

REPUBLIC OF KENYA



**MINISTRY OF AGRICULTURE**

**FOOD SECURITY IN KENYA**

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## 1.0 INTRODUCTION

### 1.1 CONCEPT OF FOOD SECURITY

The World Health Organization (WHO) states that Food Security is achieved “when all people, at all times have physical and economic access to adequate/sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. Food security therefore is not the physical availability of any single commodity; such as maize in the Kenyan context. Neither does it imply just availability but must be accessible in terms of affordability in adequate quantities, containing essential nutrients.

At macro level, it implies that adequate supplies of food are available through domestic production or through imports to meet the consumption needs of all people in a country. At the micro level (household or individual), food security depends on a number of factors which are related to various forms of entitlements to income and food producing assets, as well as the links between domestic and external markets.

Food security is not just a supply issue but also a function of income and purchasing power, hence its relationship to poverty.

There are four dimensions of food security that determine the level at which a community is placed in relation to vulnerability to hunger;

- i. Food availability
- ii. Food accessibility
- iii. Stability
- iv. Utilization/nutrition

### **1.1.2 Food availability**

Food availability to the people can be through own production, purchases, Food Aid or gifts. The analysis of average food availability among a representative set of African countries reveals that in one third of African countries, the average daily caloric intake availability is below the recommended level of 2100 Kcal (Ethiopia, Kenya, Rwanda and Tanzania in East Africa, and Angola, Madagascar, Mozambique and Zambia in Southern Africa, Sierra Leone in West Africa). In a few countries (Burundi, Democratic Republic of the Congo, Eritrea and Somalia) the mean availability is below 1800 Kcal, which is considered the minimum intake level. In some countries (Botswana, Burundi, DR Congo, Gambia, Liberia, Madagascar, Senegal, Sierra Leone, Somalia, Tanzania and Zambia) the situation has been deteriorating over the last ten years while in others (Ghana, Malawi, and Nigeria) aggregate figures show some improvement (FAO, 2006).

### **1.1.3 Food accessibility and Stability**

Kenya for a long period pursued the goal of attaining self-sufficiency in food commodities that included maize, wheat, rice, beans, milk and meat. Self-sufficiency in maize was achieved during the 1970s when production was high and the surplus was exported. Unfortunately, attainment of self-sufficiency does not automatically imply that household food security is achieved. Empirical evidence shows that solving the food security issue from production (Supply side) point of view, while overlooking the purchasing power (demand side) of the people, does not solve the food security problem, with regard to accessibility of sufficient food by vulnerable groups (KIPPRA, 2007).

As a result of poor transport, high fuel prices and market infrastructure, food either does not reach those who need it most (from surplus regions) or reaches them at excessively high prices. In as many as 17 countries in Africa, conflicts have constrained the flow of food leading to insufficiency even for those who could afford to purchase. In Kenya, 30% of the food consumed by rural households is purchased, while 70% is derived from own production. On the other hand, 98% of food consumed in urban areas is purchased while 2% is own production. This emphasizes the strategic role played by the rural households in food security of many African countries. Agricultural policies formulated therefore should focus on how to increase productivity and market efficiency in the rural setups (FAO, 2006).

#### **1.1.4 Utilization/Nutrition**

Less than 50% of Sub-Saharan African countries have levels of malnutrition under 30% and only three of them are under 10% (Gabon, Namibia and Nigeria). Despite economic growth and food availability, some countries still display increasing malnutrition, as measured by the prevalence of stunted growth among children (e.g. in Mali).

In the African continent although Cereals, pulses, roots and tubers play a central role in food supply, production has generally lagged behind the rate of population growth. This is partly because priority was put on development of the cereals and pulses leaving behind the root and tuber crops which can survive harsh weather conditions. Those countries that have been able to increase their cereal production and export agricultural products have generally been those in which food security improved. To satisfy demand for

food, Sub-Saharan African countries have had to rely increasingly on imports. About 30% of cereal consumption is currently imported compared to 5% in late sixties (FAO, 2008).

World prices of wheat, rice and maize have increased since late 2007 compared to the year before. With the increase in oil freight rates this has sharply driven up the cost of imports for food importing countries. Despite soaring international prices of the cereals imports between 2006 and early 2008, the rate of importation by many countries has been faster compared to the past years. Total import bill for African countries in 2007 was 10,297 million USD compared to an estimated bill of 17,892 million USD for the year 2008 (FAO, 2008).

