



MASTER'S THESIS



Renewed Perspectives, Old Challenges

Foreign Agribusiness Impacts on Local Livelihoods and Food Security in Naivasha, Kenya

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Preface

This thesis epitomizes a continued quest to investigate ways of impelling development in the global south, and in particular in sub-Saharan Africa. Having always been interested in community-level and community-driven development, an interest reflected by my bachelor's thesis on 'Community-Driven Development in Kenya', the MSc Sustainable Development programme at Utrecht University presented a great opportunity to further explore the field of development. Motivated by key foci on global interconnectedness during the master's programme, a focus on foreign agribusiness investments in Kenya provided a unique opportunity to evaluate how local livelihoods are impacted by global forces. As Kenya has for long been faced with the challenge of food insecurity, a subject that only gains attention in cases of dire necessity in the country, a look into how foreign investments in non-food agriculture impact on local food security provided an interesting case. This thesis informs on how the interests of foreign actors interact with the needs of local communities in Kenya, and the manner in which the quality of life among local groups is impacted upon by the conduct of agribusiness.

Acknowledgements

The journey that has built up to this thesis has been facilitated by the help of many people. In particular, I would like to thank my supervisors, Prof. Dr. Annelies Zoomers and Dr. Caroline Archambault, who offered essential guidance and critical insights that immensely contributed to the realization of this thesis. Much appreciation goes to Rineke van Dam, Siegfried de Laat, and Otto Hoffman for their willingness to engage and provide reflections on the thesis.

The process of field research would not have been possible without much assistance from Marion Nashilu of the Naivasha Sub-County, and my field assistants Priscilla and Elija Ngotho. For their diverse support during the field research in Kenya, I would like to thank Rolien Sasse, Jotham Muchiri, Joyce Kirigia, Bashiru Alumsinya and James Wangu. A special recognition goes to the respondents in the research for sharing important information that is core to this thesis.

Asanteni sana!

Executive Summary

After decades of employing varied approaches to impel development in the global south, foreign agribusiness investments have been underpinned as key tools for accomplishing the elusive goal. Characterized by abundance in land and water resources, the global south provides a propitious destination for foreign agribusiness investors. The agricultural sectors of many countries in the global south are encumbered by huge underinvestment, and foreign investments are argued to provide an ample panacea to the needy situation.

While the proposition of foreign agribusiness investments has obtained support for the alleged contributions in employment and knowledge transfer among others, stern opposition adjudges the contributions aired as being ambiguous. The investments are criticised for among others, displacing local communities and competing for key resources of land and water that are used for food production. As a result, local food production is impeded and food security hampered. Based on these contrasting views, the study aimed to address the following research question:

What are the impacts of European floriculture agribusiness investments on local livelihoods and food security in Naivasha, Kenya?

The research study is couched on four main developmental theories and approaches: the livelihoods approach, stakeholder and access theories, and the institutionalist approach, all of which aid in generating useful insights from the research findings.

Naivasha, being the largest flower producing area in Kenya and having been established for more than two decades, provided the apt setting for the research. Respondents in the research comprised employees in the floriculture industry, agribusiness companies, NGOs, government institutions, business operators, smallholder farmers, and key informants, a broad respondent-base that facilitated collection of essential and far-reaching information. Data was primarily collected through semi-structured interviews, and transcribed before analysis via excel and SPSS.

The floriculture industry in Naivasha has impacted notably on the natural resources and local livelihoods. Competition for land has restricted pastoral activities, while the need for water has facilitated the implementation of a PES scheme that has benefited upstream communities. The industry has created numerous employment opportunities for local populations, instigating labour migration from around the country. However, low wages and exacting working conditions present a significant bone of contention, undermining the hype around the said contributions. While the industry has implemented developmental programmes to benefit local communities and in particular the workforce, the initiatives have been characterised by supply-led, top-down approaches that have greatly diminished efficiency.

A major challenge facing households of employees working in the floriculture industry is food insecurity. Having hailed from different parts of the country, households depend on the village markets to address food needs, accentuating the significance of financial capital. Wages, therefore, cannot be understated in such a highly monetary local economy. Due to the low wages offered, households develop

varied coping strategies that include skipping meals, which mirror de Waal's (1989) findings in Southern Sudan during the 1986 drought. Besides food, access to clean water constitutes a severe challenge in Naivasha where groundwater contains high levels of fluorine. In a bid to address the problem, floriculture companies provide clean water to employees at the workplace, but the lack of clean water at home thwarts the benefits of such an initiative.

Findings from the research study challenge the views that agribusiness investments present credible tools for propelling development in the global south given the multiple challenges facing local communities around Naivasha area. While certification standards and government institutions have often been viewed as 'enabling institutions', the challenge of improving the quality of life in the global south is characterised by complexity that demands broad understanding based on bottom-up, demand-driven development as opposed to current supply-driven, top-down approaches in the foreign agribusiness sphere.

