

ORGANIC AGRICULTURE IN KENYA: “AN INTEGRATED ASSESSMENT FOR POLICY ADVOCACY.”



Kenya Country Level Report on Integrated Assessment Project towards Promoting Production and Trading Opportunities of Organic Agriculture Products from East Africa



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ACRONYMS AND ABBREVIATIONS

ABLH	Association of Better Land Husbandry
AIDS	Acquired Immune Deficiency Syndrome
ASALs	Arid and Semi Arid Lands
CBD	Convention on Biological Diversity
CBOs	Community Based Organizations
CBTF	Capacity Building Task Force
CDE	Centre for Development Enterprises
CSD	Civil Society Organization
CSOs	Civil Society Organizations
EPOPA	Export Promotion of Organic Products from Africa
EPC	Export Promotion Council
EU	European Union
FAO	Food and Agriculture Organization of the UN
GDP	Gross domestic Product
GMO	Genetically Modified Organisms
GNP	Gross National Product
HCDA	Horticultural Crop Development Authority
HIV	Human Immunodeficiency Virus
IAP	Integrated Assessment Programme
ICIPE	International Centre for Insect Physiology and Ecology
IFAD	International Fund for Agriculture and Development
IFOAM	International Federation of Organic Agriculture Movements
IPM	Integrated Pest Management
JAS	Japan Agriculture Standards
KARI	Kenya Agriculture Research Institute
KEBS	Kenya Bureau of Standards
Kenya OA-IAP	The Kenya Organic Agriculture Integrated Assessment and Planning Project
KIOF	Kenya Institute of Organic Farmers
KOAN	Kenya Organic Agriculture Network
KOFA	Kenya Organic Farmers Association
KOOF	Kenya Organic Oil Farmers Organization
KOPA	Kenya Organic Producers Association
MDGs	Millennium Development Goals
MHAC	Manor House Agricultural Centre
MoA	Ministry of Agriculture
MOARD	Ministry of Agriculture and Rural Development
MOOF	Mount Kenya Organic Forum
MoT&I	Ministry of Trade & Industry
NBSAP	National Biodiversity Strategy and Action Plans
NCAPD	National Coordinating Agency for Population and Development
NEMA	National Environmental Management Authority
NGO	Non Governmental Organization
NIT	The National Implementation Team
NOGAMU	National Organic Movement of Uganda

NOP	National Organic Program
NSC	National Steering Committee
NSC	National Steering Committee
OA	Organic Agriculture
OAC	Organic Agriculture Committee
OSEA	Organic Standards for East Africa
PRB	Population Reference Bureau
PRSP	Poverty Reduction Strategy Paper
R&D	Research and Development
S&T	Science and Technology
SACDEP	Sustainable Agriculture Community Development Programme
SACRED	Sustainable Agriculture Centre for Research and Development in Africa
SARD	Sustainable Agriculture and Rural Development
SEE	Socio-Economic and Environment
SIDA	Swedish International Development Agency
SWOT	Strengths, Weaknesses, Opportunities and Threats
TBS	Tanzania Bureau of Standards
TOAM	Tanzanian Organic Agriculture Movement
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP-ETB	United Nations Environmental Programme-Environment & Trade Bureau
UNESCO	United Nations Educational and Social Cultural Organization
USD	US Dollars
USDA-NOP	United States Department of Agriculture – National Organic Programme
VAT	Value Added Tax

FOREWORD

Organic agriculture is one way of moving in the right direction towards sustainability through its social economic and environmental benefits. As a contrast to the modern agriculture and with its high cost technology and artificial chemicals, organic agriculture is environmental friendly and a source of sustainable livelihood. Traditional agricultural communities who followed environment friendly organic agriculture practices, ensured food security and good health to the whole family and neighborhood throughout the years.

The modern world with all the new technologies, agrochemicals, and improved seed varieties is still faced with malnutrition, hunger, and food and nutrition insecurity. Modern farming systems involve high inputs of synthetic fertilizers and biocides to support high-yielding hybrid crop varieties. This system has contributed to increased soil erosion, environmental pollution as well as loss of indigenous crop diversity and poorer health among the people. Agrochemicals certainly provide quick fix solutions but are ultimately self-defeating. In addition to this, the modern farming methods have become too costly to operate, especially in poorer countries, because increasing quantities of agrochemicals have become necessary in order to achieve satisfactory yields of saleable produce. The increasing costs of the items that farmers have to buy coupled with the low prices which they earn mean that great numbers of rural people are almost in a poverty trap caused by the farming system, its commercial pressures and marketing obligations.

The time has therefore come to learn from our ancestors and find solutions from their knowledge and experiences to face the present challenges in order to meet the basic needs of humankind. Majority of the world population are greatly concerned about the deterioration of the world's land resources and our capacity to produce food for the ever-increasing world population. It is in this context that organic agriculture has slowly been evolving as a solution to these emerging issues. Organic agriculture production seems to be operating in a system that is much closer to nature and the traditional livelihood systems of the communities in the developing world especially Africa.

Organic production apart from being suitable to marginal as well as productive environments, contributes to soil, water, and biodiversity conservation. It produces the diversity necessary for healthy nutrition, makes use of local resources and traditional knowledge and thus strengthens farming communities. A lot of farming in developing countries is considered as low or no chemical input farming though this does not mean it is always "organic by default" because some farming technologies practiced by poor people are not sustainable.

In Kenya, access to food continues to be insecure as in other African countries. The reasons for this dilemma are known to be related with social, economic, political (especially policy) and environmental factors. Both certified and non-certified organic agriculture offers considerable potentials towards food problems in developing countries. The organic agriculture sector in Kenya has developed to date without any explicit official government policy support. Past attempts by interested parties to get the government to work on this issue have not gone very far. However, the sector has benefited directly from two main government policies: Firstly, the NGO Coordination Act (1990) which basically recognizes the work of NGOs as co-workers in the rural development arena and secondly, the economic liberalization policies of the late 1980s and early 1990s, which created an environment for free enterprise with minimum government

intervention and controls in the agriculture sector. Indirectly, these created a favorable environment for the development of the organic sector and the sector has been able to exploit these policy opportunities. However, it is clear that the sector cannot develop to its full potential without government support. Among the issues that require government support are guiding policies by the government in order to facilitate the mainstreaming of organic agriculture into national planning and development.

The UNEP–UNCTAD CBTF supported project on Promoting Production and Trading Opportunities of Organic Agriculture Products from East Africa was designed and implemented from the understanding that agriculture is still the backbone of Kenya’s economy, supporting over 75% of our people’s livelihoods which makes it a major target for alleviation of poverty in the country. It is further believed organic agriculture itself has a large potential for poverty alleviation in terms of food security, trade opportunities, environmental conservation, and promotion of traditional knowledge. This potential however, remains largely unexplored in Kenya. The findings of the project which was implemented through an integrated assessment framework will assist policy makers explore options of promoting the organic agriculture in Kenya to accrue its social, economic and environmental benefits.

ACKNOWLEDGEMENTS

The National Implementation Team (NIT)¹ consisting of NEMA, the government lead agency and Bridge Africa, the national designated institution would like to express great appreciation to officials from the Ministry of Agriculture led by the PS, Dr. Romano Kiome; the Agriculture Secretary, Dr. Wilson Songa; Mr. Abner Ingosi and Mr. Ted Owango for their support, insights and audience in the course of project implementation. Other government ministries and institutions we are indebted to are the Ministry of Trade and Industry and the Kenya Bureau of Standards.

The NIT would like to acknowledge UNEP-UNCTAD CBTF for the financial and technical assistance towards the project. In particular, we appreciate the CBTF team comprising of the Mr. Asad Naqvi, Dr. Sophia Twaroq, Mr. Fulai Sheng and Ms. Anna Griggs for their immense support through insights and comments which really shaped the design and implementation of the project.

The NIT would also like to sincerely thank members of the National Steering Committee (NSC) for the important role played in guiding the development and implementation of the project. Among the organizations which were represented in the NSC include KOAN, KIOF, MoA and MoT&I, KEBS, GSI, Green Systems, and the University of Nairobi. At this juncture, we would like to single out the Kenya Organic Agriculture Network for their invaluable support and guidance throughout the project. KOAN availed very important literature and information on the organic agriculture sector in Kenya which helped a lot in documentation.

The NIT would also like to thank and acknowledge the participation and contribution of the various individuals representing the organic agriculture sector in Kenya who provided information used in the study and critiqued documents developed in the course of the project the National Stakeholders Workshops. Without you, ownership of the project through stakeholder involvement and participation would not have been achieved.

Last but not least is to our Consultants, Mr. Clive Mutunga and Dr. Francis Mwaura (University of Nairobi) and their team of research assistants especially Mr. Samuel Kibuchi, Mr. Keith Kisilu Ms. Nelly Ngichu, Ms. Angeline Wanjiru Mwangi (University of Nairobi) and Ms. Esther Kathure Magambo (Ministry of Agriculture) for the brilliant work in collecting primary and secondary data during the integrated assessment fieldwork and developing the country report. We salute you all for a job well done.

¹ The NIT was composed of Mr. Naftali Ndugire and Mr. Hudson Mukanga from NEMA; and Ms. Cecilia Kimemia and Mr. Eric Oyare from Bridge Africa.

EXECUTIVE SUMMARY

The interest in the Kenya organic agriculture IAP project was driven by the fact that agriculture is still the backbone of Kenya's economy, supporting over 75% of the population in terms of livelihoods which makes it a major target for alleviation of poverty in the country. It is believed that organic agriculture itself has a large potential for poverty alleviation, food security, trade, environmental conservation, as well as promotion of indigenous knowledge. This potential however, remains largely unexplored in Kenya due to a myriad of reasons major among them being the lack of a clear policy direction by the government to facilitate the growth of the organic agriculture sector. One of the possible reasons for lack of a policy direction is the fact that no convincing case for the sector has been brought to the policy makers. This report attempts to provide such a justification by showing how production and trade in organic agriculture has the potential of meeting some of the pressing national concerns.

The Kenya IAP project on organic agriculture rolled out in May 2005 through a collaborative effort between the UNEP-UNCTAD Capacity Building Taskforce on Trade, Environment and Development, NEMA and Bridge Africa. The latter is a local NGO active in the area of policy research and advocacy for sustainable development. The IAP project was part of the larger programme aimed at promoting production and trading opportunities in Organic Agriculture in East Africa, whose other components included background studies and regional cooperation. The assessment was carried out by Bridge Africa as the designated national institution responsible for facilitating the overall implementation of the assessment including organizing workshops, consultations with key stakeholders and final documentation. The National Environment Management Authority (NEMA) was the government lead agency responsible for providing technical support towards project implementation.

The first objective of the Kenya IAP project was to establish how Kenya's policies on organic agriculture are responsive to national environmental protection as well as to socio-economic and trade imperatives especially trade improvement and poverty reduction. The Kenyan assessment was expected to involve key stakeholders in analyzing implications of different organic agriculture policy options. The outcomes of the IAP were expected to provide the policy makers with justification on the viability of organic agriculture production and export.

The Kenya IAP project conducted a social, economic and environmental assessment of the benefits of organic agriculture in Kenya, specifically guided by the following objectives:

- To assess the current practices and situation regarding organic agriculture in Kenya, including levels of production, policies, constraints;
- To facilitate the development of a national organic agriculture policy and action plan;
- To facilitate national stakeholder dialogue among all relevant parties and authorities;
- To identify capacity building needs in the promotion of organic agriculture;
- To explore and facilitate the development of an EAC organic standard that is tailored to local ecological, social and economic conditions in order to facilitate exports to major markets.

The main analytical tool used during the IAP project was scenario analysis. This tool was used to explore the range of possible outcomes from alternative policy options on organic agriculture. The IAP process was conducted in a participatory and country driven manner through stakeholder consultations both national and regional workshops, field work and data analysis.

Expert input by UNEP and UNCTAD staff was engaged throughout the project including the review of background documents, review of analytical framework, consultative meetings and review of country draft reports besides training of the country team. The IAP report has heavily relied upon both primary and secondary data including published literature and literature from grey sources. This involved visiting key institutions to look for relevant but unpublished work, which also presented an opportunity for limited discussions with stakeholders.

The IAP process established that Kenya government in the past did not recognize the value of organic agriculture until recently. Consequently, marginal efforts were made to promote the sector through the country's agriculture policies. Instead the government appears to embrace biotechnology as the answer to perennial food shortages. The organic agriculture sector in Kenya has developed without any official government policy support although the sector has benefited indirectly from two main government policies. First, the NGO Coordinating Act (1990) which recognizes the work of NGOs as co-workers in rural development and secondly, the economic liberalization policies of the late 1980s and early 1990s, which created an environment for free enterprise. Indirectly, these two policies created a favorable environment for the development of the organic industry, and the sector has been able to establish and prove itself as an important catalyst in Kenya's development.

The assessment found out that certified and non-certified organic farming in Kenya has a development potential in the country and can contribute towards better livelihoods especially for the poor. This potential is based on broadening the options on the use of local resources, contributing to improved sustainability in terms of production and food security. The export of organic products in Kenya is also a key source of foreign exchange. It also contributes towards economic saving on agrochemicals imports. However, the IAP process noted that the full potential of organic farming in the country has not yet been fully realized due to a range of challenges that tend to disempower organic farmers. Thus, if the full livelihood potential of organic farming is to be unlocked, then a suitable package of policy options is needed to alter prevailing rules of the game as they determine interactions between actors within the organic sector. Without the attention of policymakers and other stakeholders it is not likely that the full potential of Kenyan smallholders as sustainable agricultural producers can be harvested.

The development of organic agriculture in Kenya is still facing a lot of bottlenecks stemming from inadequate agricultural policies as well as production and marketing. A key drawback for the sector in Kenya is, for example marketing because most importers are looking for organically certified produce. The organic certification is very expensive for smallholders. It is tedious with a lot of paperwork and farmer training will require financial support. The Kenya IAP project identified the main problems faced by the small organic producers in Kenya as threefold, namely: financing the shift to organic production; adoption of organic methods of production; and marketing of organic products

The IAP process established that small farmers are faced by difficulties in gaining access to formal credit for organic agriculture, since they do not have the requisite collateral to obtain credit and also due to the fact that the financial institutions do not recognize the differences between organic and conventional agriculture. The IAP process further established that farmers will be required to put in place important investments when shifting to organic production. The transitional period was identified as the most difficult one for organic producers in terms of financial needs.

The IAP process identified the key challenges facing the production and trade in organic agriculture in Kenya. The three main challenges include financing the shift to organic production, supporting the adoption of organic methods of production and improving the marketing of organic products.

The following policy-specific recommendations were made from the findings of the Kenya-IAP process:

- a) The government of Kenya (GoK) should formulate clear policies on organic agriculture. Such policies should identify mechanisms for protection of small scale producers because these are the ones facing more serious challenges compared to the large scale producers. The policies should also be designed to enable the strengthening of organic farmer associations and NGOs so that they will play a major role in the marketing of organic produce, and the dissemination of organic technologies among the small scale producers;
- b) The GoK through Ministry of Agriculture and Organic Agriculture sector stakeholders should revise the existing policies which have relevance in organic agriculture to ensure that they effectively consider the vision and mission of organic agriculture in Kenya;
- c) The GoK and OA sector stakeholders through consultations to formulate laws in favor of organic agriculture thereby enabling Kenya to comply with international regulations on organic agriculture. This will help the efforts around regional cooperation in standards development and implementation and establish easy entry to international markets
- d) National Organic Agriculture Movement in consultation with Agriculture sector ministries and parastatals like Kenya Bureau of Standards to establish a National Organic Committee (NOAC) with cross-cutting representation of government and all stakeholders in the sector. A key task for the NOAC would be to explore and spearhead the prospecting, development and eventual implementation of policies on organic agriculture.

Some of the existing policy windows to anchor organic agriculture policies is in the Vision 2030 which is a new and ambitious economic blueprint to turn country round by the year 2030. Other relevant policies include programmes and projects aimed at mainstreaming MDGs in to national development and planning. Sectoral policies under review and others under preparation such as the national food and nutrition policy also offer suitable resting places.