## **2.0 CAUSES OF FOOD INSECURITY**

### **a) Poverty**

About 10 million people live in ASAL areas which covers 80% of Kenya's land mass. Over 60% of these people live below the poverty line. They usually have scant savings and few other sources of income to cushion them from external shocks. Included in the category of the poor population are those living in high potential areas in possession of few assets and cultivating small pieces of land inadequate to sustain a living. In this category are the urban poor who depend on informal poorly paying jobs.

### **b) Poor economic performance**

Kenyan economy has performed poorly till recent years. The population that lives below poverty line bears the most shock of a poorly performing

economy due their vulnerability and low resilience. Furthermore, production for 2008 dropped significantly due to Post Election violence that disrupted cultivation and also caused food destruction among other causes.

**c) Droughts, floods & human conflicts, land degradation**

Drought cycles seem to have shortened to every 2-3 years instead of 5-7 years in the past. The effect of climate change and global warming is posing great danger to agricultural productivity. This has been aggravated by population pressure in high potential areas pushing human settlement to water catchment areas and also cultivation of the fragile ASALs (Nyariki D.M., 2007).

Other Challenges to food security achievement include

- ◆ Continued over-reliance on rain-fed agriculture,
- ◆ Limited agro-processing/value addition,
- ◆ Inefficient marketing systems,
- ◆ Losses due to Pests and diseases, and poor handling
- ◆ High costs of production due to high cost of inputs; fertilizer, seeds, and fuel,
- ◆ Poor rural infrastructure; such as roads/railway, energy, market sheds,
- ◆ Limited access to affordable credit facilities,
- ◆ Under funding/investment in Agriculture sector

The global scene also directly and indirectly affects food security in the country mainly through:

- Export bans on cereals by surplus countries which then reduce food volumes available in world market and lead to high import prices.

- Rising fuel prices - high transport/freight charges that push grain prices upwards.
- Rise in cost of fertilizer in world markets which lowered its application and in turn reduced food production.
- The increase in demand for alternative source of fuel energy in developed countries. This diverts cereal crops such as maize and sorghums into production of bio-fuel. Advanced economies are initiating programmes to produce bio – fuels from foodstuffs through subsidies and protectionist measures. This diversion of crop produce towards production of bio – fuels occasioned by demand for a cleaner environment has enhanced demand especially for cereals, pushing world prices higher and raising risks of food insecurity.
- Increase in global fertilizer demand with increased cereal cultivation in response to crop production for human consumption, use for animal feed and bio – fuel production.
- When the value of U.S dollar or any other foreign currency falls in relation to Kenyan shilling, there is increased cost of imports which then raises food security concerns in the event of food imports
- Changing eating habits – More livestock products now consumed in India and China putting more pressure on cereals for manufacture of animal feed and fertilizer for fodder/pasture production in those Asian countries.

### 3.0 THE KENYA FOOD SITUATION

Over the years, Kenya Government has strived to achieve national, household and individual food security throughout the country. The success in this effort has been mixed. The economic review of agriculture 2007 indicates that 51% of the Kenyan population lack access to adequate food. This inaccessibility to food is closely linked to poverty which stands at 46% (National Economic Survey, 2008).

#### 3.1: Production Trends of Major Foods

Table 1: Maize production trend, 2003 - 2008

Year	2003	2004	2005	2006	2007	2008
Area(Ha)	1,670,914	1,819,817	1,760,618	1,888,185	1,615,304	1,706,814
Prod(90kg bag)	30,120,530	27,249,721	32,423,963	36,086,406	32,542,143	26,230,000
Consumption estimates (90 kg bags)	30,150,000	31,135,000	32,120,000	33,105,000	34,098,000	35,121,000

Source: Economic Review of Agriculture 2008

- An assumed population growth of 2.5% per year
- An average national consumption of 1 bag/person /year

**Table 2: Wheat production trend, 2003 - 2008**

Year	2003	2004	2005	2006	2007	2008
Area(Ha)	151,135	145,359	159,477	150,488	140,176	127,066
Prod(90kg bag)	4,207,278	4,173,652	4,063,294	3,978,454	3,936,105	3,206,808
Consumption estimates (90kg bag)	9,812,000	9,878,000	9,924,000	10,035,000	10,311,000	10,517,000

Source: Economic Review of Agriculture 2008

- ◆ Amount of rainfall and its poor distribution over the growing period reduced yields by about 20% compared to last season.