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List of Abbreviations

- ACP- African, Caribbean and Pacific
EPA – Economic Partnership Agreement
EU – European Union
FAO – Food and Agriculture Organization
FNSP – National Food and Nutrition Security Policy
GFSI – Global Food Security Index
JKIA – Jomo Kenyatta International Airport
LANAWRUA – Lake Naivasha Water Resource Users Association
LNGG – Lake Naivasha Growers Group
SSA – Sub-Saharan Africa
WHO – World Health Organization
WRMA – Water Resource Management Authority
WRUA – Water Resource Users Association

1. Introduction

The quest for global development epitomizes a well-trodden path that has been laden with numerous paradigms, but the developmental challenge lingers on. Old and new challenges continue to significantly shape international development, giving rise to a cadre of approaches that are often propounded as panaceas for international development. In the present era of globalisation where local occurrences are influenced by events taking place in far-away localities and the other way round (Giddens, 1990: 64), global challenges become local challenges and vice versa. An interesting case that exemplifies this scenario is the practice of foreign agribusiness investments in sub-Saharan Africa (SSA), which has been peddled as a cogent approach in realizing the long-awaited dream of the region's development. The phenomenon of foreign agribusiness investments in the SSA is not new. What is nascent, however, is the notable rise in the number of these investments (Hallam, 2009). An average growth of 17 per cent in foreign agricultural investment in Africa was recorded between 2003 and 2010 (World Bank, 2011). The renewed attention and emphasis on foreign agribusiness investments in SSA arouses tremendous curiosity, and especially the impacts that such investments have on local populations.

The push for agribusiness investments in SSA is built on, among others, the view that the region boasts a remarkable agricultural potential (European Commission, 2013). This view is juxtaposed with the fact that SSA's agricultural sector has faced enormous under-investment, as evinced by majority of the countries in the region that are net-importers of food. Agribusiness investments are strongly postulated to ameliorate global food security (ibid). However, foreign agricultural investments could exacerbate the state of food insecurity in host countries that are food insecure. The investments compete for scarce resources such as water, arable land and labour, and thereby curtail competitiveness of domestic food and agricultural production (Wimberley, 1991; Wimberley and Bello, 1992; Cotula et al. 2009; FAO, 2011). The increased demand for resources culminates in higher food production costs which besides harming poor farmers, drive up food prices that make it extremely difficult for local consumers to access food (FAO, 2011). While food insecurity has been an incessant developmental challenge facing SSA countries for decades, a possible solution from the presence of foreign agricultural investments continues to lie further away as the agricultural products are mainly for export and thus unavailable to local consumers (Aykut and Sayek, 2007).

An apposite case of an established, dominant agribusiness sector in SSA is the floriculture industry in Kenya, which is the 3rd largest flower exporter globally (Rikken, 2011). While the floriculture industry has been lauded for its contributions to the local economy through creation of employment opportunities and earning foreign exchange, there have been numerous reports of poor quality of employment and negative impacts on natural resources especially Lake Naivasha. In an era where foreign land acquisitions and virtual water trade (Food & Water Watch, 2008) are a bone of contention especially concerning SSA countries, there is need to scrutinize the impacts of foreign agribusiness investments on local populations and economies. It is in this frame of thinking that this research aims to look into how

European flower agribusiness investments in Kenya directly and indirectly impact on local livelihoods and food security.

Kenya has been faced with the challenge of food insecurity over the years, and as such underlines the need for investigating ways in which foreign agribusiness investments impact on local food security. According to the Global Food Security Index (2013), Kenya ranks 80th out of 107 countries, with a score of 36.4 out of 100. The United States ranks 1st with a score of 86.8, the Netherlands is 5th with a score of 83.2, and South Africa, the leading Sub-Saharan African country on the list, ranks 39th with a score of 61.0, while the Democratic Republic of Congo is 107th, the last in the rankings, with a score of 20.8. These figures reflect the tremendous challenge that food insecurity is for Kenya. European countries rank highly on GFSI, and their agribusiness investments in a country that is significantly lower on GFSI ranking presents an interestingly informative case in the study of international development.

Following these notable developments, the following main research question for the study emerges:

What are the impacts of the European floriculture agribusiness investments on local livelihoods and food security in Naivasha, Kenya?

In order to explore this research question in depth, the following research sub-questions guide the research study:

- a) How do European flower agribusiness investments in Naivasha impact on land and water resources?
- b) How has the floriculture industry impacted on local livelihoods in Naivasha?
- c) What is the status and determinants of food security in the households of employees in the floriculture industry?

This research study is driven by a number of objectives. Firstly, the study intends to inform the current debate on the impacts of foreign agribusiness investments in low-income countries with abundant resources of land and water, and that are faced with major challenges and particularly food insecurity. Secondly, given the dependence by these investments on resources that are used for food production, the research aims to inform on how such scarce and finite resources are impacted upon and the implications for local livelihoods. Further, the study seeks to make a scientific contribution through the conduct of situ-specific research in a dimension that features an industry that has received scant attention on the aspects of food security and local livelihoods. The justification for this study is grounded on the current debate and notable recognition of foreign agribusiness investments as tools for sustainable international development by influential institutions such as the European Commission. Further justification is drawn from the past success of the floriculture industry in Kenya that has been juxtaposed by numerous critical reports on poor working conditions and unsustainable use of water.

After the introduction, the thesis is structured into different chapters that are encapsulated as follows:

Chapter 2: Theoretical Background

This chapter contains a review of relevant previous literature covering foreign agribusiness and local natural resources, the current debate on foreign agribusiness investments, and global and national (Kenya) food security, followed by the theories on which this study is couched.