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1.0: INTRODUCTION

The IAP process as currently formulated incorporates a self-evaluation framework to review existing planning processes on sustainability issues. To this end, it uses modules to identify the key social, economic and environmental (SEE) issues and provides a logical structure to systematically generate information, analyze the information to create functional insight, and generate the required output. IAP has a number of objectives. Firstly, it aims to generate information and acquire strategic insights into sustainable development aspects and identify critical sustainability issues. Secondly, it seeks to identify policy options that take into account sustainability goals and objectives. Thirdly, it defines SEE sustainability criteria and indicators. Lastly, IAP builds commitment for sustainable development at different levels.

Integrated assessment (IAP) is an assessment of policies, programmes and plans including the integration of sectors for national development. The IAP framework is a multipurpose instrument for planning, implementation and research. The IAP process is a multidisciplinary consultative process to validate the findings development issues. The process involves policy makers, designated government agencies and national CSOs. IAP projects are usually designed, conceived and implemented by national teams of experts and can thus build national capacities. The IAP project report is expected to inform decision-making, enhance coordination, build consensus (though national stakeholder consultations) and save time and money.

Undertaking IAP is important because of the development trade offs between social, economic and environmental aspects of policies, programmes, plans or projects. In some arrangements, the social and environmental costs of development are much higher than the economic achievements. The aim of IAP is to try to minimize undesirable social and environmental effects by developing policies and plans that integrate environmental, social and economic considerations.

There is emerging concern in Kenya that planning at the national level has concentrated on economic issues with less attention paid to social and environmental issues. To address this shortcoming, UNEP launched an IAP initiative as a way of promoting sustainable development in the country. The objective of the project was to develop institutional capacity for integrated assessment and planning in the country by testing IAP methodologies on the organic planning process. The Kenya organic agriculture IAP project was *ex ante* as there are no existing organic agriculture policies in the country. This report therefore examines the organic agriculture planning and policy making process in light of IAP principles and methodologies. It also explains how other sectors; especially trade and environment can be integrated into organic agriculture for sustainable development.

The Kenya IAP project on organic was a UNEP-UNCTAD led project that seeks to enhance institutional capacity for integration of social and environmental considerations, as well as trade issues, into national and sectoral planning processes. The inadequate consideration of these issues in national and sectoral policy planning and coordination has contributed to environmental and social problems in the country, such as adverse human health effects, and degradation of land, water, and other natural resources. The key beneficiaries of the Kenya IAP project outputs include, Kenya government ministries especially those of planning, agriculture, trade, finance, and environment and other stakeholders including farmers, consumers, service providers, CSOs, researchers and scientists and traders and the UNEP and UNCTAD.

1.1: This Report

Since 2004 nine countries have participated in a UNEP-sponsored Integrated Assessment and Planning (IAP) initiative. The objective has been to enhance the capacity of the institutions in developing countries and transition economies to improve their policy making processes and design and implement policies that generate developmental and trade benefits, reduce poverty, and enhance environmental sustainability. This report is supposed to be an additional contribution to the UNEP-IAP initiative for the purpose of promoting production and trading opportunities of OA products from East Africa.

The report is organized within 4 chapters. Chapter 1 of the report discusses the IAP project background including the project process and the development challenges of sustainable organic agriculture in Kenya. Chapter 2 examines the organic agriculture sector in Kenya while Chapter 3 provides analytical scenarios of policy status in the organic agriculture sector. Chapter 4 provides the report's conclusions and recommendations.

1.2: Kenya country integrated assessment project of organic agriculture

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The Kenya IAP project on organic agriculture rolled out in May 2005 through a collaborative effort between the UNEP-UNCTAD Capacity Building Taskforce on Trade, Environment and Development, NEMA and Bridge Africa. The latter is a local NGO active in the area of policy research and advocacy for sustainable development. The IAP project was part of the larger programme aimed at promoting production and trading opportunities in Organic Agriculture in East Africa, whose other components included background studies and regional cooperation. The assessment was carried out by Bridge Africa as the designated national institution responsible for facilitating the overall implementation of the assessment including organizing workshops, consultations with key stakeholders and final documentation. The National Environment Management Authority (NEMA) was the government lead agency responsible for providing technical support towards project implementation.

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The Kenya IAP project conducted a social, economic and environmental assessment of the benefits of organic agriculture in Kenya, specifically guided by the following objectives:

- To assess the current practices and situation regarding organic agriculture in Kenya, including levels of production, policies, constraints;
- To facilitate the development of a national organic agriculture policy and action plan;
- To facilitate national stakeholder dialogue among all relevant parties and authorities;
- To identify capacity building needs in the promotion of organic agriculture;
- To explore and facilitate the development of an EAC organic standard that is tailored to local ecological, social and economic conditions in order to facilitate exports to major markets.

1.3: Kenya country integrated assessment approach and methodology

The IAP process was conducted in a number of systematic steps. The first step involved forming a National Implementation Team (NIT). The NIT comprised the National Environmental Management Authority (NEMA) as the government lead agency and Bridge Africa as the implementing institution. Bridge Africa, as the implementing institution, was mandated to undertake a thorough review of available literature, prepare project background papers, and carry out the actual assessment including fieldwork. The preliminary assessment results were presented at several workshops in 2006 both in Arusha, Tanzania and Nairobi, Kenya.

The main analytical tool used during the IAP project was scenario analysis. This tool was used to explore the range of possible outcomes from alternative policy options on organic agriculture. The IAP process was conducted in a participatory and country driven manner through stakeholder consultations both national and regional workshops, field work and data analysis. Expert input by UNEP and UNCTAD staff was engaged throughout the project including the review of background documents, review of analytical framework, consultative meetings and review of country draft reports besides training of the country team. The IAP report has heavily relied upon both primary and secondary data including published literature and literature from grey sources. This involved visiting key institutions to look for relevant but unpublished work, which also presented an opportunity for limited discussions with stakeholders.

At the beginning of the IAP process, the NIT identified specific social, economic and environmental (SEE) indicators to be applied in the IAP process in order to measure the impact of organic agriculture in the three sectors. The selected indicators are shown in Table 2. Fieldwork in the IAP process involved an analysis of organic farmer and farmer groups but this was limited to those involved in the production of macadamia nuts and herbs and spices. This was because the NIT felt that these two crops would offer best results for the analysis since both had very high potential for addressing the priority policy concerns. Secondly since the two crops were already being grown by small-scale farmers, they would have the requisite experience in conversion as well as the production and market related issues.

Table 1: A summary of the SEE indicators in the Kenya IAP project

Sector	Indicators
Social	<ul style="list-style-type: none"> - Number of farmers adopting organic agriculture - Number organic agriculture related employment opportunities - Improved living standards

	<ul style="list-style-type: none"> - Level of food and nutrition security - Reduction in rural to urban migration - Improved health standards - Reduction in agrochemical related diseases
Economic	<ul style="list-style-type: none"> - Increased income at the household level - Increase in investments e.g. number of new businesses - Increase in household income - Percentage increase in volume and value of exports - Farm gate prices - number of certified organic farmers and traders - Increased revenue
Environment	<ul style="list-style-type: none"> - Increase in farm-based biodiversity - Number of trees and diversity of species on farm - Improved soil fertility - Improved agricultural yields - Percentage reduction in use of chemicals - Amount of land under organic production - Reduction in the application agrochemicals

The SEE indicators were applied in a survey conducted among the stakeholders (Annex Table 1) where a questionnaire was administered to key informants and focus groups conducted to determine what they considered as the key challenges facing organic agriculture in Kenya.

1.4: Kenya – An overview

Kenya is situated on the eastern coast of Africa lying astride the equator with a total area of 582,650 km² (224,962 sq mi), including 11,230 km² (4,336 sq mi) of water. It is bordered to the north by Sudan and Ethiopia, to the east by Somalia, to the south east by the Indian Ocean, to the south by Tanzania, and to the west by Lake Victoria and Uganda. Kenya has a total land boundary length of 3,477 km (2,161 mi) and a coastline of 536 km (333 mi). The environment in Kenya consists of the following key types of natural ecosystems: arid and semi arid areas; savanna; forests; marine and coastal ecosystems; and inland freshwater and saline ecosystems. About 80 per cent of the country is arid or semi-arid land and the potentially cultivable land covers only 99,420 km² or 10 million ha or about 20 per cent of the land surface.

Kenya can therefore be classified as a dryland country with less than 20% of humid environment and over 80% of dryland (Figure 2). The drylands of Kenya approximately include savanna (8%), semi arid areas (14%), arid areas (36%) and very arid areas (22%). The high and medium potential areas in the humid zone are suitable for rained agriculture and are dominated by crop and dairy farming, occupying 31% and 30%, respectively. Table 1 shows the distribution of land in Kenya according to agricultural potential.

Table 2: Agricultural land in Kenya ('000 ha)

Province	High potential	Medium potential	Low potential	Other land	Total land area	Density (Person per sq. km)
Central	909	15	41	353	1318	282
Coast	373	796	5663	1472	8304	30

Eastern	503	2189	11453	1431	15576	30
Nairobi	16	-	38	14	68	3079
North Eastern	-	-	12690	-	12690	8
Nyanza	1218	34	-	-	1252	350
Rift valley	3025	123	12220	1515	16883	38
Western	741	-	-	82	823	406
Total	6785	3157	42105	4867	56914	49

Source: Government of Kenya, CBS, Statistical Abstract (2004)

Kenya's people encompass more than 70 tribes who have migrated here over the centuries. They include a mixture of northern Bantus, Nilotes, Cushites, Arabs, Asians and then Europeans. Kenya's population has increased rapidly by 28% from 6,416,000 in 1950 to 8,189,000 in 1960, by 37% to 11,253,000 in 1970, by 46% to 16,466,000 in 1980, by 36% to 22,400,000 in 1987, and by 24% to an estimated 27,885,000 in 1995. The population of Kenya was 28.7 million in 1999. In 2005 the population was estimated by the United Nations at 33,829,590 with a growth rate of 2.5% p.a. and the <15 year bracket accounting for 44% of the population, the 16-64 year bracket for 52% and the >65 year bracket for only 4%. The population is projected to be 36.5 million in 2010. Figure 1 shows the 2002 population density map of Kenya.

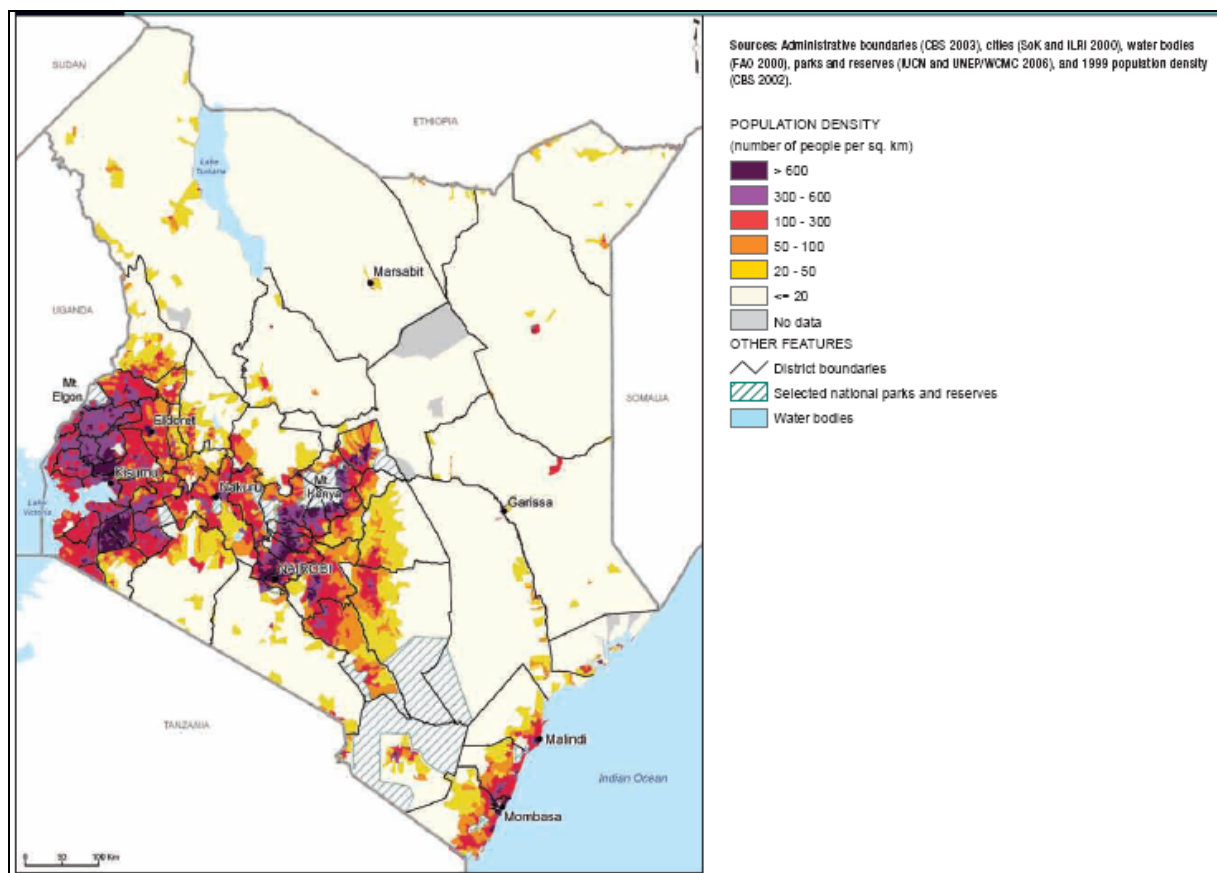


Figure 1: The population density of Kenya (2002)

Upto 78% of the people in Kenya are living in the rural areas with upto 64% of the economically active population depending on agriculture, which exerts considerable pressure on the natural resources leading to land degradation and poverty. Agriculture is therefore a key sector in Kenya

because it contributes about 25% of the Gross domestic Product (GDP), produces most of their basic food requirements, generates 60% of the foreign exchange earnings and provides about 70% of Kenya agro-based industrial raw materials and almost all employment opportunities in the rural areas.

Kenya is considered to have the most advanced agriculture in East Africa, with a relatively strong research and technology sector and delivery system, and an extensive network of rural infrastructure. According to WRI (2007) the area covered by agriculture in Kenya is about 19% of the total land surface (Figure 2). Compared with their neighbors, Kenyan farmers use more fertilizers on arable land at 35 kg/ha, though this is far below the world average at 94 kg/ha. In Tanzania, fertilizer use is 7 kg/ha which is very low and almost less than half of the average level for Africa at 18 kg/ha.