**Table 3: Rice production trend, 2003 - 2008**

Year	2003	2004	2005	2006	2007	2008
Area(Ha)	10,781	13,322	15,940	23,106	16,457	24,166
Prod(Tons)	40,500	49,300	57,900	64,800	47,300	63,248
Consumption estimates (Tons)	258,600	270,200	279,800	286,000	293,700	301,600

Source: Economic Review of Agriculture 2008

- ◆ Production meets only 20% of national Rice requirement

**Table 4: Beans production trend, 2003 - 2008**

Year	2003	2004	2005	2006	2007	2008
Area(Ha)	879,032	872,070	1,034,477	995,391	846,327	641,936
Prod(90kg bag)	4,763,928	2,576,020	4,175,772	5,908,887	4,775,512	2,944,217
Consumption estimates (90 kg bags)	4,611,000	3,444,400	4,449,450	5,111,100	5,826,700	6,626,400

Source: Economic Review of Agriculture 2008

- ◆ Poor distribution of rains and pest damage affected crop performance compared to previous seasons.

**Table 5: Irish Potato production trend, 2003 - 2008**

Year	2003	2004	2005	2006	2007	2008
Area(Ha)	126,490	128,484	132,030	120,754	98,401	139,974
Prod(Tons)	1,220,629	1,124,235	2,640,600	2,415,080	1,968,020	1,679,688
Consumption estimates (Tons)	2,892,300	2,981,780	3,074,000	3,166,220	3,261,200	3,359,000

Source: MOA; Economic Review of Agriculture 2008 & KIPPRA; Kenya Agric. Sector Data Compendium, Dec. 2007

**Table 6: Milk and Beef production trend, 2005 - 2007**

<b>Product</b>	<b>2005 Volume</b>	<b>2006 Volume</b>	<b>2007 Volume</b>
Beef Production (MT)	414,175	430,000	445,000
Beef consumption (MT)	310,370	321,750	330,000
Milk ('000' Lts) Production	3,400,000	3,700,000	3,800,000
Milk Consumption ('000' Lts)	2,661,750	2,730,000	2,800,000

### **3.2. Crops Food Status**

The national average maize production stands at 2.8 million tons with the highest ever realized being 3.2 million tons in 2006. National supply for staple foods in 2008 is as follows; maize 2.4 million tons (26 million bags) against a national requirement of 3.1 million tons (34 m bags), wheat 360,000 tons against national requirement of 900,000 tons, rice 120,000 tons against national requirement of 280,000 tons (MOA Reports, Economic Review of Agriculture, 2008). The country depends on imports to bridge the gap in these staple foods and especially wheat and Rice; periodically for maize when production fall bellow demand.

### **3. 3 Livestock Food Status**

Livestock products include milk, beef, mutton, goat meat, pork, poultry and eggs. On average, 4.0 billion litres of milk is produced annually while local milk demand is 2.8 billion litres. The meat sub sector is dominated by red meat (beef, mutton and goat). Red meat accounts for about 70% of the meat consumed locally while white meat (pork and poultry) makes up the remaining 30%. The production of red meat is 430,000 tons against national requirement of 330,000 tons while white meat is 40,000 tons against requirement of 39,600 tons (MOLD, Reports).

### **4.0 INITIATIVES TO MITIGATE CURRENT FOOD INSECURITY SITUATION**

The strategy for achieving food security has mainly been a combination of long term action to enhance productive potential and incomes with programmes and policies that respond to immediate needs of the poor and food insecure. Government supports efforts to increase agricultural productivity by revamping the development and application of improved technologies and reviving extension services. Secondly, Government supports purchase and storage of Strategic Grain Reserve (SGR) as well as intervening in stabilizing the price of cereals by participating in the market through NCPB.

While these strategies have been put in place to attain national food availability, deficits continue to recur especially in years of prolonged drought and floods. Furthermore, national food security has not guaranteed household food availability and accessibility. Transportation of the foodstuff

produced in one area to the food deficit areas continue to pose a major challenge due to poor infrastructure in some parts of the country. People in the food deficit areas lack purchasing power hence rely on famine relief. During the years of drought, the government imports grain and offer duty waiver for private sector as an incentive.