Chapter 3: Regional Thematic Background

As the title of the chapter suggests, the background of the research setting is covered, with an emphasis on the key themes of floriculture agribusiness and food security.

Chapter 4: The Conceptual Framework, and Methods and Methodologies

The conceptual framework for the research study is presented and explained, followed by the methods and methodologies applied in the research and justification, as well as limitations to the research study.

Chapter 5: Competition for Resources: The Winners and Losers

This is the first chapter of the research findings, and it entails the impacts of the floriculture industry on land and water resources, and ultimately local livelihoods.

Chapter 6: Local Development: An Oversold Dream

The second chapter of the research findings, chapter 6 informs on the impacts of the floriculture industry on the local development and livelihoods, including working conditions in the floriculture industry.

Chapter 7: Household Food Security: A Trivialized Scourge

The overriding focus in this chapter is the status of food security in employee households, and the influence of the floriculture industry.

Chapter 8: The Floriculture Agribusiness, Local Livelihoods and Food Security Nexus

This chapter interprets the research findings, drawing key insights from the theories presented in chapter 2.

Chapter 9: Conclusions and Recommendations

This chapter follows up on the insights from the research findings and discussion chapters by offering key conclusions and recommendations for future research.

2. Theoretical Background

This chapter aims to inform on the existing knowledge on the topics of foreign agribusiness and food security in the global south, with a particular focus on Kenya. Through a review of subsisting literature, the main concepts relevant to the research are expounded and the situation on the ground is assessed. The literature review also informs on the factors that significantly motivate the research based on existing gaps in literature, gaps that the research study aims to address. A critical review of the literature sets a platform for generating important scientific knowledge through research, which should contribute in stimulating intelligible debates on the topics covered. This study is built on four major theories whose main theses are presented, and their role in contextualizing the study in development is explained. Based on the reviewed literature and theory, a conceptual framework contained in the Methods and Methodologies chapter is built that informs on the approach employed in carrying out this research study.

2.1 Agribusiness

2.11 The Concept

The origins of agribusiness are traced in the food sector, when it became apparent that management and policy initiatives of the food sector could only be successful if the food system was brought into the fold (King et al., 2010). Davis and Goldberg defined agribusiness as “the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing, and distribution of farm commodities and items made from them” (1957:2). The Ministry of Agriculture in Kenya has adopted Davis and Goldberg’s definition of agribusiness in the national agribusiness strategy that principally aims to modernize Kenya’s agriculture sector. In the following sections, the drivers of foreign agribusiness investments in Africa are explored, followed by a debate between proponents and opponents of foreign investments in the global south.

2.12 Drivers of Foreign Agribusiness Investments in Africa

A look into the impacts of foreign agribusiness investments in the host countries informs on the hypothesis of the research study that foreign agribusiness investments depend on, and thereby compete for scarce resources of land and water, resources that are fundamental to food production. In developing countries that are faced with enormous challenges of food insecurity, augmented competition for these resources by wealthy agribusiness investors spells doom for efforts geared towards ameliorating food security. As the supply side of food security is hampered by diminished access to principal factors of production, an already dire food security situation is exacerbated.

The global south, and Africa in particular, has been the recipient of the recent wave of foreign agribusiness investments that have been impelled by numerous forces, both internal and external. The processes of foreign investments have been notably characterised by an incredible surge in acquisitions of tracts of arable land by foreign investors that include governments and multi-national private companies

(Evers et al., 2013; Cotula et al., 2009), notably accelerating competition for land in the process. Since 2006, in excess of 46 million hectares of land have either been leased out or are still subject to potential land deals with foreign investors, and the lion's share of the land involved, 70 per cent, is in Africa. In addition, between 445 million to 1.75 billion hectares of land in Africa comprise 'unused' and 'marginal' land that is not being productively used, and provides a considerable opportunity for investment (World Bank, 2010). Availability of arable land in Africa thus provides a considerable 'pull force' factor for foreign investors, and the focus on the subject by the World Bank is indicative of the involvement of powerful global institutions as driving forces in processes of foreign agribusiness investments in the global south.

The current processes of land acquisitions notably resonate with earlier territorial acquisitions during the colonial period (Evers et al., 2013), insinuating a redress of the 'old' which is now presented as the 'new' in order to fit in contemporary settings. Analyses of trends that majorly characterise land acquisitions reveal that majority of the targeted countries are weak states marked by poor and corrupt governance structures (Deininger, 2011). Financially endowed but resource-poor countries have been leading actors in the global land rush in an attempt to insure their security in food, energy and minerals (Borras and Franco, 2012). Following the significant rise in oil prices in 2003 and the scant hopes of new oil discoveries at the time, concerns for energy security were greatly heightened given the loss of national sovereignty through 'foreignization' of essential energy resources, and as a result finances were directed towards agricultural commodity markets (Woodhouse, 2012; Zoomers, 2010). As such, foreign agribusiness investments provide notable opportunities for insuring security against future uncertainties.