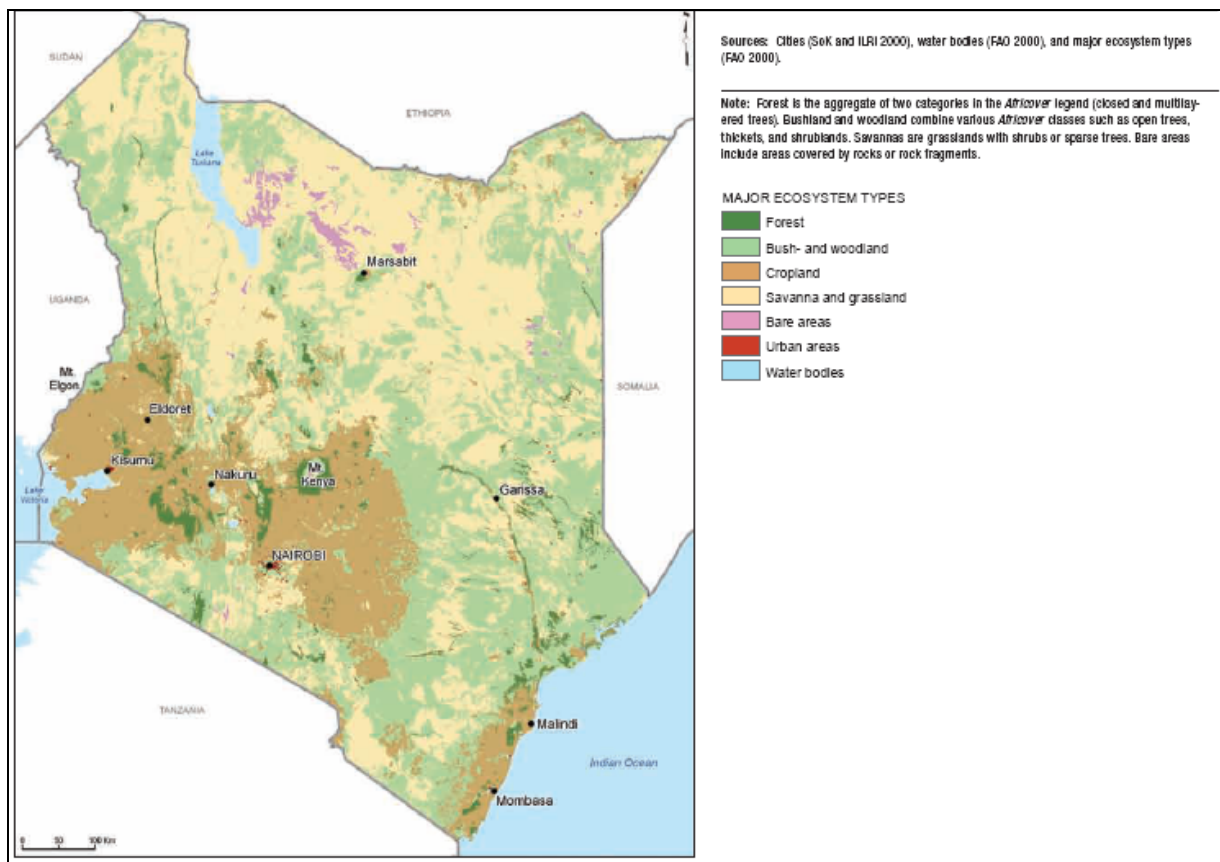


Figure 2 – Distribution of agricultural activities in Kenya (2002)

1.5: The agriculture sector in Kenya

Agriculture remains as the mainstay of the Kenyan economy with important vertical and horizontal linkages to other sectors such as manufacturing and service sector. The sector accounts for 60-65% of the country’s export earnings and 45% of government revenue (Republic of Kenya 2005). Given its importance, the performance of the sector is therefore reflected in the whole economy. The development of agriculture is also important for poverty reduction since most of the vulnerable groups like pastoralists, the landless, and subsistence farmers, also depend

on agriculture as their main source of livelihoods. Growth in the sector is therefore expected to have a greater impact on the larger section of the population than any other sector. The development of the sector is therefore important for the development of the economy as a whole.

The immediate post independence period was characterized by impressive agricultural performance which in turn spilled-over to other sectors of the economy, therefore leading to marked improvement in the well-being of the population. According to Kimenyi (2002), the impressive performance was due to a combination of factors including government policy and the fact that there was an expansion of land under cultivation. There was also extensive involvement of the government in production, distribution and marketing of agricultural product. During these early years agricultural policies were aimed at achieving equity, employment, and self-sufficiency (Kimenyi, 2002). Therefore, the government put in place incentive structures whose goal was to promote production of specific commodities in line with the stated development goals and targets. For example, policies on maize production were aimed at ensuring food self-sufficiency (Republic of Kenya, 1981 cited in Kimenyi, 2002). In addition, the government played a pivotal role in providing supportive infrastructure and quality agricultural services.

Various institutions like KFA and ICDC complemented agricultural activities in areas of credit, marketing and distribution. Clearly, the impressive agricultural performance recorded in the 1960s and 1970s and the associated poverty reduction was largely the result of complementary policies by the government. Generally, government policies had the role of lowering the transaction costs of engaging in agricultural activities. The evidence also shows that farmers were fairly responsive to the incentive structures put in place (Kimenyi, 2002). The result of the good agricultural performance, together with various government interventions in the provision of social services, translated in measurable improvements in the quality of life such as access to education and healthcare. There was, for example, a rapid increase in school enrollments (Republic of Kenya, 1999, cited in Kimenyi, 2002). Furthermore, there were noticeable improvements in the nutritional status of the population. Clearly, improvements in agricultural production had a positive impact in poverty reduction. Therefore, support of the agricultural sector paid handsome dividends in terms of poverty reduction.

The impressive performance was however not sustained and instead there were significant declines in agricultural production during the 1980s and 1990s (Republic of Kenya, 1997; Nyoro Jayne, 2001 cited in Kimenyi, 2002). According to Odame, Kameri-Mbote and Wafula (2003), agricultural production has gradually declined since the mid 1980s and more rapidly in the past five years. It declined from 4.6% in 1960 to less than 1% in the 1990s (Odame, Kameri-Mbote and Wafula 2003). Further, the sector's contribution to GNP dropped from 35% to 28% during the same period (Republic of Kenya 2000 cited in Odame, Kameri-Mbote and Wafula 2003). The production of major food crops, such as maize, rice, wheat and sorghum dropped significantly during the decline.

To some degree, the poor performance has been the outcome of factors outside the control of government and the farmers, such as bad weather, declining prices of agricultural produce, and increasing prices of agricultural inputs. However, the decline in agricultural performance has also to do with the change in transaction costs of engaging in agricultural production following government reforms. In particular, it does appear that an institutional void was created after the reforms. There is a clear need, therefore to evaluate the appropriate role of the government in the

agricultural sector. According to Kimenyi (2002), while liberalization is generally a good policy, it is not often recognized that the liberalization process involves complex institutional changes that obviously should be instituted with caution.

Agriculture is still an important sector in Kenya’s economy despite the decline. The country still is a major exporter of coffee and tea, in the world market where it also has a reputation for high quality, fruit, flowers and vegetables exports. Agricultural products account dominates Kenya’s exports, with tea and coffee accounting for 42%. In the recent past, the horticultural industry has experienced rapid growth in the country. Recent analysis showed that substantial horticulture produce is consumed locally, thus contributing to food security and employment (Odame, Kameri-Mbote & Wafula 2003). Horticulture also provides raw materials for agro-food processing industries and is a key export sub-sector. At an annual growth rate of 15–20%, the sub-sector has grown rapidly in two decades. Indeed, the foreign exchange earnings from horticulture have grown at an annual rate of 20% and now stand at about Ksh.14 billion (Odame, Kameri-Mbote and Wafula 2003). This rapid growth has been attributed to high global demand and appropriate policies (or lack of government intervention), which have encouraged private sector participation.

1.5.1: Socio-economic impacts of the agriculture sector in Kenya

The importance of the agriculture sector in the economy is reflected in the relationship between its performance and that of the key indicators like GDP and employment. Since independence, Kenya has relied heavily on the agriculture sector as the base for economic growth, employment creation and generation of foreign exchange. The sector has also been a major source of the country’s food security and a stimulant to off-farm employment.

Trends in the growth rates for agriculture, GDP and employment, show that the declining trend experienced in the sector’s growth especially in the 1990s, is reflected in the declines in employment and GDP as a whole (Figure 3). The growth rate fell from 4.6% p.a. in 1964-73 period to 1.1% per annum in 1996-2000. Between 1990 and 1995, the growth rate was a mere 0.4% p.a. In the year 2000, agriculture performed poorest: it shrunk at a rate of 2.3% and, as noted by Nyoro *et al* (2001), production of both food and export crops followed a declining pattern.

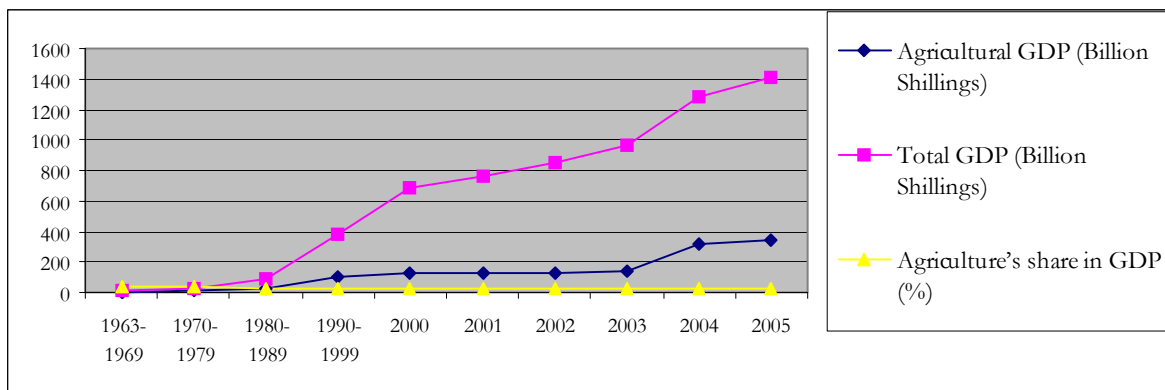


Figure 3: Agricultural GDP as a share of total GDP (1963-2005) - Source: GoK, Statistical Abstracts, (Various years)

The key constraints for sustainable agriculture in Kenya include low rainfall, use of improper technologies which are not adapted to local conditions, poor returns to agricultural products, low price of outputs relative to the price of the inputs; thin markets with price risks that undermine incentives to invest in land; and water deficits for crop growth in and out of the growing seasons. In most years, dry spells during the rainy season cause markedly reduced yield or total crop failure.

Increasing importance of small scale agriculture in the sector, coupled with its declining productivity and low incomes are a concern especially relevant to poverty reduction efforts. The small scale sector contributes 75% of total agricultural production and over 70% of the total marketed production, reflecting the increasing importance of smallholder farms in agricultural production. The small scale sector absorbs about 51% of the total labour force in the overall agriculture sector. Food production also accounts for a major share of small scale agricultural production, (Republic of Kenya 1999). The importance of smallholder agriculture as a source of livelihoods in the rural areas is therefore a major concern for agricultural and rural development. This is because of the high poverty levels in the rural areas especially among smallholder subsistence farmers.

The significant involvement of women in small scale agriculture is an important factor among measures to improve agricultural performance. Women provide 75% of the labour force in small scale agriculture and manage 40% of the small scale farms. Up to 2/3 of the female population in rural areas is engaged in subsistence farming. Despite women's significant contribution to agriculture, they face a number of constraints, especially limited access to productive resources like improved inputs, extension, and marketing facilities which limit their productivity. Institutional factors also limit women's access to financial services.

1.5.2: Environmental impacts of the agriculture sector in Kenya

Kenya's immediate development problems include persistent and increasing poverty coupled with rising population. The interaction of the poor population and the environment due to expansion of human settlement and engagement in unsustainable farming practices have impacted negatively on farmlands, landscape, forest land, wetlands and biodiversity, almost throughout the country. Expansion of human settlements have reduced the land potential, especially in the arid and semi-arid areas, making the struggle for survival hard and leading to severe over-exploitation of natural resources and destruction of critical ecosystems.

The increase in population has also resulted in massive land sub divisions in the high and medium potential areas. Massive degradation has also resulted from unsustainable land use practices such as increased application of fertilizers without use of organic manure. Agricultural intensification has also led to a number of environmental problems such as outbreak of pests and pollution of water resources from the heavy use of fertilizers and agricultural chemicals. There are also increased health problems related to the use of pesticides.

Environmental degradation and rising poverty is a major concern relevant to agricultural development. As agricultural land continues to be scarce, and rural poverty continues to increase, agricultural practices that conflict with the environment have increased. High levels of poverty in the rural areas, where agriculture is the main source of livelihoods, have significant implications for environmental sustainability. The poor people tend to engage in farming practices that

negatively affect the environment and reduce the land potential. With increased pressure on the natural resource base and the need to increase productivity, the challenge remains that of intensifying land use while enhancing the long run productive capacity of the resource base. Low productivity, with pressure on the natural resource base has led to increased migration into the ASALs with inappropriate farming practices and negative environmental consequences.

1.5.3: Agricultural policy and regulation in Kenya

The government ministries responsible for agriculture and livestock development are the lead agency in matters of agriculture in Kenya. Other major institutions involved in agricultural activities include the office of the president, the ministries responsible for environment, natural resources, planning and national development, co-operative development, research, technical training and technology, local government, energy, lands and settlement, water resources, and related state corporations and parastatals. However, a wide range of other stakeholders in the private sector and civil society are involved. These include NGOs, CBOs, companies, development partners, and local farmers among others. The government through the ministry of agriculture has over the years put in place a number of policies to guide development in the sector. These policies range from general policies on service delivery to commodity based policies. Some of the key policies are considered below.

a) Food policies

The government has enacted three policies on food security including Sessional Paper No. 4 of 1981 on National Food Policy, Sessional Paper No. 1 of 1986 on Economic Management for Renewed Growth, and Sessional Paper No. 2 of 1994 on National Food Policy. The three sessional papers outline the actions to be taken in order to promote food security in the country. Sessional Paper No. 2 is still the one in force up to now. The ministry of agriculture is however, in the process of revising this paper and converting it into a National Food and Nutrition Policy. This draft policy is at an advanced stage of development because the draft is ready and a cabinet memo for the same has been done. Section 2.24 of the draft policy is on potential for increasing production and recommends agricultural intensification by use of certified seed maize to increase production from 50% to 100%. Section 2.29 of draft policy National Food and Nutrition Policy aims at rolling a “green revolution” through the use of hybrid seeds, fertilizers, pesticides, irrigation and mechanization. This is contrary to the concept of organic agriculture because organic agriculture was largely prompted by the negative effect of the Green Revolution. Section 3.5 of the draft spells out the government’s main objective to ensure supply of adequate and quality inputs. Section 3.6 spells out the government policy to ensure supply of fertilizers to increase production. These two sections may conflict with the philosophy of organic agriculture on minimal use of agrochemicals. This policy on the overall, like the previous ones on food does not make any provisions for organic agriculture as an option for food production.

b) Extension policies

The ministry of agriculture operated without a national extension policy up to 2001. This is because extension was previously seen as the sole responsibility of government and was usually donor funded. In 2001 it was found necessary to have an extension policy to take care of the changing needs of farmers and to accommodate the growing number of extension providers. This was also to give a framework within which to accommodate extension. The National Agriculture

Sector Extension Policy (NASEP) was therefore published in 2001. Modalities for putting NAEP into effect were set out in the national agriculture and Livestock Extension Programme Implementation Framework (NALEP-IF). The key goals of NASEP were the emergence of extension systems that are demand-driven and with greater involvement of the private sector. It also focussed on the progressive commercialisation and privatisation of extension services. However, both NASEP and NASEP-IF do not make any specific provisions for organic agriculture. Further, the lead organizations in organic agriculture in the country like KOAN and KIOF are not cited among the extension providers. These are organizations such as Kenya Institute of Organic Farming (KIOF) and Sustainable Agriculture Community Development Programme (SACDEP).

c) Strategic Plan 2006- 2010

The Strategic Plan for the agriculture sector which is an implementation tool for the Strategy for Revitalizing Agriculture (SRA; 2004- 2014), sets the goals and strategies that the ministry of agriculture will pursue over the 5 year period. It is a commitment by the ministry to improve service delivery in line with the national aspirations as articulated in the Economic Recovery Strategy (ERS), 2003. The Strategy for Revitalizing Agriculture (SRA; 2004- 2014) presents strategic interventions which will transform agriculture into a competitive and commercially oriented enterprise.

The Strategic Plan has only considered some of the critical issues for social, economic and environment sectoral integration. Section 3.3.4 on conservation of the environment and natural resources through sustainable land use practices, for example, directs the ministry of agriculture to ensure dynamic equilibrium of agricultural land through sustainable land use practices and environmental conservation. The Strategic Plan does not, however, explicitly make any provisions in support for organic agriculture despite the fact that it has provisions for environmental conservation and sustainable land use.

d) Commodity policies

In an effort to promote agricultural development, the ministry of agriculture has in the recent years made a lot of progress towards formulation of commodity-specific policies. The general idea has been to provide comprehensive direction towards commodity-specific enterprise development. Some of the commodity policies under preparation include: Potato Policy (2005); Pyrethrum Policy (2005); Cotton Policy (2006); Sugar Policy (2006); Oil Crop Policy (2006); and the Nuts and Cassava Policy. A review of these commodity based policies reveal that none has made any provisions for organic production of the products. However, a number of these crops are grown without use of any external inputs. This is either due to the fact that the farmer cannot afford the inputs or because the soil is still able to support a crop.