Kenya has however, been generally self sufficient in maize except a few years such 2004/2005, 2007/2008 and 2008/09 (MOA Reports). This is attributed to the disruption of farming activities as a result of post election violence, soaring costs of farm inputs, high energy costs, unfavourable weather conditions and diminishing global food supply which has imparted negatively on national food security. The desirable situation is when the country has stable and long term food security especially at national level.

In view of the above scenario, the government has put in place immediate to short term and long term measures to address food insecurity concerns.

In an effort to address Food security in the country the Government has put in place short and long term strategies. These include policies and strategies that focus on production, food diversification, value addition, marketing and availability.

In recent years the government has put in place key policy documents (strategies) that provide the needed thrust in the Agriculture and Rural Development (ARD) sector. These key documents include the Strategy for Revitalizing Agriculture (SRA) 2004 - 2014 and the Ministry's Strategic Plan (SP) 2006-2010 and now the vision 2030 strategy as successor to the

Economic Recovery Strategy for Wealth and Employment creation. The Vision 2030 particularly recognizes that Agriculture will continue to play a crucial role towards the achievement of a sustained GDP growth rate of 10% annually. The Ministry will make its contribution through implementation of several flag ship projects identified. These include: Development of an Agricultural Land Master Plan, passage of a consolidated agricultural policy reform and legislation, implementation of a 3- tiered fertilizer cost reduction programme, emphasis on value addition to agricultural produce in order to increase incomes to farmers (Vision 2030, 2007). The following are some of the programmes that the Ministry of Agriculture is implementing with the aim of achieving a sustainable national food security:

#### **4.1 Short term interventions - ongoing**

- ◆ Maize subsidy and Marketing Policy: The Government has adopted continuation of policy of free maize marketing and is developing an effective well targeted subsidy scheme for the vulnerable. This scheme will be broadened to include the vulnerable groups in urban centres and those scattered in pockets in the high potential rural settings.
  - ◆ Waiver of duty on imported maize by the private sector from 16<sup>th</sup> January 2009 to 30<sup>th</sup> June 2010.
  - ◆ Government has announced producer price for this years maize crop to be KES 2,300 per 90 kg bag, to replenish the SGR stocks.
  - ◆ Government's importation programme for 7 million bags of white maize.

- ◆ Private sector maize importation after duty waiver was granted by Government has so far reached over 10 million bags of 90 Kg.
- ◆ Bulk importation 163,000 MT of fertilizer: of which 63,000 MT will be imported by Government and 100,000 MT by ADC, KTDA, and NCPB.
- ◆ Strategic Grain Reserve (SGR) will be raised from current 4 million bags to 6 million bags by end of this financial year and to 8 million bags by the end of 2010/2011 financial year.
- ◆ The SGR will also include other foodstuffs like sorghums, millets, beans, powdered milk, hay for animal feed and change name to Strategic Food Reserve (SFR) – to broaden the types of food held under SFR.

## **4.2 Long Term Interventions - Targeted Food Security Programmes**

### **4.2.1 Njaa Marufuku Kenya (NMK):**

The programme targets the poor people who have been depending on food relief. This programme gives grants to farmer groups and schools to produce their own food. The Government, in collaboration with FAO, has disbursed Ksh 327.6 million to assist 1,866 groups, 40 schools and 35 organizations to undertake food security projects.

### **4.2.2 Water Harvesting for Crop Production:**

The objective of this is construction of water pans and micro-dams for crop production to address food security. The programme was started in

2007 and has disbursed over KES 200 million and constructed 145 water pans. In the financial year 2009/2010 the programme targets to build another 200 of such pans at a cost of KES 100 million. This programme is wholly funded by Government of Kenya.