Food security in particular has been at the heart of these cosmic land acquisitions. The immense focus on food security is traced back in 2008 with FAO's declaration of imminent global food insecurity, and the pronouncement that unless food production increases twofold by 2050 then global food demands will not be met (Evers et al., 2013). At the same time, market prices for agricultural commodities have been on the rise and volatile, as opposed to the expectations that the prices would stabilize to the lower levels prior to the 2007-8 crisis (HPLE, 2011). The figure below shows price trends of major food commodities between 2000 and 2010:

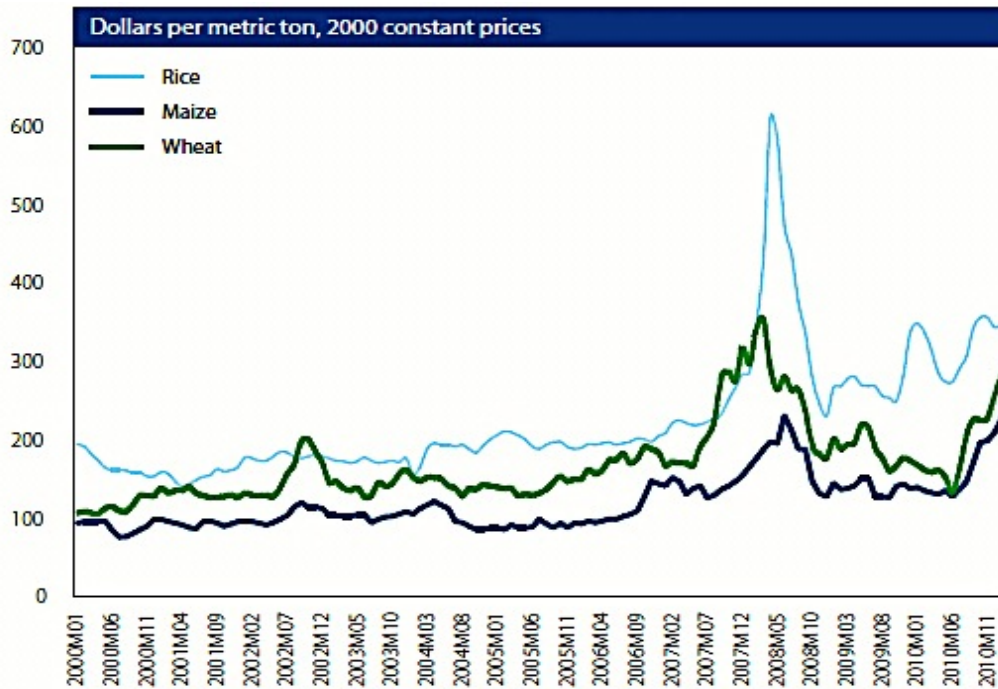


Figure 1: Rise in prices of major food commodities in the period between years 2000 and 2010. Source: Joachim von Braun (2008).

These occurrences have raised significant concerns about food insecurity, prompting food production for export to financially wealthy countries with scant resources and in the process land grabbing has intensified in land-abundant countries (Zoomers, 2010). The enormous attention on food production confounds the widely held reality that “world food supplies are sufficient to feed the world’s population one and a half times over”, a view that has usually underlined poor distribution as the root obstacle to global food security (Kay, 2012: 6).

Besides the ‘pull forces’ of the natural resources, another driving force for foreign agribusiness investments in African countries is the push by governments for modernization of the agricultural sectors (Woodhouse, 2012). The push for modernisation is rooted in many African countries’ agricultural history, whose lack of development in the post-colonial period has been mainly blamed on the negative impacts of the structural adjustment programmes (SAPs) that came into force in the 1980s. Following the SAPs, African governments were restricted in their investment in the agricultural sector, resulting in much lower proportions of public expenditures on agriculture, around 6-7 per cent of GDP, relative to around 20 per cent of GDP invested by ‘developed countries’. As such, foreign investors have emerged as a primary alternative for propelling agricultural investments in African countries hence the emphasis by national governments on the need for foreign agribusiness investments (Woodhouse, 2012; De Schutter, 2011).

Large-scale land acquisitions have thus been framed around ‘crisis narratives’ in the form of food scarcity, for example, with an amicable solution being exploitation of the potential of the ‘marginal, empty, and available’ land in the global south (White et al., 2012). This view has served as a justification for foreign land acquisitions around Africa. From the perspective of African governments, the land acquisitions have been framed around ‘development narratives’ with the view of modernising a

‘backward’ and ‘traditional’ agriculture sector that has for long suffered from lack of adequate investments. As such, the two narratives underpin each other in a manner that represents a ‘win-win’ situation, resulting in ‘push and pull forces’ to the foreign agribusiness investments in Africa. The debate on foreign agribusiness investments in the global south draws insightful views from the supporting and opposing camps, as covered in the following section that illuminates on the nexus between foreign agribusiness investments and local food security and development.

2.13 Foreign agribusiness investments: A contested sphere

In a continent where livelihoods of majority of the population revolve around the agricultural sector, the forces impelling foreign agribusiness investments and the subsequent impacts on local populations warrant consideration. A strong debate has ensued between proponents and opponents of foreign agribusiness investments in the global south, generating key insights on the perceived contributions and negative impacts that arise from these investments. In this section, the views that substantiate the practice of foreign agribusiness investments are presented, followed by the opposing views, and finally an analysis of both perspectives that also informs on the approach taken by this research study.