From the foregoing, it is clear that agricultural policy in Kenya mainly revolves around the following goals:

- Increasing productivity and income growth especially for smallholders;
- Enhanced food security and equity with emphasis on irrigation to introduce stability in agricultural output, commercialisation and intensification of production especially among small scale farmers;
- Appropriate and participatory policy formulation and environmental sustainability.

e) Environment concerns

The Government of Kenya has developed guidelines to integrate environmental concerns in the agriculture sector especially in relation to management and conservation of critical ecosystems and genetic resources. The national legislation restricts the transfer of productive arable land to non-agricultural uses especially human settlement and commercial investment. The ministry of agriculture is primarily concerned with the conservation of agricultural biodiversity especially biodiversity of relevance to food production. Biodiversity conservation is undertaken on-site at the farm level, and off-site at the National Gene Bank and public arboreta. All these are reflected in the National Biodiversity Strategy and Action Plans (NBSAP) and the National Environmental Action Plans (NEAP) from which the NBSAP were derived. The Environmental Management and Coordination Act (1999) was enacted and became operational in 2000 as a measure to safeguard environment from agricultural activities. However, enforcement of this legislation has been rather wanting as population pressure and demand for environmental resources has been increasing in the recent years.

Sustainable agriculture concerns in Kenya are addressed through a wide range of programmes and projects such as integrated pest management (IPM), soil and water conservation, environment management, rehabilitation of degraded lands and conservation of flora and fauna. IPM in Kenya is coordinated by the Crop Protection Branch of the ministry of agriculture. The Government in the early 1990's also initiated the Safe Use of Pesticides Project with the main goal of ensuring safety in application and disposal of pesticides.

1.5.4: Policy gaps and weaknesses in the agriculture sector

Several key areas of policy concern in the agricultural sector can be identified from the foregoing. One of the major concerns facing policy makers and those having interests in the sector is the declining performance of the sector. The performance of agriculture, which remains the backbone of the economy slackened dramatically over in the 1980s and 1990s. This decline culminated in a negative growth in the sector that engages about 75% of the country's labour force. Such a decline implies lower levels of employment, incomes and more importantly, food insecurity for a vast majority of rural Kenyans. A sizeable proportion of women is engaged in small-scale agriculture and that women are the majority in the sector. A decline in agriculture has thus far reaching implications in terms of employment and income inequality as well as food security for the country.

Lack of a comprehensive land use policy has over time led to difficulties of access and utilization of land. Land is an important resource in agriculture in Kenya and lack of access to or ownership of land is considered one of the major causes of poverty. The scarcity of agricultural land makes the issue of land use policy a critical one. The country previously lacked a clearly articulated land policy with the result that issues like land use, management, tenure reforms and environmental protection are inadequately addressed through the existing systems. However, the government has recently developed a land policy which will hopefully address these issues in the future.

Although Kenya has a broad Science and Technology (S&T) policy constituency, it lacks a specific national policy and legal framework on biotechnology (Odame, Kameri-Mbote, & Wafula, 2003; Bett & Freyer, 2007). However, the National Council for Science and Technology

has recently is in the process of drafting a national biotechnology policy but this is yet to be finalized. Regulations and Guidelines for Biosafety in Biotechnology for Kenya were released in early 1998 and thereafter a National Biosafety Framework Policy was launched. These national documents represent major steps towards the implementation of international Biosafety Protocols such as the Cartagena protocol which is intended to safeguard countries against the risks of genetically modified organisms (GMOs).

In Kenya, no clear considerations have been made to mainstream biotechnology into national planning and development. Biotechnology is for example not mentioned in the current Development Plan (2002–2008), although it was mentioned for the first time, as a specific policy for agricultural development, in Kenya's Seventh Development Plan (1994–1996).

Some of the key issues facing the conventional agriculture sector in Kenya therefore include the following:

- Increasing agricultural productivity and incomes, especially for small-holder farmers;
- Emphasis on irrigation to reduce over-reliance on rain-fed agriculture in the face of limited high potential agricultural land;
- Encouraging diversification into non-traditional agricultural commodities and value addition to reduce vulnerability;
- Enhancing the food security and a reduction in the number of those suffering from hunger and hence the achievement of Millennium Development Goals (MDGs);
- Ensuring environmental sustainability.

Organic agriculture can offer solutions to address some of the challenges of conventional agriculture and specifically tackle some of the identified priority policy challenges that conventional agricultural sector is faced with in Kenya. Conventional agriculture may give short-term gains in production, but in most cases it is not sustainable in the long term, nor does it guarantee safe food. In particular, conventional production methods are inadequate for disadvantaged farming communities and are thus not a suitable solution for many of those who face food shortage.

1.5.5: Organic agriculture in Kenya

FAO has defined organic agriculture as one of several approaches to sustainable agriculture where almost all synthetic inputs are prohibited and soil investment and crop rotation are mandated. It aims to optimize quality in all aspects of agriculture and the environment by respecting the natural capacity of plants, animals and the landscape. The International Federation of Organic Agricultural Movements (IFOAM), defines organic agriculture as “a whole system approach based upon sustainable ecosystems, safe food, good nutrition, animal welfare and social justice”. Certified organic agriculture is considered as a defined and regulated system of agricultural production that seeks to promote and enhance ecosystem health whilst minimizing adverse effects on natural resources. During the Kenya IAP project organic agriculture was considered as the farming system that respects the biological relationships that exist in nature thereby fostering natural resource and environmental conservation.

The key goals of organic agriculture are as follows: to produce food of high nutritional quality in sufficient quantities; to interact in constructive and life enhancing way with natural systems and cycles; to encourage and enhance biological cycles within the farming system which includes

microorganisms and other plants and animals; to maintain and increase long-term fertility of soils; to promote the healthy use and proper care of water, water resources and aquatic life; to use as far as possible, renewable resources in locally organized agricultural system; to minimize all forms of pollution that may result from agricultural practices; and to maintain the genetic diversity of the agricultural system and its surroundings, including the protection of plant and wildlife habitats and ecosystems. Organic agriculture is therefore considered as a sustainable and environmentally friendly form of agricultural production currently practiced around the world and has particular advantages for small-scale farmers in Africa.

Organic agriculture in Kenya dates as far back as farming has been in the country. However, most farmers are involved in it by default not by design. According to Kimemia and Oyare (2006), a lot of farming in Africa including Kenya has limited access to external inputs due the cost factor although that does not mean that such practice is organic by default because some forms of farming are harmful to the environment. The history of formal organic farming in Kenya can be traced back to the 1980s. In 1984, University of East Anglia in the UK organized a course in organic farming at Enmesh College in England which was attended by Kenyans. The participants then returned and introduced organic farming in the country eventually establishing the Kenya Institute of Organic Farming (KIOF). Kenya therefore has two decades of formal organic farming history although the organic sector is still relatively small but growing very fast. The Ministry of Agriculture did not pioneer the development the sector in Kenya but rather the farmers, NGOs, faith-based organizations and the private sector, which have taken the initiative themselves. At the beginning, the government appeared to view the development of organic agriculture in Kenya as a contradiction of the Green Revolution being promoted in many parts of the developing world mainly with donor support.

The organic agriculture sector in Kenya has therefore mainly developed without any formal government policy support. The sector has consequently encountered a wide range of challenges during the last two decades, especially in the areas of regulation and marketing. Despite these challenges, the sector is considered to have a good potential of catalyzing the socio-economic and environment sectors especially through rural employment creation and incoming generation as well as combating food security and ensuring long-term environmental security. The aim of the Kenya IAP project was to highlight the benefits of the organic sector in Kenya, and identify the key challenges facing the sector in order for the policy makers to find ways of addressing them.

2.0: THE ORGANIC AGRICULTURE SECTOR IN KENYA

Studies indicate that organic agriculture has developed rapidly through out the world in the last few decades and is now practiced in approximately 120 countries around the world. Its share of agricultural land continues to grow even in Africa. According to a recent survey, more than 31 million hectares are currently managed organically in at least 623,174 farms worldwide (Helga & Yussefi, 2006). Studies in Africa indicate that half of all the countries have a record of certified organic agriculture. According to Helga & Yussefi (2006), Africa has committed about one million hectares to organic agriculture representing only 1.3% of the global total.

Certified organic farming in Africa is mostly geared to products destined for export with the large majority being exported to the EU, which is Africa's largest market for agricultural produce (Helga & Yussefi, 2006). The domestic market for organic produce is very small mostly because of low-income levels and an undeveloped infrastructure for inspection and certification. According to Helga & Yussefi (2006), one important growth factor in Africa has been the rising demand for organic products in western countries. Another motivation has been the new opportunities for affordable maintenance and movement of soil fertility on tropical land often threatened by degradation and erosion.

2.1: A Profile of the organic agriculture sector in Kenya

According to Kimemia and Oyare (2006), each of the three East African countries has had quite a different history since independence, which has ultimately influenced the development of their organic agriculture sectors. In Kenya, colonial land occupation was common, especially in areas of high productivity where large scale farms were developed with a focus on high input agriculture. As a result, many of these inputs were introduced to surrounding smallholder producers. This was also true in many parts of Tanzania. However during the country's socialist period, there was a strong government promotion of cooperative societies as a means of supporting farmer and many chemical inputs were introduced directly to smallholder farmers. In Uganda, colonial land occupation was never prolific and farm size, therefore, remained small, with smallholder farmers as the backbone of agricultural production. These past scenarios are still largely reflected in the East African organic agriculture sector today. In Kenya, a few large commercial farms have led the way in export-oriented organic production. In Tanzania most organic produce comes from smallholder farmers arranged in strong cooperative unions, and in Uganda organic production is dominated by smallholder farmers organized through private companies.

Formal organic agriculture in Kenya dates back to the early 1980s when the first pioneer organic training institutions were established (Bett & Freyer, 2007). During that period, a few horticultural companies such as Panafood in Naivasha started growing organic vegetables mainly for export. According to Bett and Freyer (2007), initial efforts to promote organic agriculture in Kenya were made by rural development NGOs, CBOs and faith based organization. The six key organizations involved in the establishment and development of the organic agriculture sector in Kenya included: Kenya Institute of Organic Farming (KIOF) formed in 1936; Kitale-based Manor House Agricultural Centre (formed in 1984); Thika-based Sustainable Agriculture Community Development Programme (SACDEP formed in 1992); Nairobi-based Association of Better Land Husbandry (ABLH) formed in 1994; and the Molo-based Baraka Agricultural College and the Sustainable Agriculture Centre for Research and Development in Africa

(SACRED). Most smallholders are organized in groups some of which are registered. It is estimated that KIOF has so far trained 5000 members in organic farming practices since it was established in 1986, while Manor House Agricultural Centre has so far trained over 6000 Kenyan farmers in organic farming. These institutions are mostly relying on funding from foreign donors and collaborations with national and international research institutes and universities

The geographic areas with a good potential for the establishment and promotion of organic agriculture in Kenya are widespread throughout the country but mostly in the humid zones. Table 3 shows the types of organic products that are currently produced in the different provinces of Kenya. The Central, Western and Nyanza Provinces, together with some parts of the Rift Valley, have higher potential for production and have a wider variety of crops compared to other regions. Whereas the Eastern parts of the Rift Valley and North-eastern Province have a higher potential for wild harvests, the Central Province has the most certified organic farms in terms of acreage. In recent years, a new form of organic farming has emerged mainly from the dry land zones which constitute over 80% of the country. Two examples include *Aloe* farming and production of gum Arabica from the dry land *Acacia* trees. Such nature-based enterprises are bound to transform the local economies in the ASALs with good conservation dividends in those area most of which are grappling with widespread problems of environmental degradation.

Table 3: The types of organic foods in Kenya

Regions (Provinces)	Non-certified Organic Products	Certified Organic Products
Nairobi	Processing of dried fruit	Processing of cold pressed oils Processing of vegetables
Central	Fruits - avocados, mangoes, passion, apples, guava, pineapples, pawpaws. Coffee, vegetables (both exotic and indigenous), potatoes (Irish and sweet), water melon sweet melon, green peas, ginger, green pepper, okra.	Avocadoes and mangos (in-conversion), coffee, vegetables (baby vegetables and salad vegetables), dried fruit, bird's eye chili. Cane fruit.
Nyanza	Bananas, fruits, ground nuts, sesame, sugar cane, chilies, sorghum, millet,	Birds-eye chilies
Rift Valley	Honey, tea, fruits, aloe, gum arabica	Honey, black & herbal tea, dried culinary herbs and spices, essential oils, cold pressed oils, nutraceuticals, vegetables (baby vegetables and salad vegetables).
Eastern	Vegetables, fruits (mangos, papaws and oranges), cassava, millet, sorghum, amaranth, medicinal plant products	
North Eastern	Aloe, gum arabica	Essential oils
Western	Indigenous vegetables: amaranth, spider plant, saghert,	Pineapples
Coast	Cashew nuts, ground nuts, turmeric, ginger	Natural craft products as certified NTFP ² by FSC

Source: KOAN 2005

² Non Timber Forest Products, Forestry Stewardship Council certification and labelling

Some of the small-scale organic farmers formed a national unifying association, the Kenya Organic Farmers Association (KOFA). While the larger companies and commercial farmers most of whom are already in the export market have also organized themselves into the Kenya Organic Producers Association (KOPA). In 2004 the Kenya Organic Agriculture Network (KOAN) KOAN was formed and mandated to be the umbrella body representing all organic agriculture organizations in Kenya, to help organize the sector and champion its course.

The government of Kenya appears to have started appreciating the role of organic agriculture in the country and is now participating in its development, though no tangible policy framework has so far been developed. Since the 1998, some government programmes have been introduced to provide support for farmers reverting to organic management strategies. This includes the establishment of extension services and demonstration farms. Kenyan universities are now also taking organic agriculture seriously with more agriculture, environment and natural resources management students increasingly undertaking research and writing theses on aspects of organic agriculture. Currently, Egerton University is developing a curriculum for a course in organic agriculture. This shows the appreciation of organic agriculture in academic circles.

The organic sector in Kenya is therefore still considerably small by international standards but it is growing very fast. In 2003, the total production area was 494 ha representing only 0.002% of the total agricultural land (Hine & Pretty, 2006; UNEP-UNCTAD, 2006). Recent studies have indicated that the coverage is about 185,485 Ha which is approximately 0.69% of the total arable land (Bett & Freyer, 2007; Hine & Pretty 2006). So far about 30,000 farms have changed over to organic cultivation methods (IFOAM & Fib 2006, cited in Bett & Freyer, 2007).

2.1.1: Standards and Regulations for Organic Agriculture in Kenya

According to UNEP-UNCTAD (2006), East Africa has previously relied heavily on external standards for certification and regulation of organic production and exports. Initially, all certified organic production was mostly certified either according to the EU regulation 2092/9, the US National Organic Program (NOP), or the organic standards of Japan Agriculture Standards (JAS). The direct use of these standards in East Africa has been very problematic due to stringent requirements. It is therefore quite natural that East African stakeholders have been looking for an organic standard that is better adapted to their situation. By 2005 there were several public or private organic standards in East Africa. These included: one private sector standard by Go-Cart and NOGAMU in Uganda; one working draft from the TBS and a private standard by Tanker in Tanzania; and two private sector standards by KIOF and KOAN in Kenya UNEP-UNCTAD (2006).

The Kenya Bureau of Standards (KeBS), eventually entered the arena and formed a “Technical Committee on Organic Foods” whose remit was to develop a set of organic standards for Kenya. KeBS is a statutory governmental organization that develops national standards in all sectors (Kimemia & Oyare, 2006). The KeBS organic standards and guidelines (DKS 1928:2004) were developed in a participatory manner and eventually gazetted in January 2006. It is expected that the application of national standards for organic agriculture will open the door for the registration and accreditation of other private standards in order for them to engage in local certification (UNEP-UNCTAD, 2006).