#### **4.2.3 BOOSTING FOOD PRODUCTION THROUGH IRRIGATED AGRICULTURE PROJECTS.**

##### **PHASE I**

The emergency food production project is targeting to increase food production specifically maize and rice to enable the country to be food secure in the light of the continuing drought condition in the country. In the first phase, 8 schemes are being targeted for implementation and are distributed across the country. The following are brief reports for these identified schemes:

##### **Bura Irrigation Scheme.**

The scheme is located in Tana River District, adjacent to the Tana River. It is currently operated by farmers and NIB with a potential of **3,000 and 6,750 acres** respectively. The current challenges faced in the scheme are dilapidated infrastructure and support to production through extension and inputs. In order to bring the area into production, the project is required to carry out extensive bush clearing of '*Mathenge*' and desilting of the irrigation canals and provision of farm inputs. The estimated cost to bring it into production is about Ksh **387M** and **292M** for works and Agricultural inputs respectively.

##### **Hola Irrigation Scheme**

The scheme is also located in Tana River district and partly settled by farmers on one section who are farming on aegis of the National Irrigation Board and the other section is owned by NIB. It has an irrigation potential of **3,000 acres** suitable for growing of cereals and pulses. Challenges that have hindered exploitation to its potential include dilapidated infrastructure for 1,800 acres and support to production through extension and inputs. To bring the scheme into production, the project has to invest in bush clearing of 'Mathenge', land leveling and construction of irrigation canals. The scheme will require an investment of Agricultural farm inputs worth Ksh **90M** and a further **Ksh 250M** for the works.

### **Perkerra Irrigation Scheme**

The scheme is located in the former Baringo District and has a potential irrigable area of **1,000 acres** which is suitable for cereals and pulses. Challenges that affect the scheme are inadequate water for irrigation to command the entire 2,500 acres. To bring it into full production the project will invest money for Agricultural inputs worth about **Ksh 30M**

### **Tana Delta Irrigation Scheme**

The scheme is operated under the aegis of TARDA and has a potential of **3,500 acres** for Maize and **1,500 acres** for rice. Challenges facing the full exploitation of the scheme includes dilapidated infrastructure and availability of inputs to bring the scheme into production, the project will have to invest in the rehabilitation of canals and the repair of rubber dam.

Total cost for the scheme is estimated to be about Ksh 300M and 150M for works and inputs respectively.

### **Ahero irrigation Scheme**

The scheme is located in Nyando district and operated by farmers under NIB. It has a potential of **3,000 acres** for rice production. Challenges experienced in the scheme are funds to complete construction of infrastructure for an extra 1000acres and also support to farmers to produce rice. To address these issues, the project will have to support the construction of the canals to tune of **18M** and also support the farmers with farm inputs worth an estimated cost of **92M**.

### **West Kano Irrigation Scheme**

West Kano is located in Kisumu East District with a potential area of **2,250 acres** suitable for rice. It faces the challenges of having weak farmer organization and lack of inputs by the farmers to grow the rice. The project will need to support the scheme with Ksh**68M** for farm inputs.

### **Bunyala Irrigation Scheme**

Bunyala irrigation scheme is located in Bunyala District with a potential area of **1,200 acres** for rice. Major challenges are on funds to complete expansion and provision of farm inputs for farmers. The project will need to support the works required for expansion at an estimated cost of **Ksh 25M** and support provision of farm inputs at a cost of **Ksh 37M**.

### **Mwea irrigation Scheme**

This scheme is located in Kirinyaga South with a potential **14,000 acres**. The scheme is suitable for growing rice. Major challenge is in the infield infrastructure dilapidation. The project will support the rehabilitation of the infrastructure at an estimated cost of **Ksh 50M**.

### **South West Kano Irrigation Scheme.**

This is located in Kisumu East District with a potential area of 3,000 acres. The area is suitable for rice growing. Challenges faced in the scheme include the completion of the secondary canals, de-silting and support to farmers for production. Project will support minor rehabilitation of the scheme and support the farmers at an estimated cost of **Ksh36M** and **Ksh92M** for works and farm inputs respectively.

### **IRRIGATION PROJECTS - PHASE II**

These include Proposed Development of new schemes and expansion of existing ones.

- a) **Un-utilized existing irrigation Schemes** – An additional 16,210 Ha of land is proposed for rehabilitation and improvement of irrigation and Drainage infrastructure at a cost of KES 930 million.
- b) Small holder irrigation Scheme – Farmer owned - additional 640 Ha of land proposed for rehabilitation and improvement of irrigation and Drainage infrastructure at a cost of KES 339 million.
- c) Proposed Development of new Schemes – 15,000 Ha of land will be developed for irrigation at a cost of KES 10 Billion.

