nutritional and health status of pupils. - To increase enrolment, attendance, performance and retention of school and pre-school children.	- Standard guidelines for school feeding implemented. - School feeding programme scaled-up to reach more vulnerable school children. - Income generating activities including school gardens and livestock keeping in place and	Review and implement harmonized standards and guidelines for school feeding to promote adequate nutrition Expand school feeding program to all schools including children in pre-school Promote the establishment of school gardens/livestock Mobilize strategic partners for	20 18,000 50 10	2008/09 2008/09 - 2013/14 2008/09 - 2011/12 2008/09 -	- Ministry of Education. - MOH, MOA, MoLFD, NGOs, MOHA, private sector, civil societies, private sector, development partners., communities.

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
		supplementing the school feeding programme. - Schools undertaking routine nutrition assessment. - Time and energy saving technologies adopted by schools. - Reports and recommendations are disseminated and acted on.	accelerated scale-up of school feeding programs Promote income generating activities to enhance institutional capacity to access nutritionally adequate foods. Develop guidelines and tools for routine health and nutritional assessment in schools and preschools Promote time and energy saving technologies Strengthen monitoring systems for school feeding programmes	See school gardens See '5.1' See' 5.3' 108	2011/12 2008/09 - 2011/12 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14	
6.2 Food and nutrition education in schools	To provide appropriate knowledge to school children on the importance of good nutrition for a healthy and active life	- Nutrition education integrated in school curricula at all levels. - Improved capacity of teachers to disseminate and teach nutrition in schools. - Basic knowledge on food and nutrition provided in all schools. - The school administrators are able to identify and refer children with health and nutrition problems. - 4K clubs and young farmer clubs in place and supplementing school meals.	Integrate nutrition education in school curricula at all levels Strengthen the nutrition component in the pre-service and in-service training of teachers Capacity building of school administrators on early identification of health and nutrition problems and timely referral for appropriate action Develop and disseminate IEC materials with key messages on nutrition in the lifecycle Promote the establishment of young farmer or 4K clubs for demonstration of production of nutrient rich foods	5 6 60 See '5.3'	2008/09 - 2009/10 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2013/14 2008/09 - 2011/12	- Ministry of Education. - MOA, MOH, MOLFD, MOEN, MOW, development partners, extension service providers, private sector, communities, MOGSS, MOYA.
Sub-total				18,259		
7. FOOD AND NUTRITION IN CRISIS AND EMERGENCY						
7.1 Crisis mitigation and emergency preparedness	- To reduce vulnerability to food and nutrition insecurity. - To strengthen emergency preparedness mechanism.	- Reduction of dependants on food aid by 50% by 2012. - Loss of productive assets during crisis reduced by 75% by 2012. - Enhanced emergency preparedness.	Strengthen food and feed distribution networks from surplus to deficit areas (stocking and distribution) Build community capacity in emergency preparedness (40 districts) Promote PP involvement in response to emergencies Facilitate social protection scheme for the food insecure (cash transfers) Facilitate Protection of productive resources (soils, water, vegetation, livestock)	1,000 60 6 120 600	2008/09 - 2011/12 2008/09 - 2011/12 2008/09 - 2011/12 2008/09 - 2011/12 2008/09 - 2011/12	- Office of the President. - MOA, MOLFD, MOH, MoWI, MOE MOF, MORPW, MOTI, MENR, private sector, NGOs/CBOs, development partners, communities.

