

# FOOD PRICE CRISIS AND FOOD INSECURITY IN KENYA

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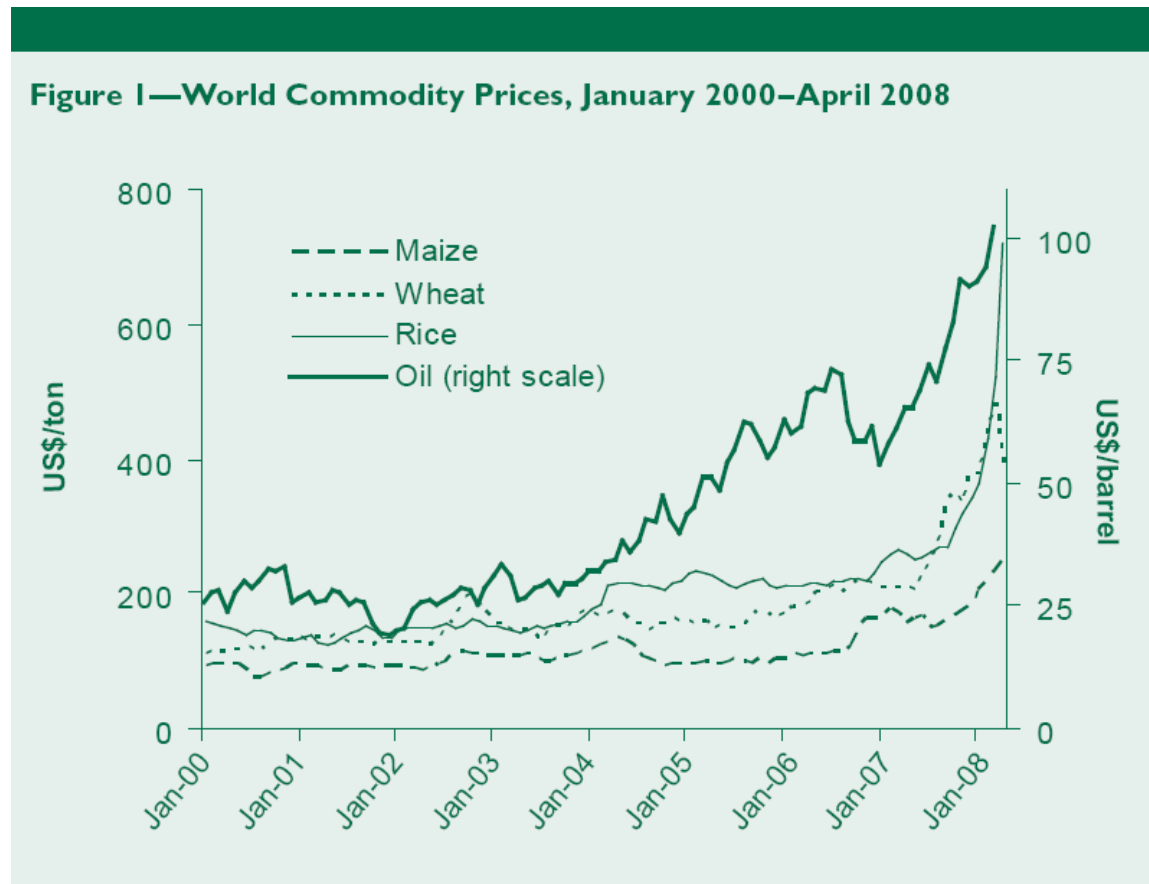
## **Abstract**

A study was carried out using secondary data to review food price crisis and food insecurity in Kenya. Food prices have been increasing in Kenya since 2006 to date. Prices of staple foods such as maize, wheat and milk among others have been rising progressively diminishing access to food for the poorer sections of the population leading to food insecurity in many households. Underlying causes of food price crisis and food insecurity include both demand side and supply side factors. Demand side factors include: rapid population growth, rapid urbanization, low income, poverty and increasing demand for food products for biofuel production in developed nations. Supply side factors include: declining agricultural productivity, high input prices, decline in world food stocks, underinvestment in rural infrastructure, climate change and climate variability, underinvestment in agriculture, poor markets and market access by small holder farmers. The impacts of food price crisis manifest as high food prices, political instability, food insecurity, increasing poverty, and declining agricultural productivity. Both short-term and long-term policies have been enacted by the government and other stakeholders to address the problem. Short term coping strategies include provisions of emergency food assistance by the government and donors, adoption of food policy nets (food subsidies, cash transfers, food for work and school feeding programmes), adjustment of trade and tax measures, enhancement of agricultural production by providing agricultural input subsidies and administered prices for producers. Long term policy measures include investment in agricultural research and extension, investment in rural infrastructure (irrigation, marketing infrastructure etc), investment in financial services and agro-processing. The study concluded that food price crisis and food insecurity are a reality in Kenya and necessary interventions are required to deal with it.

**Key words:** High food prices, price volatility, policies, impacts and Kenya.

## 1 Introduction

Rising and volatile food prices and food insecurity which are referred to as the food crisis are a global phenomenon. Since 2003, international prices of a wide range of commodities have surged upward in dramatic fashion, in many cases more than doubling within a few years, in some cases a few months (Figure 1). Prices of these commodities have also been rising in Kenya.



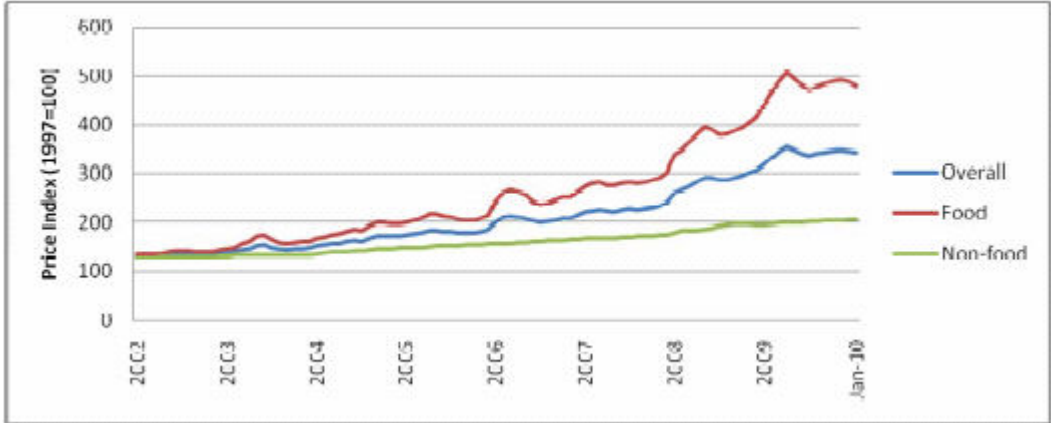
Sources: IFPRI 2008.