- Investment in these schemes is expected to produce 5 million bags of 90 kg of maize and 739,518 bags of 80 kg of Rice in the next 3 years.
- Phase one activities are targeted to yield up to 1 million bags of maize in year one and about 300,000 bags of Rice.

#### **4.2.4 National Accelerated Agricultural Input Access Project (NAAIAP):**

The programme has 2 components: a) **Kilimo Plus** targets the resource poor who are provided with a package of seeds, fertilizer and training to cultivate at least one acre of land to meet household needs and surplus for sale. These inputs are provided free of charge through voucher system for at least 2 years. b) **Kilimo Biashara** targets the more endowed farmers providing them with low cost credit to purchase inputs.

To date the Government has disbursed Ksh 605 million which has benefited 121,000 farmers with Kilimo plus. In the next Financial Year Kshs 1 Billion is expected to be spent to reach another 100,000 farmers.

The government has also made arrangements with development partners and the Equity bank to avail some Ksh 4 billion for Kilimo Biashara. This bank is in the process of developing an insurance scheme for crop and livestock farming.

#### **4.2.5 Promotion of “Orphan Crops”:**

While overall food security in the country is a wide subject covering all crops, livestock, land use, land and water management, inputs and rural

credit system, alarm on food security is raised only when there is deficit of maize. To correct this notion that food is only maize the Ministry and its sector partners has developed strategies to promote cultivation/rearing and utilization of other crops and livestock to increase the food security base. Multiplication and production of orphan crops seeds that perform well even with little moisture, promotion of rearing of such small emerging livestock as ostrich, guinea fowls are examples.

Crops under this programme include; cow peas, pigeon peas, Green grams, cassava, sweet potatoes, millets, sorghums, beans and early maturing open pollinated varieties of maize. The programme promotes indigenous crops that can do well across a range of agro-ecological zones including Arid and Semi-arid lands, hence suitable for food security. To date, the ministry has distributed 1,769 MT of food crop seeds, 4.3 million sweet potato vines and 3.8 million cassava cuttings worth KES 350 million. The programme is funded by Government only.

#### **4.2.6 Policy initiatives for food security**

The Ministry identified promotion of orphan crops as a solution to chronic food insecurity in the ASALS in its Strategy to Revitalize Agriculture (SRA).

The National Food Security and Nutrition Policy (NFNP) highlights the nutritional effects on a population primarily fed on maize and advocates diversification of eating habits. This emphasizes the need for increased efforts to produce more of the other food crops in addition to cereals.

#### **4.2.7 Rice and Potato Development**

In order to diversify crop production and increase food security base these two crops will be developed among others. A national Rice Development Strategy has been launched to address constraints in the production of this crop. The areas to be covered include promotion of improved varieties that are rain fed. Five varieties of New Rice for Africa (NERICA) have been released for planting by farmers. Rehabilitation of irrigation infrastructures will also be focused in the Strategic Plan. Irish Potato production has declined in the last decade due mainly to infection by blight diseases. An elaborate programme has been developed to address availability of clean seed and other constraints along the value chain. In this regard Potato seed Master Plan and Policy have been developed in an effort to revive potato production. The Ministry is in the process of developing a Soyabean Research and Development Strategy.

#### **4.3 Long - Term Agricultural productivity programmes**

##### **4.3.1 National Agriculture and Livestock Extension Programme (NALEP):**

This is a long term programme that seeks to institutionalize demand driven and farmer-led extension services. The programme reaches 1.2 million farmers per year with support of Kshs700 million per Financial Year from the Government of Sweden and the Government of Kenya. Alliance for Green Revolution in Africa is supporting these efforts in Soya promotion.

#### **4.3.2 Kenya Agricultural Productivity Programme (KAPP):**

The programme aims to improve livelihoods of Kenyans through improved performance of the agricultural technology supply and demand system. The first phase of this programme (2005-2008) has supported extension activities in 20 districts and research activities at a cost of USD 40 Million from the World Bank and the Government of Kenya. The second phase of this programme (2008-2013) is planned at a cost of USD 80 Million.