In recent years, the three East African countries have come up with one organic standard for East African (OSEA). The standard was developed through a public-private partnership of East African businesses, government bureaus, organic movements and certification bodies, in cooperation with the UNCTAD, UNEP and IFOAM as well as GROLINK and EPOPA. In this way, the spirit of cooperation through the organic sub sector has found its way in the region. It is expected that the standard, once finalized, will boost organic trade and market development in the region, define a common vision of organic agriculture in East Africa, raise awareness about organic produce among farmers and consumers, facilitate training and certification, and create a unified negotiating position that should help East African organic farmers win access to export markets

2.1.2: Certification

Organic products have no outright distinction from conventional products especially at the market. Therefore, organic products require strict inspection right from when the product is being produced and processed. Organic marketing agents have therefore established an inspection system to which the organic farmers wishing to market their produce as organic must apply for inspectors to inspect their production systems, write a report and have another independent third party give a certificate of organic production after studying the inspection report. This is a guarantee process for consumers to know the product is really organic. The organic product must be accompanied by the certificate of organic production all the time or be labelled organic, with the label of the certifier, UNEP-UNCTAD (2006).

There are three reasons why certification and mandatory regulation is necessary in organic agriculture. Firstly, is the cultivation of a respectable and credible image for the sector? Secondly, is for the certification to serve as an instrument for the development of the local market, and finally as a tool for assisting organic producers to access export markets through equivalence agreements. Organic produce generally sells at premium prices in overseas markets and wins higher profits for farmers. There are now over 70 countries that have home-based organic certification systems. Asia has 117 certification bodies, 104 of these based in China, India and Japan UNEP-UNCTAD (2006). Most Latin American countries have their own domestic certification bodies. However, organic certification services have not yet been fully established in many other parts of the world (Kimemia & Oyare, 2006). In Africa, organic certification is mainly organized under participatory guarantee systems whereby an Internal Control System (ICS) operated by a farmers' group is linked to an exporter, who holds the organic certificate. Currently, East Africa leads the continent in that kind of certification.

The cost of certification remains one of the most contentious issues in organic agriculture both for small scale farmers and the commercial operators. The solution to this problem will be the creation of government institution with mechanisms for the provision of affordable inspection and certification services. In this endeavor the Conservation Agriculture Trust of Kenya (CATOK), a non-profit trust duly registered under Trustship Act of Kenya was formed with the aim of assisting farmers and agricultural exporters access the services of internationally recognized organic inspectors and certification bodies within the recognition of FAO, IFOAM and EU.

In 1997 ABLH, in collaboration with Soil Association began providing certification services. However, after three years the collaboration came to an end. In 2001, ABLH approached the UK-based Organic Food Federation (OFF) to continue with the project, which they accepted, but the work never took off (Kimemia & Oyare 2006). Through an initiative of the ICIPE, AfriCert Ltd was formed in 2003 to carry out certification services in the country. AfriCert has achieved ISO 65 accreditation, which is one step towards getting international recognition for its organic certification. Some of the other certification organizations or agencies still active in the Kenyan market include the Soil Association (SA-UK) and Ecocert (France).

One of the key limitations of certification of organic production in East Africa is the cost. Local certifiers are charging Kshs 35,000 per year per producer which is quite a high call especially for the small scale producers. The other challenge is the long time taken for production unit to be declared organic with the conversion from chemical to organic production taking between 2-3 years.

2.1.3: Market

Market opportunities for the products of organic agriculture can be categorized into both international and domestic categories. Both markets are growing and are expected to continue growth in the foreseeable future. In 2005 the global market alone was estimated at USD30-32 billion dollars, an increase from USD27 billion in 2004 (UNEP-UNCTAD, 2006).

(a) International market

Studies of the global organic market have shown that the UK market, which is the second largest within the EU is also one of the most dominant for East Africa (UNEP-UNCTAD, 2006). The Netherlands with a medium size EU market is also a very important vehicle for East Africa. The US market which is the biggest in the world, has a low impact in East Africa due to long distance and strong competition from Latin America. Canada with sixth largest world market has a strong interest in direct imports from developing countries.

According to UNEP-UNCTAD (2006) and Bett and Freyer (2007), export of organic products from Kenya has been taking place for the last two decades. This mainly consists of vegetables and fruits produced by large scale farms. In 2005, between 2,200 to 2,400 metric tonnes of organic produce worth over USD 4.6 millions was produced and exported from Kenya (UNEP-UNCTAD, 2006). Over the years, exports have diversified beyond vegetables and fruits to include other products such as essential oils, dried herbs and spices as well as products for the cosmetic and pharmaceutical industries which are more often produced by smallholders.

(b) Domestic market

Market studies for organic produce have showed that the African market has been quite small in most parts of the continent. This is due a number of factors such as lack of awareness attributed to poor marketing, low-income levels, lack of local organic standards and certification infrastructure (Kalibwani, 2004, cited in Bett & Freyer, 2007). UNEP-UNCTAD (2006) established that amongst the many initiatives in Kenya to develop organic farming there are only a few that have focused their efforts on developing and expanding the domestic markets. Kenya has almost 20 outlets where consumers can buy organic products. The City of Nairobi and its

environs alone has up to 13 outlets and the number is growing. Other upcoming markets are scattered in the main towns in Kenya. Over 50 herbal clinics scattered throughout the country are also promoting healthy eating through organic diets. Table 4 provides a summary of some of the key outlets for organic produce in Kenya and their products. Table 4 shows that majority of the outlets are currently concentrated within the upper class zones of urban areas such as Nairobi Downtown, Westlands, Muthaiga and Gigiri where the people are aware and can afford the organic products. Most of these outlets are also importing some of the products because of inadequate local supply or lack of the required product-specific certification services.

Table 4: Summary of some of the key outlets and organic products in Kenya

Outlet	Location	Organic products
Uchumi Supermarkets	Key cities including Nairobi, Mombasa and Kisumu	Fruits and vegetables, honey, herbal pharmaceuticals
Nakumatt Supermarkets	Key cities including Nairobi, Mombasa and Kisumu	Fruits and vegetables, honey, herbal pharmaceuticals
Healthy U at Sarit Centre	Nairobi	Porridge oat, honey and sunflower.
Zucchini Green Grocers at ABC Place	Westlands, Nairobi	Organic salad vegetable (lettuce) and other greens
Green Dreams Organic Shop	Gigiri, Nairobi	
Organic Green Grocers based at the Mobil Plaza	Muthaiga, Nairobi	Salad vegetable and other conventional green groceries
Green Corner	Highridge and Yaya Centre, Nairobi	Fresh fruits and vegetables, dairy, eggs, frozen meats, dried and canned items, spices.
Juja Organic Market	Juja Town	Fresh fruits, dried fruits, vegetables, herbs, spices, tubers, squash, and vegetables, nuts, porridge powders, <i>Chapati</i> flour, herbal teas, body care products, honey, arrowroots, oranges, amaranth grains, garlic, ginger and sweet potato.
Biosafe Technologies	Juja Town	Mushroom
Bridges Organic Health Restaurant	Nairobi Downtown	Fresh vegetable and fruit juice cocktails, dietary fiber, vitamins, minerals, oils, vegetable soups, and traditional Kenyan dishes made with whole grain and organic ingredients.

The most common types of organic produce in the local market include: indigenous vegetables, especially “Sukuma wiki” (kales) and cabbages; French beans, runner beans, mange tout, fruits and salads; tea including hibiscus tea, jam, and macadamia nuts and oils. However, the best trade opportunities concern high value and value added products including organic honey, coffee, nuts

and oil seeds, fresh vegetables, herbs and spices, essential and pressed oils, indigenous plant materials and flavorings such as vanilla, fragrance, cosmetic and body care products and nutraceutical materials.

2.2: Socio-economic and environmental impacts in Kenya

The Kenya IAP project established that there are limited studies undertaken in Kenya to effectively assess the specific socio-economic and environmental impacts of organic agriculture in the country according to the specific SEE indicators developed by the NIT for the Kenya assessment. The IAP project could not get enough secondary data to effectively apply the SEE indicators in order to generate a reliable country impact profile. However, using the feedback from impromptu chats in the field and discussions with key informants as well as findings from other studies especially Kimemia and Oyare (2006) and GTZ-SUSTAINET (2006) several generic SEE impacts for Kenya were identified as follows:

2.2.1: Social impacts

- ***Production of cheap and healthy food*** - According to Kimemia and Oyare (2006) a study of Mirichi Organic Farmers Association in Kenya established among other things that organic farming is a cheap option towards food security as farmers do not need to buy expensive synthetic inputs. They rely on local resources like compost that is produced on the farm. Organic farming also yields healthy foods and is both ecologically friendly and resilient. An assessment of some farms under the association showed that the maize crops were able to withstand moisture stress more than those of conventional farmers.
- ***Enhanced family involvement in agriculture*** - According to Kimemia and Oyare (2006), the study of Mirichi Organic Farmers Association also showed that organic farming quite often involves the entire family. Children are more involved in raising small stock like rabbits and chicken while women work more on kitchen gardens. Other activities like horticulture are done in togetherness. Kimemia and Oyare (2006) concluded that organic agriculture will not only ensure food security but also promote participation by all family members in production.
- ***Gender empowerment*** - Organic agriculture enables different social groups that may not have previously been involved in agricultural trade to become more involved. This is particularly true for Kenyan women who, in many cases do not have access to the inputs or credit required for cash crop farming. Organic farming is therefore a source of empowerment.
- ***Employment creation*** - Unemployment is a serious problem in Kenya with most job seekers migrating to the urban areas for formal employment. This problem of rural to urban migration including the increased upsurge of urban slums can be reduced by the organic agriculture sector through the creation of rural occupational opportunities. The Kenya IAP project established that most of the organic product outlets in Nairobi were facing a problem of inadequate supply of organic produce which is an indicator of underutilized opportunities in the rural production areas.
- ***Reliance on local inputs*** – Organic farmers in Kenya have realized the value of the inputs they readily have around them in form of manure from their animals. This is very often wasted in conventional systems. Waste plant matter from roadsides and the field boundaries is used as mulch or to make compost. At the same time, local varieties of crops, many of which are ideally

adapted to local conditions but which have been half-forgotten in the rush to adopt modern varieties are used in organic agriculture.

- ***Application of indigenous knowledge*** - An important local input in organic farming is the people's own knowledge. Local people are experts on the plants, animals, soils and ecosystems they are surrounded by and on which they depend. Instead of condemning this as superstitious nonsense, organic agriculture draws on this wealth of knowledge, and encourages local people to use it, test it, and promote what works. The widespread use of indigenous vegetables like *amaranthus* in Kenya is a good example of the application of local knowledge for the realization of traditional vegetables.

2.2.2: Economic impacts

- ***Premium price*** - Engagement with the lucrative and rapidly expanding organic foods market in Kenya especially around the city of Nairobi is a key indicator of the potential benefits of the organic sector. The economic significance of organic farming, however, spreads well beyond the premium market into numerous additional non-monetary returns accruing to the producers by virtue of their being organic.

- ***Reduced financial risk, increased profit margins and access to new markets***: Organic farming often involves substituting purchased inputs with ones that are locally available, thereby increasing the profit margin of the farmer. Organic farming also reduces financial risk by avoiding the need to take high-interest loans for purchase of agro-inputs. For many farmers, switching to organic farming often also implies opening up access to new markets that are not often readily accessible.

- ***Knock-on effect on conventional prices***: It is the 'gross earnings' rather than just the 'margin of the premium' that represent the true benefit of organic farming. The premium offered on organic products, however, has a knock-on effect on the prices offered in local conventional markets by creating competition as the local non-organic traders seek to maintain their supply base. Thus, the benefits of organic farming become more diffuse and more widespread.

2.2.3: Environmental impacts

- ***Agro-biodiversity conservation***: Maintaining agricultural biodiversity is vital in ensuring long-term food security. Field audits during the Kenya IAP project observed that organic farms exhibited great biodiversity, with more trees, a wider variety of crops, use of local varieties of seed and many natural predators controlling pests and helping to prevent disease.

- ***Improvement of soil fertility*** - Conventional farming methods rely on artificial fertilizers to maintain fertility. Organic agriculture uses a range of techniques to maintain and improve soil fertility including: organic fertilizers, mulching, cover crops, agro forestry, crop rotation and multiple cropping. Organic farming therefore helps conserve and improve the farmer's most precious resource — the topsoil. Organic farmers in Kenya use trees, shrubs and leguminous plants to stabilize and feed the soil. They use dung and compost to provide nutrients, and terracing or check-dams to prevent erosion and conserve groundwater.

- **Better pest control** - Conventional farming uses chemical pesticides to control pests. These are expensive and often result in the emergence of new and resistance pests or the resurgence of the very pests they are trying to control. Organic agriculture instead uses integrated pest management approaches involving a combination of natural enemies, crop rotations and mixtures and biological control. These methods cost less than the pesticides, and do not result in pest resurgence.

- **Controlling erosion** - Sustainable agriculture includes a palette of techniques to conserve precious topsoil and prevent it from being washed or blown away. These include using contour bunds, contour planting, check dams, gully plugs, and maintaining cover crops or mulch to protect the soil from heavy rainfall. In Kenya some farmers use the zero-tillage approach of cultivation which ensures sufficient soil cover in the farms especially at the on-set of the long rains which are predominantly torrential and extremely erosive.

- **Water conservation** - Water is scarce in Kenya and as a dry land country, drought is never far away. Organic agriculture conserves water in the soil through a variety of methods. Fortunately, many of these are the same as those used to control soil erosion. Because it conserves water and uses a variety of crops instead of just one, organic agriculture is less risky than conventional mono-cropping and it is more likely to produce food for the farm family even during a drought.

2.3: Challenges and emerging opportunities

The Kenyan government did not recognize the value of organic agriculture until recently. Consequently, marginal efforts were made to promote the sector through the country’s agriculture policies. Instead the government appears to embrace biotechnology as the answer to perennial food shortages. The development of organic agriculture in Kenya is therefore still facing a lot of bottlenecks stemming from inadequate agricultural policies as well as production and marketing. A key drawback for the sector in Kenya is, for example marketing because most importers are looking for organically certified produce. The organic certification is very expensive for smallholders. It is tedious with a lot of paperwork and farmer training will require financial support. A SWOT analysis on the organic sector was recently undertaken by Bett & Freyer (2007) and highlighted the main challenges and opportunities in the sector as summarized in Table 5.

Table 5: A summary of the challenges and opportunities facing organic agriculture in Kenya

Development issue in organic agriculture	Challenges	Opportunities
Policy	<ul style="list-style-type: none"> • Overlooks equity issues, largely neglects the small farmer in prioritizing agricultural research and setting research and development agenda. • Policies focus on the development and commercialization of cash crops destined for export. 	<ul style="list-style-type: none"> • >85% of Kenyan farmers are small scale. • Presence of a large number NGOs and CBOs promoting organic farming.
Certification and marketing	<ul style="list-style-type: none"> • Importers wish to buy organically certified Produce • High cost of certification coupled with too much paper work which local farmers are not familiar with. 	<ul style="list-style-type: none"> • Apart from export market the local market for organic produce is picking up.

3.0: POLICY ASSESSMENT

The organic agriculture sub sector in Kenya has developed without any official government policy support although the sector has benefited indirectly from two main government policies. First, the NGO Coordinating Act (1990) which recognizes the work of NGOs as co-workers in rural development and secondly, the economic liberalization policies of the late 1980s and early 1990s, which created an environment for free enterprise. Indirectly, these two policies created a favourable environment for the development of the organic industry, and the sector has been able to establish and prove itself as an important catalyst in Kenya's development.