A surge in the price of food is of special concern to the world's poor people. Many impoverished people depend upon food production for their livelihood, and virtually all poor people spend large portions of their household income on food. Sharply rising prices offer few means of substitution and adjustment, especially for the urban poor, and there are justifiable concerns that millions of people may be plunged into poverty by this crisis, and that those who are already poor may still suffer more through increased hunger and malnutrition (Heady and Fan, 2008).

Rising food prices cause considerable policy dilemmas for developing country governments. Letting domestic prices adjust to reflect the full change in international prices generates inflationary pressures and causes severe hardship for poor households lacking access to social safety nets. Alternatively, governments can use food subsidies or export restrictions to stabilize domestic consumer prices, yet this exacerbates global food price increases and undermines a rules-based trading system. The recent episode shows that many countries chose to shift the burden of adjustment back to international markets (Lustings, 2009). This situation is witnessed in many developing countries in Africa, Asia and Latin America. In Africa (Tunisia, Egypt, Kenya, Uganda etc) we have seen protests against high commodity prices and in some situations unexpected revolutions and change of governments for example in countries such Tunisia and Egypt (The Economist, 2011 and 2012). Riots due to high food prices have also occurred in some other African countries such as Cameroon and Uganda.

**1.1 High food prices in Kenya**

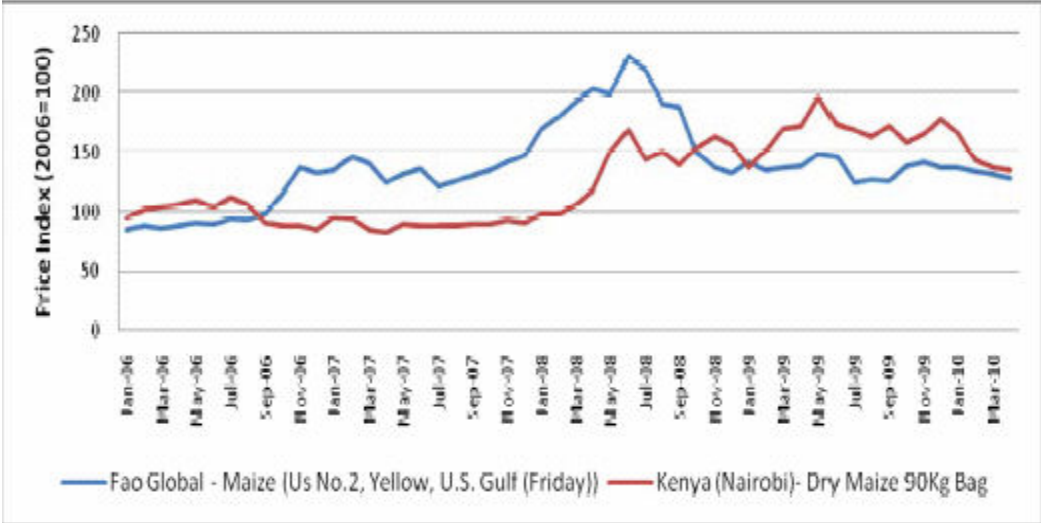
In Kenya, food prices have been on the increase since 2006-2010 as shown in Figure 2. The consumer price index (CPI<sup>1</sup>) for food has increased more rapidly compared to non-food CPI (Figure 2). Prices of many staple food commodities (maize, wheat, rice and milk) have increased tremendously in the last three years. Increasing food prices have also been accompanied by volatility in prices of most food commodities.



**Figure 2: Trends in CPI, 2002-2009**  
**Source: Ndirangu, 2009 in ReSAKSS 2009**

<sup>1</sup> Consumer price index (CPI) is a measure of prices of a basket of goods over time.

Prices of food in Kenya have continued to increase despite a decline in world food prices in the first quarter of 2009. Prices of food products such as maize in Kenya have remained high as prices on the world market have dropped as shown in Figure 3.



**Figure 3: International and Kenya Maize Price Movements: January 2006- March 2010**  
**Source: Ndirangu, 2009 in ReSAKSS 2009**

Prices of maize are very high and rising, progressively diminishing access to food for the poorer sections of the population. However, with the removal of the high import tariff on maize in mid June 2010, it is hoped that the private sector will cover most of the deficit. Nevertheless, vulnerable people, particularly pastoralists (the region is affected by drought), will not have access to maize on the market and will therefore need food assistance.

These persistently high food prices indicate a poor degree of price transmission from international markets to domestic markets in Kenya. The local price movements reflect a combination of several factors, including weather conditions, shifts in local production, disease and consumption shocks, inflation and changing informal trading patterns. The recent decline in international food prices seems not to have been solely due to a fall in demand or an increase in supply, but rather a combination of other economic factors (high interest rates and inflation) that imply the food crisis is not yet over. Some of the other important economic factors that have contributed to the food price crisis include speculation, dysfunctional markets, the financial crisis

and insecurity in some countries. A review of monthly price movements in Kenya shows a trend of persistently high and increasingly variable food prices, which have a negative impact on the country's food security (ReSAKSS, 2009). On the domestic market, food prices have continued to increase at unprecedented rates. Food prices for staples such as maize, wheat and rice have continued to rise despite world prices having reduced. Over the past six months, the devaluation of the local currency against the dollar by almost 25 percent, coupled with a 40 percent increase in fuel prices, has led to serious hikes in food prices making it harder for millions of Kenyans to afford food especially poor and vulnerable groups.

## **1.2 Overview of food security in Kenya**

### **1.2.1 Food security definition**

In 1996 the World Food Summit adopted the following definition for food security:

“Food security, at the individual, household, national, regional and global levels is achieved 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”. (FAO, 1996)

This new emphasis on consumption, the demand side and the issues of access by vulnerable people to food, is most closely identified with the seminal study by Amartya Sen (1981). Eschewing the use of the concept of food security, he focuses on the entitlements of individuals and households. Food security is a multi-dimensional phenomenon. Food security, therefore, implies the provision of safe, nutritious, and quantitatively and qualitatively adequate food, as well as access to it by all people. Food security has three dimensions (Gina, 2003).

- Availability of sufficient quantities of food of good quality, supplied through domestic production, trade; stocks and transfers (food aid by government and donors)
- Food access by households and individuals through own production, purchase at markets and other means of exchange such as barter trade or gifts
- Optimal uptakes of nourishment, through a sustaining diet, clean water and adequate sanitation.