#### **4.3.3 Bulk Fertilizer procurement:**

The 2 KR Fertilizer Grant Project aims at increasing food production through easy access and affordable fertilizers. In the 2007/08 financial year 7,217 farmers benefited and Kshs.294 million counterpart funds raised and used to assist IDPs. The programme targets to benefit 12,240 farmers in 2008/09 financial. Funding is by Japan and GOK amounting to KES 568 Million for 2 years.

Within the current financial year, fertilizers worth one Billion shillings have been imported while another consignment worth KES 11.5 billion is in the process of being procured for the coming planting season. These arrangements are being carried out by ADC, NCPB, and KTDA. Source of funding is GOK & ADB. This will cost KES 12.5 Billion. There are long term plans to build a fertilizer factory as captured in Vision 2030. This is one of the Flagship projects to be undertaken by the Ministry.

#### **4.3.4 Agricultural Mechanization Services Revitalization:**

The objective of this initiative is to improve agricultural infrastructure and land development services to the Kenyan farmers. There are 23 Agricultural Mechanization Services (AMS) stations and 10 Agricultural Technology Development Centers Country Wide. Over the last 3 years 10 dozers, 85 tractors and accessories, 40 double cab pick ups, have been procured at a total cost of KES 800 Million.

#### **4.3.5 Agriculture Sector Support Programme (ASPS):**

The objective of this programme is to revitalize growth of the Agriculture Sector by providing a conducive policy and institutional environment to increase Agricultural Productivity through public – private partnership. It is a five year multi-sectoral programme which covers Makeni, Kitui, Kwale, Kilifi and Taita Taveta, Mwingi and Malindi. GOK/DANIDA has funded the programme at a total cost of Kshs 2.607 Billion.

#### **4.3.6 Agricultural Productivity and Income Generating Programmes:**

##### **i. Cotton Development:**

The objective is to promote Cotton Development through the recently formed Cotton Development Authority. The programme will spend Kshs150 million in 2008/2009 financial year.

##### **ii. Small - Scale Horticulture Development Project:**

The project's main objective is to improve irrigation infrastructure for enhanced production and marketing. The project area covers Machakos,

Narok, Mbeere, Nakuru North, Kajiado, Loitoktok, Marakwet and Meru south and will be financed by GOK/ADB at a cost, Kshs 162 Million.

**iii. Promotion of Private Sector Development in Agriculture (PSDA):**

Its main objective is support to small and medium-scale enterprises for selected agricultural value chains. The programme will cost Kshs 235 Million for 2008/09 Financial year funded by GOK/GTZ.

**iv. Small Holder Horticulture Empowerment Programme (SHEP):**

The objective of the project is to empower small holder horticulture farmer groups to increase horticultural production in their groups. This is a joint project between GOK and JICA.

**v. Smallholder Horticultural Marketing Project (SHoMaP)**

The project is funded by IFAD and based in Nakuru. The project covers 14 districts in Western, Nyanza, Rift Valley, Central and Eastern Provinces. Since inception in January 2008, the project has spent Ksh. 35 million to-date.

## **5. LIVESTOCK PROJECTS ADDRESSING FOOD SECURITY**

### **5.1 ASAL Based Livestock and Rural Livelihoods Support Project**

The project covers 22 districts in the arid and semi-arid lands (ASAL) of Kenya and has a six-year implementation period. The objective of the project is to improve sustainable rural livelihoods and food security through improved livestock

productivity, marketing and support for drought management and food security initiatives. The project has four components including; Sustainable livestock improvement; Animal Health; Livestock Marketing improvement; Drought management and food security initiatives. It is financed by African Development Bank (AfDF), Government of Kenya (GOK) and beneficiaries. The AfDF contributed Ksh. 1.9 Billion which is 68.2% of total cost while the GoK contributed Ksh. 314M and beneficiaries Ksh 149.5M. The project is expected to have the following outcomes;

- Improved food security through increased incomes
- Increased rural employment
- Empowerment of the rural community through the participatory approach.
- Reduction in livestock mortality rates and improved water supply.
- Improved sustainable rural livestock livelihoods.

## **5.2 Small Holder Dairy Commercialization Programme (SDCP)**

This is a joint development programme between the Government of Kenya and International Fund for Agricultural Development (IFAD) with an emphasis on Commercialization of dairy and dairy products through the Market Oriented Dairy Enterprises (MODE) approach. The objective of (SDCP) is to increase the income of the poor rural households that depend substantially on production and trade of dairy products for their livelihood. The programme is designed to reach 24,000 households engaged in dairy production and trading in the next six years within 9 districts spread across South Rift Nyanza, North Rift, and Western Province. This is expected to significantly reduce food insecurity levels in this region. The programme is expected to cost USD 19.5 Million.