The Kenya IAP project confirmed that there are no official policies for organic agriculture in Kenya, even though there is increasing public interest and recognition of organic agriculture. However, the government is slowly recognizing the role of the sector (MOA 2005 cited in Bett & Freyer, 2007). The government seems to embrace the biotechnology option as the answer to the perennial food problems and poverty suffered by rural farming communities. This is evidenced by the biotechnology research complex recently established and commissioned by the government in Nairobi. According to Bett and Freyer (2007), this may have come about due to a strong influence by industrialized countries. This orientation appears to set a grim picture towards Kenyan policy on organic agriculture. Since organic agriculture in Kenya is small and led by civil society organizations who work with poor and marginalized smallholder farmers, its adoption may be constrained by lack of technological support, extension services and big funding associated with the government.

In recent years some policy makers and donors have started to recognize the potential of export oriented organic agriculture as a means of generating foreign exchange and increasing incomes. Yet the broader benefits of organic farming and agro-ecology, in terms of enhancing food security, environmental sustainability and social inclusion and reducing exposure to toxic pesticides often go unrecognized or are simply underestimated.

3.1: Country Goals and Targets

The future of organic agriculture in Kenya and its impact in the social, economic and environmental sectors cannot be considered in isolation from the future SEE development goals and targets for the country. These goals are outlined in several key national and international guidelines especially the following:

- The Poverty Reduction Strategy Paper (PRSP), 2000-2003;
- The Economic Recovery Strategy (ERS), 2003;
- Sessional Paper No.6 on Environment and Development 1999;
- Vision 2030 (2007);
- Millennium Development Goals (MDGs).

a) The Poverty Reduction Strategy Paper (PRSP), 2000-2003

The PRSP has five basic components and policy objectives as follows:- to facilitate sustained and rapid economic growth; to improve governance and security; to increase the ability of the poor to raise their incomes; to improve the quality of life of the poor; and to improve equity and participation.

The PRSP was developed as a result of countrywide consultations up to grass root level which were also sector based. The PRSP attempts to highlight the development priorities for each development sector including the social, economic and environment sectors with a common goal of poverty minimization. The PRSP recognizes the importance of poverty minimization for the uplifting standards in all development sectors in the country.

b) The Economic Recovery Strategy (ERS) for Employment and Wealth Creation, 2003

In December 2002 the government launched the ERS as a vehicle for fast tracking development in Kenya. The strategy was designed to serve as a framework for employment and wealth creation. All sectors in government including the organic sector are expected to peg their development plans on the provisions of ERS. For example, in agriculture sector, the Strategy for Revitalizing Agriculture (SRA) is the implementing vehicle for ERS.

Some of the tangible gains made through the ERS with relevance to the Kenya IAP process include:

- Revenue growth from about 100bn in 2001-2002 to over 340bn in 2005-2006;
- Tourism growth by over 1.3 million visitors by 2005;
- Primary school enrolment by 7.6 million by 2005;
- Health facilities increase from 4,557 in 2003 to 4,912 in 2005;
- Introduction of the Constituency Development Fund (CDF) & Local Authority Transfer Fund (LATF);
- Percentage of roads in poor state reduced to 32% in 2005.

c) Sessional Paper No.6 on Environment and Development

The overall goal of the Sessional Paper is to integrate environmental concerns into the national planning and management processes and provide guidelines for environmentally sustainable development. The specific goals are (a) to promote maintenance of ecosystems and ecological processes essential for the functioning of the biosphere and to (b) promote the protection of biodiversity including genetic resources.

d) Vision 2030 (2007)

Kenya has in the past had two long-term policies and several 5-year development plans that have guided planning and investment. The first was Sessional Paper No. 10 of 1965 on African Socialism and its application to Kenya. The second was Sessional Paper No.1 of 1986 on Economic Management for Renewed Growth. These plans attempted to confront the country's most entrenched problems by charting a vision of how development would tackle them. Whereas the country grew by an average of 6% over the 1964-1980 period and 4.1% over 1980-1990 period, the period 1990-2002 was a period of declining per capita income with GDP growth of 1.9 % against a population growth of 2.9%.

Since 2003, Kenya has made tremendous effort to get the economy back on track through the Economic Recovery Strategy (ERS) with the GDP growth rate shooting back to 5.8 % by 2005. While Kenya fares well when compared to other parts of Sub-Saharan Africa (SSA), it does poorly compared to the middle-income countries, and especially the second-generation newly industrializing countries, such as Malaysia, Indonesia and Thailand that 35 years ago were at the

same stage of development as Kenya. To remain relevant and competitive regionally and globally, Kenya must plan for the future. It must chart a new road map, informed by past failures, build on strengths and confront the realities of poverty, unemployment and globalization. The Kenya vision 2030 lays the foundation for an economic revolution for the present and future leadership. The organic agriculture sector provides a window through which the socio-economic and environmental goals of vision 2030 can be achieved.

e) Millennium Development Goals (MDGs)

Since the introduction of the UN-MDG concept the government of Kenya brought on board all stakeholders and created awareness on the MDGs. Consequently various arms of Government have come up with programmes to specifically meet the targets of the MDGs. Different levels of achievements have so far been recorded for various MDGs especially MDG1 and MDG7 which are highly relevant to organic agriculture. In 2002, the Office of the UN Secretary- General identified Kenya as one of the eight countries in the world that are front-runners in the implementation of recommended steps for the achievement of MDGs.

Government ministries in the agriculture sector in collaboration with development partners developed “Njaa Marufuku” Kenya Programme for implementing MDG 1 to upscale poverty reduction and food security initiatives in the country. The goal of the programme is to contribute towards reduction of poverty, hunger, and food insecurity especially among poor communities in Kenya. The objectives of the programme are: - to increase food security initiatives through support to resource poor communities; to support health and nutrition interventions that target the poor and vulnerable; and to strengthen and support private sector participation in food security and livelihoods innovations.

The target beneficiaries of the programme are the extremely poor and vulnerable members from both rural and urban areas. The goal is to have them actively involved in agricultural production, through organized groups registered by relevant government authorities, mainly the Community Development Officers (CDOs). The programme has three components as follows: community driven food security improvement initiatives; community nutrition and school meals programme; and private sector food security innovations. The key areas of support by this programme are:- extension service delivery; water harvesting technology transfer; capacity building; crop and animal husbandry; small scale irrigation technology transfer; and environmental conservation. The programme is expected to give poor members of the community an opportunity to upscale their initiatives thus enabling them to meet their needs for food and also generate incomes.

3.2: Mainstreaming organic agriculture in policy, planning and development - A problem analysis

From the analysis of Kenya IAP project findings, it was possible to distinguish between the low-input, traditional (near organic) farming practices and the high input, modern farming sectors in agriculture. The IAP project focused more on the low-input, traditional farming which is mostly practiced by smallholders. The medium and large scale production is predominantly modern and is characterized by conversion from high-input and modern farming to organic farming, mainly for export markets. This distinction is important since the kind of challenges faced, and the intervention measures to be taken in the two sectors, could be quite different. However, the latter appears more capable of moving forward without great support than the former.

The Kenya IAP project identified the main problems faced by the small organic producers in Kenya as threefold, namely:

- Financing the shift to organic production
- Adoption of organic methods of production
- Marketing of organic products

3.2.1: Financing the shift to organic production

Small farmers in Kenya are facing major problems in terms of introducing new crops and technologies because they frequently require credit to cover investments, such as irrigation, and off-farm costs related, among others, to the processing and packing of organic produce. Evidence from the IAP process showed that the most important period in the shift to organic production is the transitional period, especially; the first three years after farmers start to produce organically. During that period, most farmers produce organically before certification. This stage therefore is associated with critical certification costs together with additional costs for production investments including equipment and training. These transitional period costs can be viewed as an investment that will eventually yield returns after the transitional period and can be distinguished in terms of both on-farm and off-farm costs.

a) On-farm costs

Shifting to certified organic agriculture requires a wide range of production costs. The production costs include control of weeds and pests using labor-intensive technology. Apart from production costs the shift is liable for certification costs. Organic production will therefore incur lower costs in chemical inputs and higher costs in labour relative to conventional production. This mostly leads to higher production costs per hectare in organic agriculture than the conventionally grown crops. The change in production costs mainly relate to the labor costs in organic because producers have to introduce several new tasks, such as soil-conservation and more careful management practices. Some of these measures are required in order to obtain products of higher quality.

Certification is one of the most important cost-items faced by organic farmers, especially during the transitional period. This is because farmers have most often to meet the certification fee in order to access the market. Normally, the certification cost varies depending on the certification firm. In most cases, the costs include payment for inspection which is calculated on the basis of the daily fees and the travel and living expenses of the inspectors and the certification fees. The costs will vary depending on whether the inspectors are based in the country, but with an average level of USD 500 per day for UK inspector. Table 6 gives a general picture and characterization of certification fees in Kenya.

b) Off-farm costs

The Kenya IAP project established that one of the most important off-farm costs incurred by small farmers who convert to organic production emanate from the establishment of a good monitoring system. Such a system is required by the regulation agencies as part of the certification process. The establishment of a monitoring system can involve substantial costs in terms of setting up the infrastructure. This may require the acquisition of expensive physical equipment like ICT as well as engagement of specialized human resources. In addition, a

successful monitoring system is often accompanied by intensive training and awareness creation. Such training activities impose extra costs. The marketing of most of the organic products also requires facilities where such products can be sorted, classified, partially processed and packaged before being sent to the market. In most cases individual small scale farmers are unable to produce sufficient output to keep the facilities working at full capacity. Such facilities have to also be certified by certification firms.

Table 6: A summary of certification fees for producers in Kenya

	Annual/Application fee (USDs)	Inspection fee (USDs)	Other expenses
Holdings less than 50 ha	620	500 per day for UK inspector	Transport, travel time, and subsistence allowance
		Local fee rate for local inspector	
1-100 members (e.g. growers, collectors)	2300	500 per day for UK inspector	Transport, travel time, and subsistence allowance
Each additional band of 100 members upto 1000 members	100	Local fee rate for local inspector	

Source: Author's compilation

3.2.2: Adoption of organic production methods

The successful adoption of organic production methods will depend on a number of important considerations including; technology options; access to extension services; and efficiency of the monitoring system. Many advocates of organic agriculture have emphasized that the values behind the concern over the environment are key in explaining the adoption of organic methods of production. In contrast, analysts relying on a more conventional micro economic framework argue that farmers will adopt organic technologies if the returns are higher than those obtained using conventional technologies. Interviews with stakeholders during the Kenya IAP process revealed that the attitudes of farmers towards organic production corresponded to the expectation of higher returns as the main driving force for small farmers to shift to organic agriculture.

One of the factors that may influence the adoption of new organic technologies by small farmers relates to the complexity of such technologies. If new technologies are difficult to adopt, farmers may resist applying them and may continue using the ones they already know. One of the potential problems that small farmers face in producing organically is the limited supply of technologies that are effective in solving technical problems like the control of weeds, pests and disease and that are appropriate in terms of the particular characteristics of the farmers, such as their limited access to credit.

It is important to note the fact that small farmers find organic technologies relatively easy does not mean that they do not face some important technology problems. The most significant has to

do with the need to obtain a product of good quality. Exporters and marketing firms have learned that buyers of organic products have become increasingly more demanding in terms of quality. The Kenya IAP process established that small organic farmers often have difficulties introducing new technologies because they do not have access to technical assistance of good quality. Most of them have limited or no capacity to pay for technical assistance and have to rely on public extension services that are often under-funded and of low quality. Public extension services in Kenya are usually running on a limited capacity with a limited coverage and operational problems related to budget constraints.

One of the major issues for small scale organic producers especially within associations revolves around the need to ensure that all members properly apply organic methods of production. Because visits to every association member would make the certification process too expensive, the international norms that regulate the certification of organic products allow certification firms to carry out inspections among only a sample of farmers (usually about 20%), on condition that the association sets up “internal control system” or ICS. This system is intended to control the compliance of all farmers with the proper methods of applying organic technologies. It involves unscheduled visits in addition to the annual visits of the certification agencies and the collection of detailed information about the association and its members. The capacity of organic produce associations in Kenya to organize efficient and reliable ICS is likely to be key to success as organic producers.

3.2.3: Marketing of organic products

The Kenya IAP process established that small scale farmers often face great difficulty in selling their products because they lack marketing skills and the right connections. Many of them depend on middlemen who pay them lower prices. In most cases the buyers of organic products in both international and domestic markets do not want to deal with a large number of individual small scale farmers, an alternative that would be too costly and time consuming. Thus, they prefer to negotiate with an agent who has organized the small farmers and coordinated the production and deliveries of a reasonable number of producers. In this way, small farmers have a relatively weak position in negotiations with firms because they have limited information and poor organization. Thus, small producers selling to marketing firms end up receiving relatively low prices and accepted contract terms that are not advantageous for them. Consultations with stakeholders during the Kenya IAP project indicated that all the market challenges can be easily removed using the right policy intervention.

3.4: Policy assessment, design and implementation

The choice, design, development and implementation of a policy encompasses four main phases which the Kenya IAP project took cognizance. These include data acquisition, development of initial policy, stakeholder consultation and policy implementation and evaluation. Data acquisition in the Kenya IAP project involved the collation of existing information in a structured way within the approach and methodology explained in section 2. The initial organic agriculture policy proposals presented here are mainly based on the review of available documents as well as consultations with stakeholders during the IAP process. It is expected that the actual development of policies by the government will borrow from this experience. However it is important to note that although the Kenya IAP report was engaged in quite a bit of stakeholder consultation and participation (SCP) with regard to the possible policy scenarios for

the Kenya organic agriculture sector, it is expected that the process of actual design and development of policies by the government will undertake more intensive consultations.

3.5: Best practice policy options for organic agriculture

The Kenya IAP process undertook a review of best practices in the organic agriculture sector. From this review it was concluded that an organic agriculture policy package for Kenya should recognize and make considerations for the following issues among others:

(i) Recognise the potential contribution of organic farming to agricultural policy reform and rural development by:

- giving specific consideration to organic farming at all levels of policy formulation;
- removing production constraints from organic farming;
- investigating the potential for tax credits and other means to support organic farming via the tax laws (e.g. pesticides tax, organic investment tax credits, reduced or zero VAT on organic foods);
- Building as much consensus as possible on the long term objectives for organic farming.

(ii) Strengthen the performance of organic farming with respect to environmental, social and other public goods by:

- ensuring the compatibility of organic farming and other measures, including strengthening the links with other, more targeted agro-environment measures and integrating organic farming within general agro-environment schemes;
- promoting organic farming as a preferred management option in regions of high nature value;
- encouraging targeted research and information dissemination to improve the environmental and social impacts of organic farming;
- Developing organic regulations and production standards to include specific environmental and social provisions.

(iii) Empower the consumer to actively support the changing direction of agricultural policy and in particular the contribution of organic farming, by:

- informing consumers how organic products can be recognised, what practices and technologies are acceptable in organic farming, and what benefits can be expected;
- involving consumers in standards setting and dialogue on the development of organic farming;
- improving understanding of consumer characteristics, needs and motives;
- developing a unified approach to a widely recognised common logo;
- increasing market transparency, including improved communication and avoiding confusion from intermediate and pseudo-organic standards;
- supporting the development of domestic (local, regional) markets in order to reduce dependence on exports;
- improving access of low income groups to organic products, including through public procurement for schools and hospitals;
- strengthening consumer-producer links;
- recognising and working with gender issues;

(iv) Support organic producers directly and indirectly, by:

- financial remuneration for the production of public goods within the framework of agro-environmental and rural development programmes – organic farming should be supported in accordance with its potential to achieve a broad array of environmental and other objectives, and in this context should have a financial advantage over other approaches in this area, such as integrated crop management, related to its actual environmental benefits;
- supporting advisory and extension services for organic producers, particularly during the conversion period which represents a significant learning process; and by
- enhancing technical, financial and public good performance through targeted research and information dissemination – the level of funding for research in organic farming does not yet correspond to the vision of the future role of organic farming – it should not be restricted to levels equivalent to the current share of organic land as part of a forward looking strategy;
- Encouraging risk-sharing approaches with other parts of the supply chain that do not require the full risk of conversion to and continued organic production to be borne by the producer, and to assist the producer in obtaining a fair price.