### **1.2.2 Food security in Kenya:**

When all these facets of food security are taken into account, achievement of food security has proved elusive in most developing countries such as Kenya. Currently over 10 million people in Kenya suffer from chronic food insecurity and poor nutrition, and between two and four million people require emergency food assistance at any given time (Republic of Kenya, 2008). Nationally, an estimated 1.8 million children (30%) are classified as chronically undernourished. The national per capita energy intake per day is less than the recommended rates (Gitu, 2004). Even in years of good production, chronic under-nutrition (stunting) affects 30% of children, indicating long term inadequate dietary intake of food (this includes both macronutrients, such as carbohydrates, proteins and fats, as well as micronutrients including vitamins and minerals), inadequate distribution of food, particularly high quality foods, inadequate knowledge about feeding, care-giving of young children and repeated infections (Republic of Kenya, 2011; Republic of Kenya, 2009).

## **2. Underlying causes of food price crisis and food insecurity in Kenya**

Food crisis is caused by various factors such as climate change, urban development, population growth and oil price shifts that are interconnected and rarely confined by borders. Causes of food insecurity in Kenya are many and varied; these factors can be classified into both demand side and supply side factors as detailed below:

### **2.1 Demand side factors**

**2.1.1 Rapid population growth in Kenya** – According to the Central Bureau of Statistics, Kenya had 38.6 million people in 2009 — an increase of a third since 1999 (Republic of Kenya 2010). The current population poses huge challenges to the eradication of hunger and poverty as a result of a high population growth rate that is not in harmony with the rate of food production. Increased number of people means more pressure on the environment, as demands for food, land, clean water and energy resources escalate. With reduced resources, there is a real danger of civil strife arising as people squabble for the scarce resources and also increased food insecurity and hunger as land productivity declines (in terms of land size and fertility). This has been witnessed in the Arid and Semi-Arid Lands (ASAL) areas of Northern Kenya where there are frequent tribal wars and raiding in a bid to control natural pastures and water by different tribes and clans

of the pastoralist communities that live in these areas. These areas only support livestock production and require more investment inputs to support arable farming. Coupled with the insecurity that exists in the region as a result of militia activity has led to under development in these regions. In the traditional agricultural areas rapid population growth has led to land subdivision to uneconomic units for example in Kisii, Central Kenya, Western and Nyanza Provinces reducing crop and livestock production in these regions ( The World Bank, 2008).

**2.1.2 Rapid urbanization-** Another contributor to food price crisis in the country is the rapidly growing urban population. Kenya’s urban population increased from 9.9 % in 1969 to 15.1 % in 1979. Kenyan cities have continued to grow at a rapid rate (Table 1). The population of Nairobi grew from half a million in 1969 to 2 million in 1999 and was estimated at 3million in 2008. The urban population will continue to grow as result of rural to urban migration as people move from rural to urban areas to seek employment and a better life.

**Table 1: Population in some major Kenyan cities& Towns**

<b>Town/City</b>	<b>1969</b>	<b>1979</b>	<b>1989</b>	<b>1999</b>	<b>2009</b>
Kisumu	32,431	152,643	192,733	322,734	397,096
Mombasa	247,073	341,148	461,753	665,018	915,101
Nairobi	509,286	827,775	1,324,570	2,143,254	3,133,518
Nakuru	47,151	92,851	163,927	231,262	286,411

Source: Republic of Kenya, 2006 and 2010

According to Oxfam, rapid urbanization is changing the face of poverty in Kenya. Nairobi’s population is set to nearly double to almost six million by 2025, and 60% of residents live in slums with no or limited access to even the most basic services such as clean water, sanitation, housing, education and healthcare. Whereas the starkest poverty has previously been found in remote rural areas, within the next ten years half of all poor Kenyans will be in towns and cities. The increasing urban population offers a challenge in provision of services, jobs and adequate food supply to the residents.

A detailed household survey conducted by the Kenya Food Security Steering Group in high population density urban centers across all livelihoods in late 2010 covering an estimated 3,900

households and 5,180 children established the characteristics of urban food insecurity and nutrition, across the country (Republic of Kenya, 2008). One third (11.5 M) of Kenya's 38.6 million people live in urban areas, out of which 40 percent (4.6 M) reside in slums. Preliminary results from the baseline survey showed that rising food insecurity is precipitated by rapid and rising urbanization. The survey outcomes indicated that up to 45 percent of slum dwellers had no access to safe drinking water, while sanitation coverage was less than 40 percent. In addition, close to 50 percent of overall household income is allocated to food purchases, a clear indication of heightened vulnerability due to volatility in food prices, amidst unstable labor opportunities. A large proportion of urban dwellers are unable to meet food needs on a sustained basis over an extended period, adopting instead detrimental coping strategies such as increased child labor, skipping meals and foregoing nonfood expenditures, so as to bridge significant deficits. The food security status for poor households in urban areas is likely to remain in the Integrated Food Security Phase Classification (IPC) stressed phase and could deepen markedly as food and fuel prices continue to increase. Currently food and fuel are projected to continue rising further in coming months. Most of these poor households derive a large proportion of their income from labor and have few alternative sources of income which could lead to more households employing negative coping strategies such as buying cheap food with inadequate nutrients and skipping meals (Republic of Kenya, 2008).

### **2.1.3 Low income (low effective demand)**

According to the UN data (2008) the Gross National Income (GNI) per capita in Kenya was 783.4 US dollars. This is low compared to some middle income countries such as South Africa with a GNI per capita of 2,751.22 US\$ and Botswana with a GNI/Capita of 3,201. Low incomes are further made worse by unequal distribution of income among the population. With a gini coefficient of 0.57 in 1999, Kenya ranks among the top ten most unequal countries in the world and the fifth in Africa (SID, GOK and SIDA, 2004). As most developing countries, Kenya shows a high disparity in wealth distribution. Kenya's Gini coefficient has been fluctuating over the past two decades with an improvement from 0.57 in the 1990s to 0.425 in 2000 but back to 0.57 in 2004 (UN Habitat, 2008). Inequality is worse in rural areas; the richest 20% of the rural and urban populations earn 62% and 51% of incomes, respectively, while the bottom 20% earns 3.5 % of rural income and 5.4% of urban income (Suri et al, 2008). Recent statistics for Kenya show that income is heavily skewed in favour of the rich and against the poor. The country's top 10%



households control 42% of the total income while the bottom 10% controls less than 1% (SID, GOK and SIDA, 2004). This means that for every 76 cents earned by the bottom 10% the top 10% earn about Kshs 42. Or put it another way, for every one shilling earned by the poorest 10% households, the richest 10% earn more than Kshs 56 (SID, GOK and SIDA, 2004). The poorest 10% of the population have low effective demand for food due to low income and therefore these households are food insecure.