There are multiple proponents of foreign agribusiness investments in the global south, with diverse views on the contributions of such investments. Foreign investments in land are largely underpinned by claims of their potential to stimulate economic growth and rural sustainable development in the host countries, on condition that they are well regulated (World Bank, 2010). The main contributions of the investments are knowledge transfer through impartation of new technologies to the local spheres, ameliorating agricultural productivity, poverty alleviation and modernisation of the agricultural sector (World Bank, 2010; Deininger, 2011). These contributions indicate a wide range of developmental impacts on local economies.

The sluggish growth of the agriculture sector in many African countries relative to other regions (Faye et al., 2013), as depicted by cereal yields on the figure below, substantiates the entry of foreign agribusiness investments.

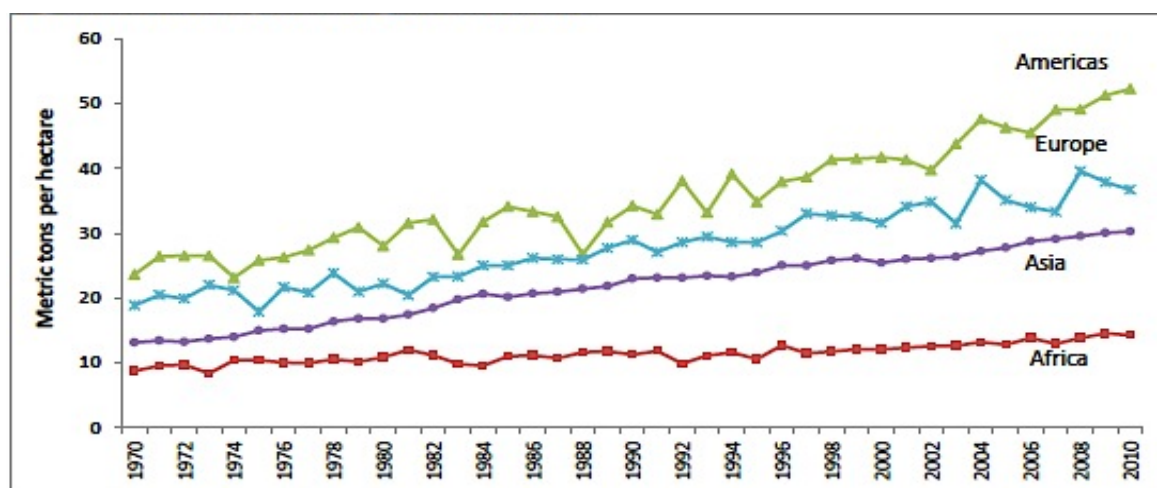


Figure 2: Cereal yield in global regions over time. Source: FAO, FAOSTAT (2012).

The low yields in Africa reflect consequences of past poor public investment in the sector. As Bates (1981) points out, public investments into the agriculture sector were in the form of subsidies to agricultural parastatals, or on farm inputs, an approach that failed to foster agricultural growth and instead led to a hefty accumulation of public debts. In retrospect, such investments should have focussed on addressing structural constraints such as infrastructure and in minimizing the high risks involved in investing in agriculture (Faye et al., 2013).

In light of these decades-long challenges, foreign agribusiness investments are viewed as having the potential to contribute to infrastructural developments. Such contributions can be through construction of roads and irrigations systems, which may impact positively on the agricultural sector and other facets of local economies. In addition to infrastructure, foreign investments can promote agricultural practices among local smallholders through contract farming, which can facilitate introduction of quality seeds, fertilizers and pesticides, and storage facilities necessary to bolster productivity. The out-grower schemes present a win-win situation for both investors and local communities. While the investors benefit from a stable supplier base, the local smallholder farmers are integrated into the global supply chain with an assured market for their agricultural produce and are therefore exposed to less risks in their agricultural practices. At the national level, a notable augmentation in food production can turn net food importers to net food exporting countries, ameliorating local food security and foreign earnings (Faye et al., 2013).

Support for foreign agribusiness investments in the global south is greatly premised on the potential to create win-win scenarios for both foreign investors and local stakeholders. Despite noting numerous shortcomings of the investments, and in particular that the benefits were significantly biased towards the investors at the expense of rural livelihoods and environment, the World Bank (2010) goes on to posit that such “immense risks” and “dangers” should not raise alarm as they can be turned into enormous opportunities. The opportunities postulated are viewed in the lens of creating preconditions for sustainable development through transfer of superior technologies and creation of job opportunities for the rural poor, the outcome of which should be augmented productivity from utilizing formerly uncultivated and underused land (World Bank, 2010:ix). These assertions have been further echoed by IFAD (2009), which recognizes the occurrences of evictions of local communities and land-use changes that are detrimental to the environment. The underlying view therefore is that the seemingly negative repercussions can be overturned in the process, and in the end generate benefits that benefit both the investors and populations in the host countries.

The European Commission (2013) views agribusiness as an instrumental tool in propelling Africa’s future economic development. As the European Commission perceives, the potential of agribusiness greatly lies in its ability to generate significant linkages associated with numerous multiplier effects that enhance economic growth. Agricultural investments targeting smallholder farmers promise greatest returns with regards to poverty reduction and economic growth, and constitute EU’s primary approach towards bolstering nutrition and food security in Africa. Agribusiness has sturdy linkages with

food security through agricultural production, a more direct linkage between agribusiness and food security, and the potential to create wealth among smallholders and rural communities, who are the dominant groups in Africa's agricultural sector. In its agenda for change, an initiative aimed at fighting poverty in the developing world, the EU top priority areas are agribusiness and food security (European Commission, 2013).