(v) Strengthen and develop regulatory systems in particular by:

- developing a national organic standard which should include non-food agricultural products such as fibres, wood, flowers and personal care products;
- increasing stakeholder involvement in standards setting and the development of regulations;
- improving links with researchers to provide a stronger scientific basis for standards;
- developing effective risk-based inspection, auditing and traceability systems through the whole supply chain to minimise the potential for fraud and food safety risks;
- examining the role of private sector accreditation systems in achieving this objective, with the potential fruitful involvement of non-government actors;
- Increasing regional and international collaboration in standards development, inspection and control.

(vi) Develop organic supply chains (covering inputs, production, processing, and trade, distribution, retailing and catering), by:

- developing comprehensive information on the sector with respect to standards, policies, production, trade and consumption statistics and market intelligence;
- improving information flows through education, technology development, research and extension;
- developing standards with respect to quality, safety, processing and criteria for the use of additives;
- establishing guidelines for sustainable and fair trade;
- increasing confidence and trust through supply chain transparency, chain agreements, risk sharing and effective control systems;
- providing financial support for the development of marketing and processing initiatives;
- addressing barriers to small-scale/on-farm processing, including reducing the negative impacts of regulations;
- targeting resources for sector development at actors with a long-term involvement in and commitment to the sector;

- Supporting human capacity building and infrastructure development initiatives.

(vii) Develop specific national policy programmes organic agriculture. Organic farming has been identified as an interesting option for overcoming a number of problems faced by conventional agriculture. Kenya should not repeat the environmental mistakes caused by high-input agriculture and could rely instead on improving the environmental and economic performance of dominant low-input agriculture, “greening” the remaining high-input agriculture and stimulating a wider spread of organic agriculture, by:

- strengthening environmental regulations related to agriculture, including enforcement and control;
- reforming current subsidy, tax and investment aids to shift support towards organic farming and away from adverse measures;
- introducing or improving existing organic farming support measures, including ensuring appropriate budgetary reservations;
- supporting institutional and human capacity building, by increasing research and education funding, developing indigenous research facilities, extension services etc. and supporting stakeholder co-operation, platform building and strengthening of organic agriculture networks, including existing international networks dealing with organic agriculture;
- encouraging development of domestic (local and regional) markets;
- developing new initiatives to meet the specific technical, financial and other needs of small producers, including the development of producer group initiatives;

(viii) Adopt an integrated, action plan approach which takes the dynamic nature of the organic sector into account, balances supply-push and demand-pull measures and reflects the specific circumstances of individual countries or regions. Such action plans should include:

- goals (vision) for the development of the organic sector;
- detailed analyses of the situation of organic farming in the specific regions and the identification of the key barriers to development;
- evaluation of and learning from experiences with similar policies in other regions;
- stakeholder participation in development and implementation of the plans through representative bodies/partnership structures with appropriate administrative support;
- realistic funding of the development process and subsequent actions;
- mechanisms to permit periodic evaluations and revisions;
- Support for the development of such action plans.

3.6: Policy considerations and options for Kenya

The organic agriculture sector in Kenya is characterized by special circumstances due to the following challenges among the producers: low labour payments, small farm structures, high proportions of the population deriving incomes from agriculture, lack of a well developed domestic market, lack of sufficient research, public information and awareness and lack of sufficient certification infrastructure. The challenges mean that Kenyan policies should be different to those developed in countries with a longer history of organic farming. Any policy intervention(s) to promote production and trade of organic agriculture must address the main problems facing the sector. The Kenya IAP project findings identified five thematic area in the

organic agriculture sector within which well considered policy intervention are urgently required to meet the challenges facing the sector, the five thematic areas are as follows:

- Innovative financing for organic production
- Establishment of Social capital Incentives
- Promoting marketing of organic production
- Strengthening the role of NGOs in organic agriculture
- Research, information, education and public awareness

3.6.1: Innovative financing of organic production

The IAP process established that small farmers are faced by difficulties in gaining access to formal credit, since they do not have the requisite collateral to obtain credit and also due to the fact that the financial institutions do not recognize the differences between organic and conventional agriculture. The IAP process further established that farmers will be required to put in place important investments when shifting to organic production. The transitional period was identified as the most difficult one for organic producers in terms of financial needs.

The government therefore needs to come up with innovative financing mechanisms to enable small farmers to benefit greatly from the availability of short-term credit to meet the investment costs. This type of credit will especially be necessary for women producers who are frequently alone and have fewer resources of their own to meet the labour costs. A policy window for this challenge exists within the recently enacted Micro Finance Act which is expected to address the financial needs of the small scale producers. Micro finance institutions should therefore be encouraged to tailor special lending facilities to organic producers. Additionally, financial support for organic farming could be harnessed from some of the existing decentralized kitties, for example the Constituency Development Fund (CDF). With the right information and awareness, the constituency committees could set aside some funds to support organic farming in the constituencies.

3.6.2: Establishment of social capital incentives

The policy of organic agriculture should be designed to enable the strengthening of organic farmer associations so that they will play a major role in the marketing of organic produce, and the dissemination of organic technologies among the small scale producers. Such associations can contribute to monitoring of their members' compliance with organic methods of production. Such associations should also be strengthened to provide solid support during the transition period for the certification of production, including temporary and partial subsidies to cover certification costs. The support should also include training for the members. Such associations can also be used to access extension services.

3.6.3: Promoting the marketing of organic production

The marketing of organic products through farmer associations having direct contacts with buyers has so far been key in helping small farmers obtain better prices in Kenya. Long-term contracts have been the better ones because they have provided a safe market and more stable prices. The Kenya IAP project findings indicated that small scale farmers have a relatively weak negotiation capacity with market firms because they have limited information and are generally poorly organized. Consequently they have ended up receiving relatively low prices and accepting

contract terms that are not convenient for them. In addition, out grower schemes with small scale farmers may have severe limitations, including the high costs of monitoring the contracts with small scale farmers and the difficulties in appropriating the benefits of investment in the schemes due to the diversion of output to other buyers who may be paying prices that are higher than the ones agreed in the contracts. Development of an organic agriculture policy should therefore identify mechanisms for protection of small scale producers.

The domestic market for organic products in Kenya shows good growth prospects and is likely to be an attractive alternative for small scale farmers because they are easier and usually less demanding in terms of quality. Thus, awareness needs to be created about the domestic market, especially when there are good possibilities for selling to supermarkets and food chains. In addition the supply chains need to be established and strengthened probably through private-public initiatives. Organic produce could also receive support in public procurement. The government as the maker of policies should therefore be the number one buyer of organic produce. The Public Procurement Act could be utilized for this purpose.

3.6.4: Strengthening the role of organic agriculture NGOs

NGOs have played the most influential role in the emergence of organic agriculture, usually by promoting alternative models of production among indigenous farmers. They have also played a major role in supporting small farmer associations in the adoption of organic methods of production and in selling organic products. NGOs with know-how and experience in organic production should be considered preferential government partners for future organic agriculture projects, and thus targeted for financing.

NGOs should be targeted and strengthened to help small organic producers in the following ways:

- (a) The promotion of technologies which are based on local inputs and avoid the purchase of chemical inputs, thereby favoring an eventual shift to organic production;
- (b) The promotion of the organization of small farmers through the creation and strengthening of farmer associations, which have become key in the marketing of organic products and the establishment of effective monitoring systems;
- (c) The establishment of contacts with buyers in both the domestic and foreign markets. In the domestic market, NGOs should be facilitated to help farmers negotiate with supermarket chains and open local fairs specializing in organic products. In foreign markets, some NGOs could help farmers enter the fair trade market, which is increasingly demanding organic products, and
- (d) Action as a mediator between small farmer groups and government agencies.

There are several model NGOs and CBOs in Kenya from which good lessons can be learned. A good case of this is the SACDEP initiative in Thika (*Box 1*). The other case is the MOOF initiative in Mount Kenya area (*Box 2*)

3.6.5 Research, information, education and public awareness

Although many resource-conserving organic production technologies and practices are currently being used in Kenya, the total number of farmers using them is still relatively small. Lack of knowledge and poor public awareness of organic and sustainable agricultural techniques is often a limiting factor in the spread of organic production. In addition, lack of knowledge and

information about organic agriculture among consumers, government bureaucrats and other influential actors in educational and research institutions, also leads to poor appreciation of the potential for organic agriculture. During the transition period, farmers must experiment more, and so incur the costs of making mistakes as well as those of acquiring new knowledge and information. Targeted education, information and public awareness campaigns should be launched at all levels. Information on marketing opportunities should be availed to producers via affordable and accessible communication media.

Box 1: SACDEP, Thika, Kenya

SACDEP Kenya is an indigenous NGO that has worked for the 13 years with over 30,000 smallholder farmers. Based in Thika in Central Kenya, SACDEP facilitates training programmes for farmers in sustainable agriculture and community development with a focus on production, processing, agro-marketing, savings and credit schemes and is currently working with 4,500 smallholder farmers in Eastern and Central provinces of Kenya. SACDEP mainly works on a weekly basis with farmers in organized community groups of about 30 families. SACDEP operates under the 4 principles of sustainable agriculture i) Ecological feasibility, ii) Environmentally friendly, iii) Social justness and iv) Culturally acceptability. Topics covered in the SACDEP training programme include natural soil fertility management; integrated environmentally friendly weed, pest and disease protection; on-farm soil and water conservation techniques and farm level seed conservation. Farmer groups are trained by SACDEP for 3-4 years in which time productivity has been reported to increase by 50% giving the farmers food security and surplus produce to sell. SACDEP also facilitates the development of Smallholder Farmers Organization (SFOs), that together address common issues such as value adding for produce, marketing, savings and credit. SFOs in this development stage also agree on sustainable and organic norms for all the producers in the group to use. Incomes have increased as a result, up 40%, enabling farmers to meet basic needs such as paying school fees and medical expenses.

Source: Hine and Pretty (2006)

Box 2: Mount Kenya Organic Farm (MOOF)

Mount Kenya Organic Farm (MOOF) is a registered NGO which was established in 1999 with a remit for facilitate smallholder producer groups in the production and marketing of high value certified organic products. The primary objective is to improve and help to raise the living standards of Kenya’s smallholder farmers by having an assured food security for themselves and their communities, to tackle poverty and to empower the local community through the production of specialty high value organic crops for local and export markets main goal is to “Tackle Poverty among Smallholder Farmers through Organic Trade.

MOOF has formed links with the soil Science department of Nairobi University , The International Centre for Insect Physiology and Entomology-ICIPE, International tree Foundation-ITF, The University of Essex , The University of Coventry, and other groups promoting sustainable agriculture in Kenya such as Kenya Organic Oil Farmers Organization (KOOF) and overseas.

The MOOF farm demonstration garden consists of 0.25 acres and is made up of a number of raised beds growing 14 vegetable types. During the 2000-2002 drought, vegetables in the demonstration garden fared well compared to others in surrounding gardens. Pest control included the use of natural predators, and plant extracts, neem and garlic sprays. MOOF has already developed a local network of Self-Help smallholder groups which it services with training and advice on certified organic farming technologies. Farmers trained by MOOF and adopting some organic methods like soil management practices (which help to retain moisture) had a greater success story for their crops. As a result 925 farmers visited MOOF organic gardens and 300 farmers adopted at least one organic technique in food production.

MOOF has recently started the organic borage for export project, which is currently supported by USAID Development Agency through FINTRAC – Horticulture Development Centre and Earthoil. The Project targets production of certified organic Borage seeds for cold pressing into nutraceutical oil for export to Europe and the United States of America. This has contributed immensely in building up the rural economy in the project area. This organic agriculture is labour intensive and has contributed to large number of people getting employed in the sub-sector. Borage seeds fetch good farm gate price at US\$ 4.00 per Kilogram which has been negotiated and agreed upon by the buyer Earthoil Kenya Limited and Farmers Self-Help groups . Borage yields are estimated at 500-750 kg per acre and the cost of production is very minimal as compared to conventional agricultural technologies. Income generated from the 30 acres of borage of this project in 2006 estimated Kshs. 4.5 Million (US\$ 64,000) coming into the Nanyuki community (80 smallholder farmers) over a period of 7 months.

It is hoped that income generated from this project will enable people to have access to better health facilities, afford a family bicycle and have access to more protein foods from stocking Tilapia fish for their diets. Income generated from sale of organic oil crops is also hoped to provide for the money needed for the household basic needs and hence reduce encroachment to Mt. Kenya forest for charcoal burning and the felling of indigenous trees for timber and fencing posts. Borage attracts bees in large numbers and this is hoped that farmers will engage in production of organic honey , which , when marketing is well organized, will fetch good income market and help people to further add to their Borage income.

Source: Hine and Pretty (2006)

3.7: Policy development and Implementation plan

The formulation of a Kenya policy on organic agriculture should be undertaken by the government in partnership with the sector stakeholders. This may require the formation of a National Organic Committee (NOAC) chaired by KOAN with representation from relevant stakeholders. NOAC will require funding from the government and/or donors. A key task for the

NOAC would be to explore spearhead the prospecting and development of a policy on organic agriculture. NOAC should also be involved in the formulation of good mechanisms for implementation of such policy in the country. One of the proposals to be considered is the creation of a department within the Ministry of Agriculture to deal with organic agriculture.

Some of the existing policy windows to anchor organic agriculture policies are in the Vision 2030 which is a new and ambitious economic blueprint to turn country round by the year 2030. Other relevant policies include programmes and projects aimed at mainstreaming MDGs in to national development and planning. Sectoral policies under review and others under preparation such as the national food and nutrition policy also offer suitable resting places.

4.0: LESSONS, CONCLUSIONS AND RECOMMENDATIONS

This section presents the key lessons learnt during the Kenya IAP project together with the conclusions and recommendations made from the project findings.

4.1: Lessons

The following key lessons were learnt from the Kenya IAP process:

- The performance of the agriculture sector in Kenya, which remains the backbone of the economy slackened dramatically during the 1980s, 1990s and early 2000s culminating in a negative growth rate of -2.4% in 2000. As a sector that engages upto 75% of the country's labour force, such a decline implies lower levels of employment, incomes and more importantly, food insecurity for a vast majority of rural Kenyans. A decline in agriculture has thus far reaching implications in terms of employment and income inequality as well as food security for the country.
- Kenya has had two decades of a formal organic farming history although the national organic sector is still relatively small but growing very fast. The government especially the ministry of agriculture did not pioneer the development the sector in Kenya but rather the farmers, NGOs, faith-based organizations and the private sector. At the beginning, the government appeared to view the development of organic agriculture in Kenya as a contradiction of the Green Revolution being promoted in many parts of the developing world mainly with donor support.
- The organic agriculture sector in Kenya has therefore mainly developed without any formal government policy support. The sector has consequently encountered a wide range of challenges during the last two decades, especially in the areas of regulation and marketing. Despite these challenges, the sector is considered to have a good potential of catalyzing the socio-economic and environment sectors especially through rural employment creation and incoming generation as well as combating food security and ensuring long-term environmental security.
- The small scale organic farmers in Kenya are faced by difficulties in gaining access to formal credit, since they do not have the requisite collateral to obtain credit and also due to the fact that the financial institutions do not recognize the differences between organic and conventional agriculture. The farmers often face great difficult in selling their products because they lack marketing skills and the right connections. Many of them depend on middlemen who pay them lower prices. The small scale farmers have a relatively weak negotiation capacity with market firms because they have limited information and are generally poorly organized
- Standardization of organic products in the past has been mainly for export market. This was due to lack of local standards for the same and also due to lack of awareness on the part of the local consumers. There are a lot of future prospects in this direction given that Kenya organic product standards were gazetted in early 2006 and the East African Organic Standards launched in May 2007.