#### **2.1. 4 Poverty**

The main concern in the country is the dramatic increase in the number of people living below the poverty line of less than US \$ 1 per day, which rose from 11 million (48% of the population) in 1990 to 17 million (57%) in 2001. Of the 17 million poor people in 2001, 14 million (82%) were in rural areas and 3 million (18%) in urban areas. The national incidence of food poverty was 45.8% in 2005/06 according to the Kenya Integrated Household Budget Survey (Republic of Kenya, 2007).

Many of the rural poor are subsistence farmers or landless people who have no access to resources necessary for food production and depend on selling their labour to obtain food. Rural poor people depend on agriculture for their earnings, either directly, as producers or hired workers, or indirectly, in sectors that are linked to farming. For example, trading, transportation and processing involve large numbers of small entrepreneurs and are necessary for agriculture but, at the same time, such entrepreneurs depend on farming activities for their survival. Food-insecure people neither consistently produce enough food for themselves nor have the purchasing power to buy food from other producers. During times of famine, food may simply not be available at any price. Currently, many communities in the ASALs of Kenya depend on relief food for their survival (Republic of Kenya, 2008).

Hunger is the most extreme manifestation of the multi-dimensional phenomenon of poverty, and the eradication of hunger is therefore instrumental to the eradication of other dimensions of poverty. Persistent widespread hunger impedes progress in other aspects of poverty reduction, and weakens the foundation for broad-based economic growth. Hunger also represents an extreme instance of market failure, because people who are most in need of food are the least able to express this need in terms of demand. Approximately ten million people were at risk of

going hungry in Kenya after harvests failed because of drought in 2009/2010 (Republic of Kenya, 2011). In response to the famine crisis the government declared the famine a national emergency and lifted the import duty on maize to increase maize imports into the country. Currently, the situation is still critical for some regions which continue to experience prolonged drought in the northern parts of Kenya.

### **2.1.5: Increasing demand for food products for biofuel production in developed countries**

It has been documented that there is an increasing demand for food crops such as cereals and oil crops for manufacturing biofuel as a result of increasing fuel prices. The increasing demand for biofuel products in developed countries have resulted in declining world food stocks implying that less food supply is available on the world market triggering higher food prices on the world market. At least 100 million tones of food grains are converted to biofuel annually (Asian Development Bank, 2008). The International Food Policy Research Institute (IFPRI) showed that the demand for biofuel in the period 2000-2007 is estimated to account for 30 percent of the weighted average increase of cereal prices (Von Brown et al, 2008). Most developing countries such as Kenya are net importers of products such as maize, wheat, rice and vegetable oils. This increasing demand for cereals and oil crops for use in biofuel production in developed countries has a repercussion on food security in Kenya, as Kenya is a net food importer. Therefore, high prices on the world market translate to high domestic prices. This is further worsened by weak currencies against hard currencies such as the Euro and the dollar. Kenya shilling has been depreciating and has reached very low levels. The weakening of the Kenya Shilling implies higher costs of imported food making food unaffordable to many poor rural and urban households.

## **2.2 Supply side factors**

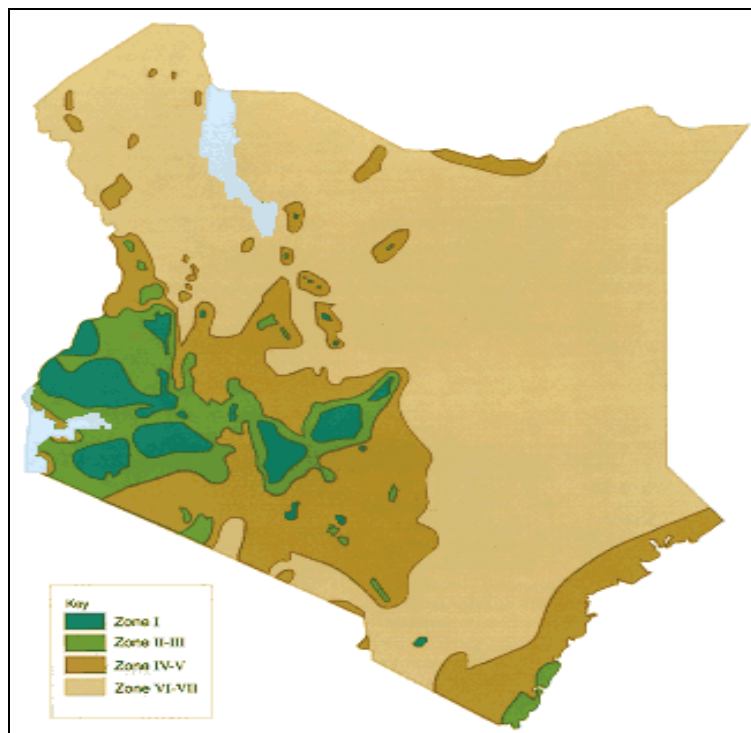
Various supply side factors have been cited as contributing to the food price crisis and food security in Kenya as shown in the following discussion.

### **2.2.1 Declining agricultural Productivity in Kenya**

One of the major causes of food crisis and food insecurity in Kenya is under performance of the agriculture sector (Gitu, 2004). The country's agricultural sector is the mainstay of the national economy. It contributes directly 26% to the gross domestic product (GDP) and indirectly approximately 27% through linkages with other related sectors. The agricultural sector employs over 80% of the labour force, generates 60% of the foreign exchange earnings and provides 75%

of the industrial raw materials (KARI, 2009). Agriculture is a way of life for overwhelming majority of the population who dwell in rural areas and derives their livelihood directly or indirectly from agriculture. Sustainable development of the agricultural sector will bear significant impact on the population and will have multiplier and spillover effects to other sectors especially industry and agribusiness

Land is a major resource in agricultural production. Kenya has an area of about 587,000 square kilometers of which 11,000 square kilometers are water and 57600 square kilometers land mass respectively. It is only about 20% of the land that fall under the high and medium agricultural potential largely because it receives adequate and reliable rainfall. The rest falls under arid and semi arid lands (ASALs) as shown in Figure 4.