The positive developmental contributions proclaimed by the proponents of foreign agribusiness investments in the global south are taken with a grain of salt by many scholars who argue that the postulated benefits are extremely ambiguous. This ambiguity is confronted by numerous severe ramifications in the form of land dispossession resulting in displacement of local land users who are forced to migrate to isolated and marginalised areas, loss of livelihoods, environmental degradation and loss of access to land and fundamental natural resources (Borras et al., 2011; White et al., 2012; Zoomers, 2010).

In many of the host countries, land that is deemed either 'non-private' or 'public' is made available for foreign investments and acquisitions (Franco, 2009), with claims that investors look for land that is void of human presence and/or under unproductive uses in the eyes of the state (Lavers, 2008: 803). However, in reality land acquired by foreign investors is both claimed and/or used by local communities, challenging the labels of 'empty' and 'unproductive' land (Da Via, 2011). According to White et al. (2012), large-scale land acquisitions have often entailed land dispossession of the poor by governments who then either sell or lease the land to wealthy investors. In the case of foreign investments in agriculture, huge tracts of land are required in order for such investors to reap the benefits of economies of scale. However, the large-scale acquisitions mean numerous households are affected. In the face of poor land governance in many African countries, local communities are left extremely vulnerable as they are not involved in land acquisition processes and they are thus either poorly or not compensated at all. The resultant restricted access to land is exacerbated by resultant environmental degradation in cases of deforestation and unsustainable water uses, and loss of biodiversity that together constrain fallback options of the affected groups (Faye et al., 2013).

Land abundance in Africa is only temporal, as continental population dynamics show that there will be increased pressure on land in the coming decades. The fact that rural areas are actually experiencing population growth in the backdrop of increasing urbanization translates to increasing demand for land in the countryside (Borras and Franco, 2012; Faye et al., 2013). Demand for, and significance of land among local populations is amplified by the failure of the contemporary agrarian transitions to absorb displaced populace into the economy, generating 'an agrarian question of labour'. This view is corroborated by the occurrences in Mozambique where it is anticipated that land enclosures will dispossess local populations sending them into towns that are devoid of labour absorption capacity (Bernstein, 2004; Tanner, 2010:125). As such, the outcome of capital investment and technical change in

the agriculture sector has resulted in “shedding rather than the absorption of labour” (White et al., 2012: 625).

The prospects for local food security are greatly dampened by foreign land acquisitions and agribusiness investments as spaces used for food production to serve domestic markets are replaced by production that focuses either on foreign markets, or addressing energy demands (Evers et al., 2013). The shift away from food production for the domestic markets notably contradicts the needs of the low-income host countries, for which food insecurity is a chief challenge (De Schutter, 2011). As the host countries are steered towards dependence on imports to address their food needs, the increasing prices of food on international markets significantly severe the status of rural peasants who become more vulnerable to dispossession (Hall, 2011). These occurrences greatly challenge the view of foreign agribusiness as a panacea to agrarian and economic development that is inclusive of smallholder farmers particularly in the rural areas, and the proclaimed enhancement of local food security. In response, especially with regards to the voluntary regulations that are meant to keep foreign investments in check, scholars advocate for an approach that places the rural poor at the core of the foreign land acquisitions debates, rather than having them on the periphery where it is hoped that voluntary actions of the investors will better their livelihoods (Evers et al., 2013: 21).

While availability of land in Africa has facilitated foreign agribusiness investments, the quality of land has been central to the investments in agriculture, leaving the primacy of water greatly underemphasised. According to De Schutter (2011), foreign investors target spaces that are both fertile and irrigated or irrigable, or that experience high rainfall as a strategy to minimise risks that stem from the vagaries of unpredictable rainfall in Africa. Water is therefore a primary factor for agricultural practices, and Woodhouse (2012:779) views water as being a ‘blind spot’ in the debates around land acquisitions, which have paid less than deserved attention to water despite its central role in irrigation agriculture. The fact that the dynamics of water access transcend the physical boundaries of acquired land translates to impacts that go beyond the spaces under the occupation of foreign investors. Further, the crops involved in large-scale land acquisitions are notably cultivated through irrigation, as they are either cultivated during the dry seasons or require water throughout the year, yet this information is found lacking in publications on large-scale land deals (Woodhouse, 2012). As such, water has been a major ‘pull force’ for foreign agribusiness investments in the global south but it is land that has received the lion’s share of attention.

According to Da Via (2011), the win-win situations as framed by key institutions such as the World Bank and IFAD are based on assumptions that would have to be overcome before easily claiming situations are win-win for investors and local communities. The proposition that global food security can be improved by employing underutilised land in ‘land abundant’ countries is a reflection of the “reductionism of mainstream, capital-centric projects of agrarian transformation and provides no account of actual land uses, resource rights, and land reform agendas” in the host countries. In addition to these reductionist ideologies, the claims that benefits accrue to local smallholder farmers both in terms of

human and financial capital fail to depict the “expansion of commercially-oriented farming within global agro-food-fuel commodity chains” that are dominated by the “monopoly power of corporate capital” (Da Via, 2011: 6). As such, the justification of foreign corporate land acquisitions by major global institutions is predicated on a model of agricultural development that foments among others, disruptions of local livelihoods through dispossession and displacement, and environmental degradation that has both local and global repercussions through climate change, for example (ibid).