- The government through the ministry of agriculture has over the years put in place a number of policies to guide development in the agriculture sector. These policies range from general policies on service delivery to commodity based policies. However, a policy on organic agriculture is yet to be formulated.
- Very few policies in Kenya have made meaningful provisions for organic agriculture as an option for food security, employment creation, poverty reduction and environmental security and sustainability. The ministry of agriculture has in the recent years made a lot of progress towards formulation of commodity-specific policies such as the Potato Policy (2005); Pyrethrum Policy (2005); Cotton Policy (2006); Sugar Policy (2006); Oil Crop Policy (2006); and the Nuts and Cassava Policy. However, none has made any provisions for organic production although a number of these crops are grown without use of any external inputs because farmer cannot afford the inputs.
- The aim of the draft National Food and Nutrition Policy to re-roll out the Green Revolution by strengthening the use of hybrid seed, fertilizers, pesticides, irrigation and mechanization in order to improve food production is contrary to the concept of organic agriculture because organic agriculture was largely prompted by the negative effect of the Green Revolution.
- The National Agriculture Sector Extension Policy (NASEP) and the Livestock Extension Programme Implementation Framework (NALEP-IF) do not make any specific provisions for organic agriculture. The lead organizations in organic agriculture in the country are not cited among the extension providers. These are organizations such as Kenya Institute of Organic Farming (KIOF) and the Kenya Organic Agriculture Network (KOA).
- The Strategic Plan on the agriculture sector in Kenya does not, however, explicitly make any provisions in support for organic agriculture despite the fact that it has provisions for environmental conservation and sustainable land use.
- The country previously lacked a clearly articulated land policy with the result that issues like land use, management, tenure reforms and environmental protection are inadequately addressed through the existing systems. However, the government has recently developed a land policy which will hopefully address these issues in the future, Land is an important resource in agriculture in Kenya and lack of access to or ownership of land is considered one of the major causes of poverty. The scarcity of agricultural land makes the issue of land use policy a critical one.

4.2: Conclusions

The Kenya IAP project established that the organic agriculture sector in the country can play an important role in addressing some of the challenges of conventional agriculture and specifically tackle some of the identified priority policy challenges that conventional agricultural sector is faced with in Kenya. However, the Kenyan government did not recognize the value of organic agriculture until recently. Consequently, marginal efforts were made to promote the sector through the country's agriculture policies. Instead the government appears to embrace biotechnology as the answer to perennial food shortages.

The domestic market for organic products in Kenya shows good growth prospects. The level of consumer awareness is increasing with more people getting conscious of the values of good health that are coming from the organic sector. The domestic market is likely to be an attractive alternative for small scale farmers because they are easier and usually less demanding in terms of quality.

The development of organic agriculture in Kenya is therefore still facing a lot of bottlenecks stemming from inadequate agricultural policies as well as production and marketing. A key drawback for the sector in Kenya is, for example marketing because most importers are looking for organically certified produce. The cost of certification remains one of the most contentious issues in organic agriculture both for small scale farmers and the commercial operators. The solution to this problem will be the creation of government institution with mechanisms for the provision of affordable inspection and certification services. The organic certification is very expensive for smallholders. It is tedious with a lot of paperwork and farmer training will require financial support. The Kenya IAP process established that small farmers are faced by difficulties in gaining access to formal credit, since they do not have the requisite collateral to obtain credit and also due to the fact that the financial institutions do not recognize the differences between organic and conventional agriculture. The IAP process further established that farmers will be required to put in place important investments when shifting to organic production. The transitional period was identified as the most difficult one for organic producers in terms of financial needs.

The Kenya IAP project identified the main problems areas faced by the small organic producers in Kenya as threefold, namely: financing the shift to organic production; adoption of organic methods of production; and marketing of organic products. The challenges mean that Kenyan policies should be different to those developed in countries with a longer history of organic farming. Any policy intervention(s) to promote production and trade of organic agriculture must address the main problems facing the sector.

The Kenya IAP project findings identified five thematic area in the organic agriculture sector within which well considered policy intervention are urgently required to meet the challenges facing the sector, the five thematic areas are as follows: innovative financing for the promotion of organic production; establishment of social capital incentives; promoting marketing of organic production; strengthening the role of NGOs in organic agriculture; and strengthening research, information, education and public awareness.

4.3: Recommendations

The following recommendations were made from the findings in the Kenya IAP process:

4.3.1: Policy and regulation

- a) The government of Kenya (GoK) should formulate clear policies on organic agriculture. Such policies should identify mechanisms for protection of small scale producers because these are the ones facing more serious challenges compared to the large scale producers. The policies should also be designed to enable the strengthening of organic farmer associations and NGOs so that they will play a major role in the marketing of organic produce, and the dissemination of organic technologies among the small scale producers;

- b) The GoK through Ministry of Agriculture and Organic Agriculture sector stakeholders should revise the existing policies which have relevance in organic agriculture to ensure that they effectively consider the vision and mission of organic agriculture in Kenya;
- c) The GoK and OA sector stakeholders through consultations to formulate laws in favor of organic agriculture thereby enabling Kenya to comply with international regulations on organic agriculture. This will help the efforts around regional cooperation in standards development and implementation and establish easy entry to international markets
- d) National Organic Agriculture Movement in consultation with Agriculture sector ministries and parastatals like Kenya Bureau of Standards to establish a National Organic Committee (NOAC) with cross-cutting representation of government and all stakeholders in the sector. A key task for the NOAC would be to explore and spearhead the prospecting, development and eventual implementation of policies on organic agriculture.

4.3.2: Market development

- a) Expansion and broadening of the domestic market is necessary in Kenya, especially within the existing supermarkets and food chains. The promotion of organic produce should be strengthened by the relevant agencies such as the Export Promotion Council, KOAN and OA marketers through field days and trade fairs like the Nairobi Trade Fare;
- b) Promote the use of organic produce by supporting public procurement of such products whereby the government should be the number one buyer of organic produce. The Public Procurement Act which could be utilized for this purpose;
- c) Develop, enhance and promote the domestic markets for organic products through sensitization of consumers and publicity campaigns especially through the media. The National Organic Agriculture Committee should have this as one of its responsibilities.
- d) The GoK and development partners like UNEP, UNCTAD, FAO, IFOAM should support and strengthen the NGO's, CBOs and private businesses which are currently involved in organic farming and by offering institutional, technical and financial resources and encourage them to build linkages between producers, traders and consumers.
- e) NOAC once established should support the establishment of local mechanisms for the regulation of the organic agriculture sector through affordable and transparent inspection and certification;
- f) Government ministries involved in agriculture and trade like MoA and MoT&I and related parastatals like HCDA and EPC should document the contribution of organic products to the total volume of export agriculture produce in Kenya. This will help place organic products in the position they deserve;

4.3.3: Research, Education, and Public Awareness

- a) Strengthening of research on organic farming through research institutions such as KARI and public universities by the GoK;
- b) Targeted education, information and public awareness campaigns should be launched at all levels by KOAN, OA NGOs and stakeholders;
- c) Information on marketing opportunities should be availed to producers via affordable and accessible communication media by KOAN in liaison with MoT&I;
- d) The GoK to develop and expand organic curriculum at all levels of education system.

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Annexes:

Table 1: Summary of key stakeholders in Kenyan organic agriculture

Stakeholder Category	Activity	Description
1. Private Sector		
i) Self Help Groups/ Producer associations	Mostly involved in production of organic crops either for national and local markets or for subsistence.	<p>These include: Small Farmers Organisations, (SFOs) Community Based Organisations, (CBOs) Faith Based Organisations, (FBOs) and Farmer Groups, (FGs).</p> <p>Most of the training organizations mobilize farmers from the same area into groups commonly known as Farmer Groups (FGs) or Organic Farmer Groups (OFGs).</p> <p>Membership per group ranges between 20 to 30 farmers.</p> <p>Conservative estimates put 35,000 groups of farmers spread countrywide.</p> <p>Some groups of farmers have organized themselves into marketing units.</p>
ii) Commercial Farmers	There are a growing number of organic certified companies/ operators who produce for both the national and international markets. Some companies are growing organic vegetables, fresh and dried fruits, dried herbs and spices and some have ventured into wild harvest products.	<p>These are mainly business companies, large scale companies, certified organic and producing for export with certified outgrowers. There are certified organic medium scale companies producing for exports, some share overheads and management of exporting consignments together, i.e KOPA (Kenya Organic Producers Association). There are also a few certified organic farmer groups who have formed companies and are now exporting. There are a number of small companies who are not currently certified and are producing for local consumption.</p> <p>There are 12 certified producer companies and 4 undergoing conversion, 15 small companies producing for the local market.</p>
iii) Processors	<p>There are organic certified companies extracting essential oils from herbs, spices and cold pressed oils from high value crops and tree seeds oils, drying and semi-processing herbs and nutraceutical plant products.</p> <p>Other certified organic companies are exporting retail packed vegetable (high-care), retail packed macadamia, coffee and tea. Non-certified organic producer organizations are drying fruits and processing dried fruit, juices, jams and chutney for national & regional markets.</p>	<p>In most cases, for certified organic operators, the same companies that produce the raw materials carried out their own processing to accord with their buyers requirements. However there are companies, certified organic operators, that buy raw materials directly from small-scale producers/outgrowers and carry out the processing prior to export.</p> <p>Non-certified organic operations, supplying national and local markets, are mainly processing their own products on a smaller scale.</p>
iv) Traders and Retailers	<p>Trade in both the local and export arenas others in trading of raw and semi-processed products from primary operators.</p> <p>There are also those who deal with input supplies.</p>	<p>Some national supermarkets have recently designated organic sections in their stores, (i.e Uchumi Hyper and Nakkumatt supermarkets). All of these products carry organic labeling but not all certified.</p> <p>Some green grocers also stock organic products, Healthy U, Green Corner Shop, ABC Place, among others. Natures Organics together with a group of farmers have started Box Schemes in Nairobi and outskirts. Organic Marketers Ltd, Natural Food Marketers and Find us In Africa, buy and sell organic</p>

Stakeholder Category	Activity	Description
		<p>products.</p> <p>EM (Effective Micro- organisms) supply EM products, BIOP Ltd is a company that supplies Organic fertilizers and pest and disease control products, as does Saroneem Products. Minjingu Phosphate supply rock phosphate, other pesticide manufactures produce biological controls.</p> <p>Some of these food and non-food products carry organic labeling, although most are not certified.</p>
v) Certifiers and inspection agencies	Certification of organic products for regulated export markets. There is currently no certification facility for the national market – this is expected to develop over the latter part of 2005 .	There are five international certifiers that are operating in Kenya; IMO, BioSwiss, Ecocert, USDA N.O.P – (National Organic Programme) and the Soil Association, mostly using nationally based inspectors. Africert and Encert are two national companies that have been formed to start organic certification for the national market. Both partner with international accredited certified companies. They are developing their services to offer multiple certification (Encert - organic, fair-trade, sustainable wild harvest. Africert is already providing Europgap inspections and developing organic inspection services). Both companies are in early stages of development.
2. Civil Society Organisations		
i) Training and research Institutions	<p>Training in organic agriculture techniques.</p> <p>Research for organic pest and disease controls.</p>	<p>There are 30 organisations offering organic agriculture training; two offering diploma courses, four offering certificate courses, the rest offer short courses. The diploma course takes two years, diploma one and a half years and short courses between one week to two weeks.</p> <p>ICIPE (International Center for Insects Physiology and Ecology) carries research on organic pest and disease remedies and, through BIOP Ltd, has developed a range of organic fertilizers and pesticides.</p>
ii) Other Promoters	These promote organic agriculture in community mobilization, capacity building and networking.	These comprise of NGOs, CBOs that have a component of organic/sustainable agriculture in their programmes. The Environment Liaison Centre International (ELCI) is hosting KOAN over its incubation period and is an advocate of organic farming and natural products development. It produces a quarterly periodical, Eco-forum, which promotes environmental (and organic) issues..
3) Government		
i) Kenya Bureau of Standards (KBS)	Development of the Kenya Guidelines for Organic Production, Processing and Packaging.	The standard has reached the public review stage where the public has been given a chance to comments. It is planned that it will be operational by August, 2005.
ii) Ministry of Agriculture	Very little contribution to the development of the organic sector to-date.	Due to the lack of exposure to the benefits of Organic Agriculture and the commercial aspects of organic farming, government reception to the movement and the growing industry is currently luke warm, as far as the ministry heads are concerned. However, the interest from the government

Stakeholder Category	Activity	Description
		extension service is over whelming. At the district level there are increasing requests for KOAN and organic training organisations to provide training in organic techniques certification & marketing to extension officers.
iii) Public research institutions and Universities	Training and Research on organic agriculture.	Egerton University has recently included an organic agriculture module in their agriculture diploma course curricula. Jomo Kenyatta University of Agriculture and Technology (JKUAT), in collaboration with KIOF and a university in the UK, is developing curricula for a diploma and a degree courses in organic agriculture. Kenya Agricultural Research Institute (KARI) has carried out research on green manure and compost analysis. The Kenya Tea Foundation and the Kenya Coffee Foundation have established field trial for both organic coffee and tea. The Kenya Pyrethrum Board, has received orders for organic pyrethrum and intend to begin conversion to organic certified status this year.
4. Development Partners	Facilitate implementation of projects.	Development partners who have recently or are currently operating in Kenya include; Hivos, Misericio, Sida, FAO, DFID, GTZ, Biovision, Rockfeller, UNDP, CDE, CBI and HDRA among others.

Table 2: Certified organic production in Kenya

Company Name	Products	Acreage (certified)	Acreage (Conversion)	Certifiers	Main Markets	Employees	Out growers
Mr Pineapple	Pineapples	80 Ha	121 Ha	IMO	Germany	Approx 120	60 (2-15 acres each)
Three palm Garden	Chilies	171 Ha		BioSwiss	USA	3	40 outgrowers
Sunripe	Beans, Peas, Sweet corn, chillies, Avocados, Passion fruits, Rasperberries	190 Ha		Soil Association and Ecocert	UK and Europe	1800	3 commercial farms, 45 outgrowers.
Vitacress	Salad and baby vegetables	42 Ha		Soil Association	UK	Over 700	None
Mt Kenya Herb	Ashgwanda, Astragalus, calendula, Catnip, Red clover, Valerian.	8 Ha		Eco-cert	EU	40	
Meru Herbs	Chamomile, Carcade, Lemon Grass, (Pawpaws, mangoes, guava, sweet	62 ha	120 Ha	Soil Association	Belgium, Japan, Austria, Italy, Germany	64 workers	43 Certified, 123 (conversion)

Company Name	Products	Acreage (certified)	Acreage (Conversion)	Certifiers	Main Markets	Employees	Out growers
	bananas, (not for export))						
Cinnabar Green	Essential Oils and dried herbs) Geranium oil, Borage seeds, Lemon grass, Rosemary, Corriander, cumin Pink pepper,	40 ha	12 Ha	Ecocert	Germany England	37 permanent 20 contracted 60-80 casual employees Harvesters – 60-80	Outgrowers – 55+
Africa Botanica	Leleshwa, (<i>Tachonanthus camphorates</i>), Aloe secundra, pepper tree oil, lippia javanica	100,000 Ha for wild harvest.		Ecocert	Europe/ US	23 full time 70 part time	8-10 technicians 35 full time staff, 70 additional women harvesters
Finlay	Tea	64 Ha		Soil Association	UK	Approx 1,400	None
Kisima (other KOPA certified members)	Fresh Vegetables, dried herbs and spices (Paprika, Birds eye chillies, taetes, Echinecea purpea, coriander, calendula, borage, safflower	80,070 has (42 ha in intensive production, rest is for honey production)		Ecocert	UK	70 permanent, 30 temporary	150 wild honey harvesters.
Kenya Nut	Ground nuts, Macademia nuts, cashew nuts, tea, coffee	818 Ha		Soil Association, USDA N.O.P - National Organic Programme,		2500	10,000 out-growers
Kigwa	Coffee	36		Soil Association			None
Arbor Oils	Gums and resins, tree seed oils, cold pressed		Conversion starts by end of 2005 of over 1,500 km2.	Ecocert	Europe and the US	5 full time	Over 5,000
MOOF	Borage		400 ha (plus 200 ha is 6	Ceres			400, plus another 200 in 6 months

Company Name	Products	Acreage (certified)	Acreage (Conversion months)	Certifiers	Main Markets	Employees	Out growers
Earthoils – Kenya Ltd	Cold pressed oils	4 ha		Ecocert	Europe and the US	28 full time	Over 2,000
Total Acreage		101,515 Ha	853 Ha				

Source: KOAN, 2005