*Figure 4: Kenya Soil Survey  
Source: Braun et al. (1980).*

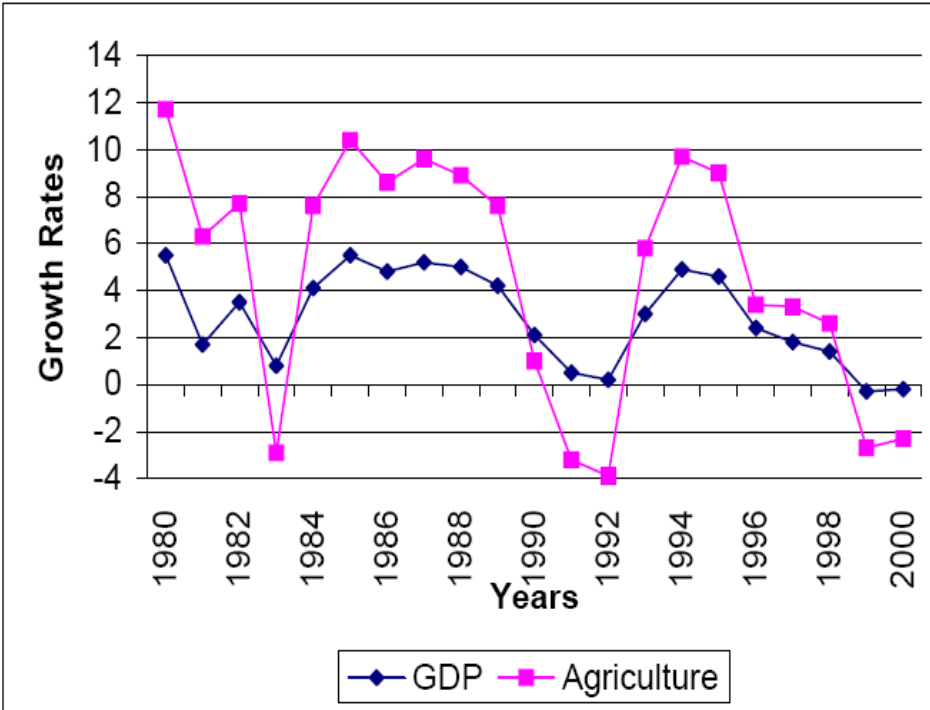
- **Zone 1** — High potential for production, some part too cold and wet for optimum Production. Some forest land.
- **Zones II and III** — Land suitable for crops where most food is grown.
- **Zones IV and V** — Marginal, high risk areas but still some crops grown; rangelands in most parts of zone V.

- **Zones VI and VII** — No cropping, except under irrigation.

From the above map, Kenya faces a major challenge in producing adequate food on limited amount of arable land.

Kenya also has dichotomy in its agricultural production systems in the country. The farming systems can be classified into small-scale and large scale. Kenya's agriculture is dominated by small-scale farmers who account for 75% of total agricultural production and 70% of marketed agricultural output. On average, small-scale farmers produce over 70% of coffee, 50% of tea, 90% of Sugar, 80% of milk, 85% of fish and 70% of beef and related products (Kinyua, 2004). Production is carried out on small land holdings averaging 0.5-3 hectares mainly for both subsistence and commercial purposes. On small-holder farms is where increasing production and commercialization is urgently needed if food security is to be achieved. Therefore the government of Kenya should invest in small holder farming by availing farmers with the requisite inputs, information and services such as access to fertilizers, credit facilities, commodity markets and price information. Large scale farms should also be facilitated by providing a conducive policy environment to operate profitably as both the small scale and large scale sectors are important to food security in Kenya.

Growth in the agricultural sectors is very critical to the overall growth of the national economy. The growth in the economy is highly correlated with growth in the agriculture sector (Figure 5).



**Figure 5: GDP growth in agriculture and the total economy**  
**Source: Gitu, 2004**

It is estimated that a 1% increase in the agricultural GDP results in 1.6% growth in the overall economy (Institute of economic affairs, 2008). Therefore, GDP growth of the agricultural sector is important to spur growth in the other sectors of the economy and is critical for the attainment of national food security. In most years the agriculture sector has registered declining productivity and has greatly contributed to reduced food supply on the domestic market. Generally there has been a continued decline in agricultural productivity in Kenya. Production of various crop commodities for example maize has remained low (Table 2). Maize yields in Kenya have been less than 2 tons/ha for many years (Table 2).

**Table 2: Trends in maize yields (tonnes/ha), 1990–2007**

	1990-1992	1993-1995	1996-1998	1999-2001	2002-2004	2005-2007
Kenya	1.74	1.82	1.53	1.54	1.69	1.72
East Africa	1.21	1.38	1.38	1.54	1.34	1.36
World	3.75	3.85	4.26	4.41	4.60	4.87

Source: ReSAKSS 2009

Crop yields are lower in Kenya compared to the world averages (Table 2). Low agricultural productivity has meant that food supply, which has been growing at a rate of 2.5 percent in Kenya, has not kept pace with the population growth rate of 2.64 percent. The low productivity at the farm level would lead to some producing households becoming food insecure. Production and consumption trends of major cereal crops are provided in appendix 2. There is need to increase agricultural productivity on Kenyan farms. This can be achieved by undertaking necessary policy changes for example land reform. The minimum size of the small scale farm needs to be defined so that sub-division of land to unviable units can be checked. Ways should be devised to encourage small scale farmers to use farm inputs.

**2.2.2-High input prices.** High input prices have also been documented to contribute to the high prices of food stuff in the country. Prices of inputs such as fertilizer, seed and agrochemicals have been increasing leading to high production costs (Appendix 1). Increased fertilizer use is one of the important means by which households and nations can reduce the likelihood of having to rely on international markets for grain. However, world fertilizer prices have risen even more so than food prices. After accounting for inland transport costs, the wholesale price of DAP fertilizer in Nakuru, Kenya has risen from Ksh 1,750 per 50kg bag in 2007 (US\$538 per ton) to nearly Ksh 4,000 per 50kg bag (US\$1,283 per ton) in 2008. These world price conditions, combined with the civil disruptions experienced in early 2008, are likely to break the steady upward trend in fertilizer use that Kenya has experienced over the past 15 years (Ariga et al. 2009). As farmers reduce the use of modern inputs due to high prices they achieve low yields which contribute to food insecurity in the country as the amount of food on the markets decline. Generally there is low supply of food whereas the demand for food has increased due increasing populations resulting in higher prices according to the law of supply and demand.

### **2.2.3 Decline in world food stocks**

In an "unforeseen and unprecedented" shift, the world food supply is dwindling rapidly and food prices are soaring to historic levels, FAO warns (The International Herald Tribune, 2007). The world has been experiencing a stagnating and decreasing supply of certain crops leading to the declining of food stocks. Since food stocks are a key determinant of food supply, declining food stocks has meant a decline in food supply causing food prices to increase. This has had direct

impact on food prices for Kenya, because Kenya is a net importer of key foods such as maize, wheat, rice and vegetable oils.