Large-scale land acquisitions cannot take place without disrupting local livelihoods, particularly through displacement. Therefore, these acquisitions have had to be legitimized by delegitimizing present land practices and claims, a process that has been notably facilitated by the “politics of satellite maps, yield gap analyses, and government inventories” (Da Via, 2011: 9). Land that has been labelled ‘marginal’ and ‘unproductively used’ by local governments is actually a major source of livelihoods for local communities such as pastoralists, who lack the ‘official’ tenures but hold claims to the land through unofficial or semi-official tenure arrangements such as ‘customary’ or ‘collective’ ownerships (White and Dasgupta, 2010: 600). These lands have in turn been termed as ‘available’ and ‘uncultivated’, with ‘productivity’ rather than ‘resource use’ being the overriding guiding factor of the acquisitions (Cotula et al., 2009: 100). As such, technocratic definitions of agricultural productivity have been employed to pave the way for large-scale, industrialized and capitalist agriculture as the only way of realizing ‘tangible’ agricultural and local development in the global south (Borras and Franco, 2010).

A combination of optimistic and pessimistic views surrounds the current spate of foreign agribusiness investments in Africa and the global south. While the proponents of the investments have mainly based their arguments on potential benefits to local economies and populations, numerous experiences point to a disadvantaged local populace facing the wrath of large-scale land acquisitions, with local communities being dispossessed of their land and displacement as the consequence. The European Commission views these very groups to be the key to unlocking Africa’s economic development through their inclusion in agribusiness, a contradictory scenario given the competition for land resources that are inevitably making it difficult for smallholder farmers to practise agriculture. In addition, the conversion of land previously used for food production to cultivation of export products that do not enhance local food availability presents a contradictory scenario. The politicisation of the land acquisition processes through the use of advanced technologies to identify areas that can facilitate the fight against poverty and ‘underdevelopment’ through ‘old’ approaches that have only been redressed anew present a strong case for evaluating the far-reaching impacts of foreign investments in agriculture. In addition, the involvement of powerful global institutions that are in support of foreign agribusiness investments for their presumed developmental impacts while at the same time there is little consideration for the negative impacts that are observed, hint at the marginalisation of already vulnerable groups in the global south. Aware of the existent polar views characterising the current debate on foreign investments in agriculture in the global south, this research study aims to delve into the case of the floriculture industry in Kenya, an export-

oriented non-food industry, and uncover its direct and indirect impacts on local livelihoods and food security.

2.2 Food Security

2.21 Evolution of the Concept

The first of the eight millennium development goals, food security is central to development and strongly related to multiple aspects of development. Food security concerns have subsisted throughout history, and the theorisation and formalisation of the concept can be traced back to major historical events. Malthus' work contained in "*In an Essay on the Principle of Population*" in 1798, postulated that human development was greatly constrained by the pressure that population growth exerted on the availability of food, primarily building on the view that population grew at a faster rate than food supply. It was not until more than a century later that food security was depicted a global challenge that warranted global attention. In 1945, the Food and Agriculture Organization (FAO) was founded with the mandate to "act as the centre of information and advice on both agricultural and nutrition questions, and (...) maintain a service of international statistics" (Shaw, 2007: 4), marking a key step towards institutionalization of global food security. In the ensuing years, FAO primarily focused on increasing food production, particularly in developing countries, a trend that persisted even after the world food crisis of the 1970s (Shaw, 2007; Swaminathan, 2001).

The early 1970s global food crisis led to the World Food Conference of 1974, a watershed event which marked the first attempt at defining global food security: "availability at all times of adequate world supplies of basic food-stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices" (UN, 1975). A national-level perspective of food security greatly characterises the definition, which looks to inform whether a country has sufficient supplies to match its people's dietary requirements either through domestic or foreign markets (Pinstrup-Andersen, 2009). Also, the focus was overly bent on the supply side of food security. Since then, the evolution of the food security concept has been characterised by three major shifts. Between 1975 and 1985, there was a shift in focus from the global and national perspective to the household and individual following important findings that hunger continued to subsist despite adequate food supplies at the national and international levels. The seminal work of Amartya Sen (1981) was particularly monumental in causing the shift, by strongly illustrating the importance of access to food by households and individuals, and the mediating role of personal entitlements such as labour, production and transfer-based services in accessing food (Maxwell, 1996). However, despite these key findings, many African governments have been hell bent on attaining national food self-sufficiency (Hirscher, 1992).

A dominant force in the second paradigm shift was the 1984 to 1985 famine in the Horn of Africa, which impelled the focus from a food first perspective to a livelihood perspective. From a conventional view and in line with Maslow's hierarchy of needs, food constituted a basic need. However, research

among famine-hit peoples in the Horn of Africa confounded the conventional view following findings that short-term nutritional consumption comprised just one of the many human needs (Maxwell, 1996). Further findings by De Waal (1989) in Darfur, Sudan, in the 1984 to 1985 famine showed that sometimes individuals strategically choose to go hungry in order to enhance future livelihoods. This finding, commonly framed as ‘time preference’, sturdily corroborated the shift towards a livelihood perspective (Maxwell 1988, 1991:22).