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
7.2 Emergency management	To minimize the effects of droughts and other catastrophes on lives and livelihoods	<ul style="list-style-type: none"> - Effects of droughts and other catastrophes on lives and livelihoods reduced. - Mortality and malnutrition levels maintained below the emergency threshold in the vulnerable populations. - Reduced livestock losses to catastrophes. 	Facilitate Decentralisation and devolution of priority setting and decision making	100	2008/09 - 2011/12	<ul style="list-style-type: none"> - Office of the President. - MOLFD, MoH, MOWI, MOA, MOE, MoF, MORPW, MOTI, MENR, MOWI, communities, politicians, private sector, NGOs/CBO, development partners.
			Align emergency interventions with physiological and regional needs	150	2008/09 - 2009/10	
			Promote timely de-stocking, emergency off-take and disease control	6,000	2008/09 - 2011/12	
			Develop guidelines for transfer entitlements to harmonize co-ordination and synergies	15	2008/09	
			Strengthen financial and technical capacity of grass-root institutions such as district steering groups to respond to crisis	50	2008/09	
			Develop an effective monitoring system for assessment of food distribution	100	2008/09 - 2011/12	
7.3 Recovery and long-term development	<ul style="list-style-type: none"> - To build asset base within the vulnerable communities that will enhance their resilience to shocks. - To link emergency response to long-term development. 	<ul style="list-style-type: none"> - Enhanced community's ability to cope with catastrophes. - Infrastructure and institutions for long-term development improved. 	Re-orient priorities of development partners and relief agencies towards support to long term development	16	2008/09 - 2009/10	<ul style="list-style-type: none"> - Office of the President. - MOA, MOLFD, MOH, MoWI, MOE, MOF, MORPW, MoTI, MENR, communities, private sector, NGOs/CBOs, development partners.
			Promote conditional cash/food/voucher transfer based entitlement	16	2008/09 - 2009/10	
			Promote public work schemes towards sustainable development.(water points, irrigation canals, community pasture/fodder banks)	240	2008/09 - 2011/12	
			Promote livelihood diversification in environmentally fragile areas	24	2008/09 - 2013/14	
			Support re-stocking programmes	150	2008/09 - 2013/14	
			Enhance school enrolment and completion rates among food insecure households	60	2008/09 - 2013/14	
			Sub-total			
8. FOOD AND NUTRITION INFORMATION						
8.1 Data collection and data management on food and nutrition	To strengthen data collection, analysis, management and information sharing	<ul style="list-style-type: none"> - Updated inventory of data collection and management. - A systematic and harmonised data collection and management system in place. - Improved access to 	Improve coordination of food and nutrition information systems	24	2008/09 - 2013/14	<ul style="list-style-type: none"> - Office of the President. - KFSM/DISK, KNBS, line ministries, universities, research institutions, UN, donors, NGOs, mass media.
			Conduct information needs assessment for both short and long-term decision making	10	2008/09	
			Conduct inventory/diagnosis of data	10	2008/09	

PRIORITY PROGRAM AREAS	OBJECTIVES	OUTPUTS	INTERVENTIONS	COST ESTIMATE (Mill. KES)	TIME FRAME	RESPONSIBILITY*
		information. - Legislation on data sharing.	collection and management systems and harmonize data sets among stakeholder institutions			
			Review existing legislation on access to and transparency of data	5	2008/09	
8.2 Cross-sectoral data analysis on food and nutrition	To strengthen cross-sectoral data analysis for short and long-term decision making on food security and nutrition at national and local levels	- Improved cross-sectoral data analysis. - Improved decision making processes.	Strengthen capacity of relevant institutions in cross-sectoral data collection, analysis, management and sharing at all levels	30	2008/09 - 2013/14	- Office of the President. - MOPND, KNBS, universities, research institutions, development partners.
8.3 Information, education and communication	To enhance effective and efficient food security and nutrition decision making processes	- Communication strategy in place. - Improved user -producer dialogue. - User-friendly and relevant Information disseminated on time.	Develop FSN communication strategy	12	2008/09	- Office of the President. - KFSM/DISK, KNBS, line ministries, universities, research institutions, UN, donors, NGOs, mass media.
			Production and dissemination of IEC materials	6	2008/09 - 2013/14	
Sub-total				97		
9. INSTITUTIONAL FRAMEWORK						
9.1 Institutional framework	To provide institutional arrangement for the implementation of FSNS	Efficient and effective FSN systems	Support to KEFSAN, NFSNSC and NFSNS	180	2008/09 - 2013/14	OP, MOA, MLFD, MOH, MOE, MWI
Sub-Total				180		
GRAND TOTAL				249,250.0		

*The lead ministries (highlighted) responsible for implementation; the rest are link ministries and institutions. The ministry names are as were known before the Coalition Government was formed in April 2008. The departments concerned still remain relevant.

**Includes infrastructural construction costs, e.g. roads.