#### **2.2.4 Underinvestment in rural infrastructure (rural roads, irrigated agriculture)**

The major reason why food production has stagnated and remained low is because of underinvestment in rural infrastructure. Rural roads in some high potential areas are missing or not well developed making it difficult for farmers to access markets and move their products from centres of production to centres of consumption in the urban areas. Lack of storage and drying facilities for cereals such as maize may lead to farmers selling their products at throw away prices to middlemen as they cannot store their products at harvest time in order to take advantage of higher prices later on in the year. This state of affairs is as a result of low investments by government and private sector in rural infrastructure. Lack of electricity in some rural areas has also contributed to low development and investment in processing facilities implying that most agricultural value chains are not well developed at the processing stage in most producing areas. This further leads to spoilage of perishable agricultural products such as fruits and vegetables which may be in excess during the rainy season and in low supply during the dry seasons. As already discussed earlier, 80% of Kenya is arid and semi-arid and therefore the development of irrigation in these areas would help boost food production because lack of water is a major constraint in agricultural production. However development of irrigation agriculture has remained minimal in the country making the ASALs to be prone to famine and dependant on food aid which in turn has contributed to high food insecurity and poverty in these regions. The inability of some regions in the country to access food may be due to poor or lack of development of food distribution systems between the surplus and deficit areas or the distribution systems are poorly managed. Therefore there is need to develop efficient agricultural products distribution systems to ensure food security for all areas of Kenya.

#### **2.2.5 Climate change/climate variability.**

The global phenomenon of climate change has also had adverse effects on food production in Kenya leading to food insecurity. In Kenya we have witnessed prolonged droughts in many parts of the country and floods in some parts of Kenya. Climate change in Kenya has been caused partly by poor management of our natural resources such as forests and soils. Despite expectation of some of these natural disasters Kenya seems ill equipped to deal with them. Lack

of a strategy or preparedness to mitigate drought has led to many Kenyans suffering from massive food insecurity. In the northern parts of the country people died as a result of hunger in 2011 and this despite the early warning of impending drought by various institutions, which the government did not respond to urgently. Lack of food and deaths of livestock and humans due to lack of pasture, food and water was a culmination of the slow response to these warnings. Massive drives to raise funds and provide food aid to victims came rather late for some people.

### **2.2.6 Underinvestment in agriculture and related services**

Agriculture is a prominent sector in the Kenyan economy. Vision 2030 which is the blue print development strategy for Kenya in the next 20 years has identified agriculture as one of the key sectors in the development of Kenya. This is rightly so because over 70% of the population live in the rural areas and depend on agriculture for their livelihoods. Despite the prominence of the agricultural sector there has been underinvestment in the agricultural sector in most African countries including Kenya

Countries that have had the most success in reducing hunger are those with the highest investment rates in agriculture. Low budget allocation to agriculture has contributed greatly to the current food crisis in Kenya (Gitu, 2004). The total allocation to Agriculture in 2005/06 was 5.7% of Government budget. In 2006/7, the budget allocation to agriculture and related sectors had increased to 6.5% and in 2007/08 it rose to 7.8% of the total expenditure as shown in Table 3 (Institute of Economic Affairs, 2008). The budget allocation to the sector ministries has been increasing in response to the Maputo Declaration (Table 3).

**Table 3: Budget allocation to the Agriculture and Rural Development (ARD) Ministries in KShs Billion, 2003/04 – 2007/08**

Year	Total	Recurrent	Development	%National Government
2003/04	15.7	11.2	4.5	4.6
2004/05	17.6	10.8	6.8	4.6
2005/06	19.1	12.6	6.5	5.7
2006/07	24.6	15.2	9.4	6.5
2007/08	30.3	16.6	13.7	7.8
2010/2011				10

Source: Institute of Economic Affairs, 2008



Tremendous effort has been made by the government to achieve the 10% stipulated under the Maputo declaration. This target was achieved in the 2010-2011 and 2011-2012 budget allocation (Ongaro, 2011). Apart from just increasing the budget allocation there is need to monitor the utilization of the funds to make sure that it is being used to increase agricultural productivity in the country and also to ensure that human and other resources needed to utilize the budget allocation exists within the system.

### **2.2.7 Poor markets and market access**

Poor markets and market access by farmers in developing countries has been blamed for low productivity and food insecurity in general. On the international markets stiff competition and unfavorable access to international markets for Kenyan products could be contributing greatly to food insecurity and poverty of farm households in Kenya. The terms of trade are also poor.

Locally smallholder farmers may not be able to access lucrative urban markets due to various constraints in the marketing system. Farmers who are unable to access better markets for their produce end up selling at the local markets or to middlemen obtaining much lower prices. This further exacerbates food insecurity and poverty in the resource poor rural households.

## **3. Impacts of food price crisis in Kenya**

High and volatile food prices have various impacts on different segments of the population in the country as detailed below:

### **3.1 High food prices and political instability**

In Kenya, there have been protests over increasing cost of living. “Protests over the skyrocketing cost of fuel kicked off with organisers vowing to adopt mass action until the Government cushions Kenyans against the rising cost of living” (The Standard News paper, October, 2011). High food prices may result in food being inaccessible to some members of the society. As the English adage goes “a hungry man is an angry man” desperate people may be forced to the streets to protest in order to force the government to do something about the food situation. This may lead to social unrest and any other undesirable political outcomes such as political unrest.

### **3.2 Impact of food price crisis on food security**

The impacts of increasing food prices can be felt at both macro and micro levels. At the micro level, poor households are not able to access sufficient food because of low income. Most poor households are food and nutrition insecure and this is manifest in rampant malnutrition and poor diets. Contrary to common belief that food producers would benefit from the high food prices, majority of people in Kenya are net food buyers. For example, information derived from KIHBS (2005/06) show that about 63 percent of crop and livestock producers are net food buyers (ReSAKSS, 2009). This implies that those poor rural households are very food insecure as they are not able to purchase sufficient food for their own consumption because of low income. This means there are many people who are undernourished in the rural areas as well as in urban areas.

### **3.3 Impact of food price crisis on poverty**

As food prices go up poor households may be engaged in coping mechanisms that may adversely affect their health such as skipping meals or buying low quality food. Increases in food costs may lead to more families falling below the poverty line hence more poor people in the country.