## 6. FISHERIES PROJECT ADDRESSING FOOD SECURITY

### 6.1 Fish Farming Enterprise Productivity Programme

This programme entails the production of fish under aquaculture systems for food production and commercial purposes. The aim of the project is to produce food, create employment and generate income, particularly for the unemployed young Kenyan's and the associated households, through sustainable aquaculture enterprises. This Programme is being implemented in the high aquaculture potential areas of Western Kenya, Nyanza, parts of Rift Valley, Eastern, Central Kenya and Coast regions then scaled up to other regions. The programme components include;

- Construction and stocking of fish ponds of not less than 300 m<sup>2</sup>
- Construction of Hatcheries and productions of fingerlings
- Provision of fish feeds and seeds
- Harvesting and marketing of table size fish
- Capacity building on good aquaculture husbandry and aqua-business
- Formation of aquaculture production and marketing groups
- Aquaculture suitability zoning
- Plant (*at least*) twenty trees around the pond area

The primary beneficiaries of the Programme are the unemployed youth in the selected households, public institutions (schools, coffee factories, irrigation schemes etc) whereas the secondary beneficiary will be the rest of the household members and other fish stakeholders.

These young Kenyans and other household beneficiaries will contribute to the Programme in terms of labour during the development of fish ponds and hatcheries and subsequent management of fish ponds. The benefits from this enterprise will be the sale of fish and fish fingerlings, besides food production at the household level. The expected outputs include;

- 100,000 rural jobs created annually for the next three years
- Increased aquaculture production by 20,000 tones annually to reach an annual target of 100,000 tones in the next three years
- Increased direct rural income from fish farming by KShs 4 billion shillings annually to an annual income target of 20 billion in the next three years
- 10,000 ponds constructed per year (i.e. 30,000 ponds during Programme period)
- 40 hatcheries constructed
- 1 Cluster per Constituency formed
- 50,000,000 fingerlings produced per year
- 600,000 trees planted around the pond areas country-wide

Programme is funded by the Government at an estimated cost of Ksh 1.5 Billion over a period of 3 years.

## **7.0 CONCLUSIONS**

- ◆ Budgetary allocation to the Ministries needs to be increased in order to sustain continuous technology development and transfer to improve Research and Extension activities.
- ◆ An all inclusive Food Security & Nutrition Policy, once finalized, will ensure full participation of all stakeholders in Food Security activities. This will include expansion of Strategic Grain Reserve (to be renamed

Strategic Food Reserve – SFR) to hold food stuffs other than maize: Wheat, Rice, millets, sorghums, powdered milk, hay for livestock and food security fisheries initiatives

- ◆ As a buffer to food shortages, the Government will raise amount of maize held under Strategic Grain Reserve (SGR) from 4 million bags to 8 million by 2010/2011 Financial Year apart from broadening the types of food stuffs held by NCPB.
- ◆ The Government needs to undertake deliberate and targeted investment in irrigation, especially for the Arid and Semi Arid Lands, in order to increase food production. Together with the Ministry of Water and Irrigation, rehabilitation of existing irrigation schemes is a priority to raise productivity. This will enable the Ministry to meet its target of 1 million acres of land under irrigation as one of the flagship projects envisaged in Vision 2030. Initial KES 2 Billion has been allocated to rehabilitation of irrigation schemes.
- ◆ In order to reduce pressure of maize as food, greater efforts will be placed in diversification of enterprises which include the drought tolerant crops, upland Rice (NERICA), livestock products and aquaculture.
- ◆ The Government will pursue an open Regional Cross Border Marketing Policy to tap on the Regional diversity in food types, supply and varying harvest seasons.
- ◆ Food security can be achieved through embracing market oriented production where products are specifically targeted for certain markets and surplus food sold for incomes.

- ◆ The government should invest more in infrastructural development in the rural areas to reduce transportation costs and enhance redistribution of food from surplus to deficit areas and avoid geographical shortages.

## **8.0 REFERENCE DOCUMENTS**

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