### **3.4 Impact of food price crisis on agriculture**

The rise in food prices presents both opportunity and challenge to halving extreme poverty and hunger in Kenya. High food prices are perceived by many people as an opportunity for farmers to increase their incomes and the chance of pulling themselves out of poverty as high food prices could stimulate increased agricultural production. But in the case of Kenyan farmers this has not been the case because of volatility of output prices and high input costs. Volatility of prices has meant that farmers have to buy inputs at high prices during periods of high food prices and yet during the harvest when there is a large supply, the prices of produce drops. This implies that farmers do not necessarily reap the benefits of high prices of commodities. The food price crisis has generally had a negative effect on the population in Kenya as very few farmers have had the opportunity to benefit from the high food prices (ReSAKSS, 2009). Increasing prices and price volatility in Kenya may have resulted in low or depressed production as farmers are unable to take advantage of the rising food prices to increase production of commodities.

## **4. Policy responses to food crisis and food insecurity in Kenya**

Given the many social problems that the current food price crisis has created or may create in Kenya, several policy interventions were adopted by the Kenya Government and donor

organizations in the Country including lately direct controls of prices of major food stuffs. This has been actualized by passing a bill in parliament in June 2011. The members of parliament felt that it was necessary to protect the general population and especially the poor from impacts of sky rocketing food prices. This shows how serious the issue is in Kenya. But passing of bills to control food prices actually reverses the gains of the liberalization process and may be detrimental in the long run.

To address these issues both short to medium-term coping strategies and long-term policy measures were undertaken by the government, donors, farmers and consumers. The short-term coping strategies would protect the poor without distorting the domestic food economy. On the other hand, the long-term policy measures would allow farmers to take advantage of production incentives while also stabilizing the economy to prevent vulnerability to future crises and price variability.

#### **4.1 The short-term coping strategies include:**

**4.1.1 Provision of emergency food assistance** – This was achieved through the distribution of relief food by both donors and the government and the release of public stocks of food staples by National Cereals and Produce Board (NCPB). Most communities that faced crisis such as floods, drought among others in Kenya were assisted by the government and NGOS such as Red Cross by providing food relief and other basic needs such as tents. This year there was a massive drive for funds to feed hungry Kenyans in the northern part of the country through the program dubbed “Kenya for Kenyans” Millions were raised and used to provide needed food to the hungry by the Red Cross. To make national food security a reality, the government has provided funds to the NCBP to purchase maize from farmers at set price of Ksh 3000 per 90kg bag. NCPB is charged with the role of maintaining strategic reserves which have been raised from 4 million bags in 2010 to 8 million bags in 2011. NCPB also offers drying and storage facilities to farmers at a small fee. NCPB also plays a key role in bulk buying of fertilizers for the government’s subsidized fertilizer program.

**4.1.2 Adoption of food safety nets** to cushion the vulnerable against the adverse effects of the food price crisis. These included:

- **Food subsidies**-low price maize flour for poor areas in urban areas (specifically for Nairobi) intended to reduce the price of maize flour to urban poor people was undertaken by the government early 2010 at the height of the food price crisis. This policy did not work well because it was difficult to strictly keep the low priced flour in the areas where the poor live.
- **Cash transfer**-cash payments are made to old people who were retired with no pensions to enable them to acquire basic necessities. Policy interventions such as the ongoing state financing of targeted, economic stimulating labour-intensive projects ('kazi kwa vijana' programme) provide a safety net for jobless youth and put money into people's pockets with the intention of spurring overall demand for goods and services hence stimulating economic growth. Lately implementation of the World Bank funded project has faced some accountability issues.
- **Food for work and food for training**- mainly by NGOs in famine prone areas of the ASALs.
- **School feeding programmes**-run by World Food Programme (WFP) mainly in ASAL areas of Kenya. This programme targets poor children to improve their nutrition and help keep them in school.

**4.1.3 Adjustments in trade and tax policy measures**- the government reduced tariff rates to zero for food imports such as maize in order to encourage the private sector to import more food into the country during the drought crisis in the country. As at 2012, this policy is still in force due to the prolonged drought and famine in the country. Once the rains have come, there is need to revise these rates upward to protect domestic producers.

#### **4.1.4 Enhancement of agricultural production**

- **Agricultural input subsidies**, mostly fertilizer & seeds- under the Economic Stimulus Programme, the government of Kenya through the Ministry of Agriculture provided fertilizers and seeds to farmers. This is an effort to boost food production at the farm level. The impact of this policy is yet to be established.
- **Increase administered prices for producers**-National Cereals and Produce Board buys maize from farmers at a fixed price. Last year maize was bought at Ksh 2500 by the National Cereals and Produce Board. This policy serves two purposes: to cushion farmers against

declining prices during periods of surplus production and ensures food reserves by buying cereals from farmers.

## **4.2 The long-term resilience measures include:**

**4.2.1 Investment in agricultural research** to create a new green revolution in Kenya. In Kenya spending on agricultural research has varied from year to year but it has generally declined since 1993. The government of Kenya should allocate a higher budget to agricultural research to give local researchers the impetus to carry out research that will address teething local issues than depending on donor funds which tend to fund what the donor wants.

**4.2.2 Increased investment in key agricultural services** such as extension services, to ensure that the latest technologies are disseminated to farmers- It has been documented that one of the reasons farmers have lagged behind is non-use of new and modern technologies. There has been a disconnect between technologies generated by research and dissemination to intended users. This is because the linkage between research and extension is weak. There is need to invest in effective extension services to speed up technology uptake and hence increased agriculture production in Kenya

**4.2.3 Investment in local infrastructure** – irrigation, communications, power and transport. Currently the government of Kenya has adopted irrigated agriculture as a way of mitigating droughts and increasing food production in ASALS (Republic of Kenya, 2009). Most irrigation schemes that were non-functional have been rehabilitated and new ones have been planned. The government is also investing in infrastructure development such as roads in the rural areas to enable farmers to access input and product markets. For example the rural electrification programme has helped many rural areas get connected to the national electricity grid, which implies that now processing factories can easily be constructed in rural agricultural areas enabling value addition through processing of the farmers' produce which will improve farmers' income and welfare. Coupled with these, the government needs to provide incentives to investors to encourage them to build processing factories in rural areas. Policies that encourage investing in rural areas have been implemented by countries such as South Korea and these policies have worked well by reducing the income gap between the rural areas and urban areas.

**4.2.4 Investment in rural financial services, markets and linkages** so that smallholder farmers can buy fertilizer and better seeds, gain more control over when and where to sell their produce, and insure themselves against risks such as drought. Currently the government has formed

partnership with private sector banks through which the government can channel affordable or subsidized credit to producers. Programs such ‘Kilimo Biashara’ have enabled smallholder farmers to access credit through banks such as Equity Bank. The impacts of these strategies need to be assessed to provide valuable data to policy makers.

**4.2.5 Investment in agro-processing** to add value to primary products and to reduce post-harvest losses and improve quality- the capacity to deal with excess production when the weather conditions are favourable. This has involved increasing storage capacity to secure food security. Various initiatives have been undertaken by the government such as initiating warehousing systems for staple cereals such as maize in some parts of the country to stabilize food supply and prices.

**4.2.6 Investment in food distribution systems-** Food distribution systems between the surplus and deficit areas are poorly managed, so is the distribution of benefits along the food value chain. There is need to invest in efficient distribution systems for agricultural products to avoid a situation where there is food in one part of the country and none in some other parts.

**4.2.7 Macro-economic policy management** - Macroeconomic stability has been pivotal to the country’s economic recovery and resumption of rapid growth of the Kenya economy since 2003. This is evident in the low levels of underlying inflation, limited public sector deficits, a stable exchange rate, and low interest rates over that period. “For this reason, Kenya Vision 2030 places the highest premium on the stable macroeconomic environment the country now enjoys, and expects it to continue in the future as a matter of policy. This is the only way in which confidence among investors and ordinary Kenyans can be maintained”. A stable economic environment also works in favour of the poor who stand to lose the most in periods of high inflation (Republic of Kenya, 2007). But in 2011 inflation has been on the rise, bank lending rates have gone up from 13% to 22%. The instability in the money markets have led to the weakening of the Kenya Shilling against major currencies, which in turn have resulted in increasing commodity prices in the country. More needs to be done to manage the macroeconomic policy to achieve macroeconomic stability.

## **5.0 Conclusion and recommendations**

- Food price crisis and food insecurity are real in Kenya. Rising food prices in Kenya have an adverse effect on the poor and agricultural development as a whole.

- A number of policies both short and long term have been formulated to address these issues. As a way forward, the proposed policies and interventions should be carried out as planned and the impacts thereof analysed to enable better planning to cushion the population against food price crisis and food insecurity.
- Key stakeholders in the food sector should continue to analyse food prices and related issues and come up with strategies for early warning to avert the negative effects of high food prices in the future. The relevant authorities also need to put in place mechanisms to respond to early warning of disasters such droughts, floods and any other disasters.
- There is need to increase agricultural productivity in the country. This may require the government to expedite the implementation processes for the various policies that have been formulated. KARI, the main agricultural research Institution has adopted value chain analysis framework. This will help to identify who does what at what point of the value chain and who is likely to benefit or to bear the costs of implementing the proposed interventions. Hopefully the identification of bottlenecks and addressing the same along the value chain will improve efficiency and increase output in the value chain which may result in stabilizing or reducing food price crisis in Kenya. This calls for various stakeholders engaged in agriculture and related activities to work together to enhanced better results.

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## Appendices

### Appendix 1: Trend of domestic fertilizer prices from 2000 to 2008

Fertilizer Type	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
SSP	825	825	850	850	1,100	1,100	1,075	1650
TSP	1125	1150	1,150	1,500	1,600	1,680	1,680	3400
DAP	1250	1125	1,125	1,500	1,680	1,700	1,730	3800
MAP	1080	1050	975	1,450	1,680	1,700	1,625	3800
ASN	950	900	925	1,250	1,300	1,350	1,300	1850
CAN	875	850	900	1,250	1,350	1,350	1,375	2000
SA	700	700	750	1,250	1,300	1,300	1,125	1850
UREA	780	750	900	1,250	1,400	1,450	1,600	3100
NPK 20:20:0	1100	1075	1,100	1,350	1,600	1,600	1,630	3000
NPK 20:10:10	1050	1075	1,100	1,250	1,350	1,400	1,450	3000
NPK 25:5:5	1270	1250	950	1,250	1,400	1,400	1,420	3150
NPK 17-17-17	1200	1200	980	1,250	1,400	1,450	1,620	3150
KCL	1200	1200	1,100	1,250	1,400	1,400	1,420	2400
NPK 23:23:0	1100	1075	1,065	1,400	1,600	1,600	1,630	3050

Source: Republic of Kenya, Ministry of Agriculture, 2011.

Available: <http://www.kilimo.go.ke>

## Appendix 2: Situational analysis of the selected food commodities

**Table 1: National maize production and consumption statistics, 1990-2008**

<b>Year</b>	<b>Area (000' Ha)</b>	<b>Total production (000' metric tons)</b>	<b>Total consumption (000' metric tons)</b>	<b>Yield (ton/Ha)</b>
<b>1990</b>	1460	3030	-	2.1
<b>1991</b>	1300	2890	-	2.2
<b>1992</b>	1310	2400	-	1.8
<b>1993</b>	1407	2430	-	1.7
<b>1994</b>	1344	1755	-	1.3
<b>1995</b>	1500	3060		2.0
<b>1996</b>	1439	2699	2610	1.9
<b>1997</b>	1489	2160	2700	1.5
<b>1998</b>	1505	2214	2718	1.5
<b>1999</b>	1476	2464	2835	1.7
<b>2000</b>	1567	2322	2970	1.5
<b>2001</b>	1500	2160	3042	1.4
<b>2002</b>	1592	1052	3069	1.5
<b>2003</b>	1671	1358	3150	1.6
<b>2004</b>	1820	2455	2802	1.3
<b>2005</b>	1761	2918	3212	1.7
<b>2006</b>	1888	3248	3311	1.7
<b>2007</b>	1615	2929	3410	2.0
<b>2008</b>	1794	2370	3600	1.3
<b>2009</b>	1885	2614	3600	1.4

Source: Economic Review of Agriculture 2006, 2009, 2010 and KIPPRA& MOA, 2010

**Table 2: Rice, wheat production and consumption in Kenya, 2001-2008**

Year	Rice				Wheat			
	Area (ha) '000'	Production (tons) '000'	Consumption (tons) '000'	Average yield (tons/ha)	Area (ha) '000'	Production (tons) '000'	Consumption (tons) '000'	Average yield (tons/ha)
2001	13.2	45	238.6	3.4	131.8	70.5	315	0.50
2002	13.0	45	247.6	3.46	144.8	77.7	342	0.54
2003	10.8	40.5	258.6	3.75	151.1	57.3	405	0.49
2004	13.3	49.2	270.2	3.67	145.4	72.0	513	0.49
2005	15.9	57.9	279.8	3.64	159.5	84.1	349	0.52
2006	23.1	64.8	286.0	31.2	150.5	122.6	545	0.81
2007	16.4	47.3	293.7	28.0	104.2	354.2	-	3.40
2008	16.7	21.8	210.0	1.31	130.3	337	-	2.59

Source: KIPPRA & MOA, 2010