The third paradigm shift entails measurement approaches in food security research, with a shift from objective indicators to subjective perceptions (Maxwell, 1996). One of the criticisms levied on the objective measurements concerns the view that nutritional adequacy as stipulated by the World Health Organization (WHO) for example, is a function of varied indicators such as age, health, size, workload, environment and behaviour (Payne and Lipton, 1994). This critical view has been substantiated by the fact that an ‘optimum’ state of nutritional health is usually omitted in studies, rendering existing standards mere value judgements (Payne and Lipton, 1985: 70-71). In addition, studies on food security have been greatly devoid of qualitative aspects such as local food habits and cultural acceptability, and thus nutritional adequacy is only a necessary but not a sufficient condition for food security (Maxwell, 1996).

In a manner indicative of the changing environment, a universal definition of food security was agreed upon in 1996 in a World Food Summit as:

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996).

In a progressive fashion, the definition recognizes safety and nutritional value, as well as people’s preferences. The latter opens up possibilities for varying food security levels given that individuals may possess equal access to food but varied preferences within accepted cultural and social lines, and religious and ethical values (Pinstrup-Andersen, 2009). With the increase in the diversity of the factors influencing food security, the need for situ-specific food security research is accentuated outright.

Food insecurity can be classified as being either chronic or transitory. Populations faced with chronic food insecurity persistently fail to meet their minimum food requirements for long periods. The main factors associated with chronic food insecurity are poverty, lack of assets and productive and financial resources that can facilitate access to food. Transitory food insecurity on the other hand entails short-term failure to meet minimum food requirements, and it stems from shocks and fluctuations in food availability and access due to factors such as low household incomes and high food prices. While chronic food insecurity calls for long-term developmental interventions such as education and access to productive resources, transitory food insecurity is highly complex due to unpredictability, and thus calls for early warning systems and safety net programmes that are suited to the specific cases. Another form of insecurity that lies on the borders of chronic and transitory food insecurity is seasonal food insecurity.

This type of insecurity is predictable in nature, and primarily results from seasonal occurrences such as dearth of work opportunities, harvesting and climate patterns (FAO, 1998: 1).

FAO's definition of food security comes short on some fronts. The reference to physical access denotes a mere redress of food availability, production and supply concerns whose persistence is representative of the Malthusian rhetoric. Economic access on its part draws from Sen's work on entitlement to food. In the current articulation, the mode of access is centred on financial capital while the diverse means through which food can be accessed have been left out (Alcock, 2009). Further, the shifts highlighted in the evolution of the food security concept by Maxwell (1996) are exceedingly focussed on measurements of food security, and as such lack an encompassing and holistic view of the broad concept of food security. Another limitation with the definition is that it has now been in use for almost two decades, a feature indicative of rigidity given that important adjustments have not been made particularly with regards to sustainability. Following that agriculture, the lifeblood of food security, is highly vulnerable to climate change while at the same time being a catalyst to, and a possible route towards mitigation of climate change, sustainability is core to food security (FAO, 2002). For instance, a reference to food waste would inform on the significance of responsible consumption in a manner that ensures sustainable food security through indirect links mediated by climate change. In the current state, food security only focuses on the minimum without focussing on the upper borderline. In close attention to these concerns, Swaminathan defines food security as "physical, economic, social and ecological access to balanced diets and safe drinking water, so as to enable every individual to lead a productive and healthy life in perpetuity", an interpretation that would integrate a life cycle approach¹ to food security (Swaminathan, 2001: 949). As such, while the FAO definition guides activities focussed on food security, there are inadequacies that can limit research and development in the event that the subject is looked into from such a narrow perspective, which can potentially limit expansion of knowledge on such a vital global development subject.

This study looks into food security from a perspective that is informed both by the two perspectives of FAO and Swaminathan (2001), in addition to the critical review of the concept of food security. While the FAO definition focuses on the supply and demands sides of food security, Swaminathan (2001) underlines the centrality of sustainability, while the critical review points out the shortcomings leading to the inclusion of for instance, social access to food that is informed by the 'theory of access' presented later in this chapter. In sustainability terms, food security is evaluated by looking into ways in which the concerned populations can adequately meet their food needs both in the present and future, a perpetual view underlined by Swaminathan (2001). As such, the evolution of the food security concept greatly shows its complexity, and the need to adapt to an ever-changing environment which impacts on the various dynamics influential to the food security of different groups.

2.22 Food availability, Access, Utilization, and Stability

The definition of food security brings out four key elements namely food availability, food access, food utilization and the stability of the three aspects over time. Food availability is attained when there are sufficient quantities of food to all individuals in a given setting (Khan and Gill, 2009; Chung et al., 1997). At the national level, availability of food entails deriving food both from domestic agricultural output and food imports (Pinstруп-Andersen, 2009), with food security thus being influenced by the levels of food production and stocks, and net trade (FAO, 2008). While food availability is a necessary condition for food security, it is not by itself an adequate factor as shown by the global proportion of undernourished people which rose by 9 per cent between 1990 and 2008, while food availability rose by 12 per cent during the same period (Barrett, 2010: 827). The significance of food availability in the process of insuring food security is notably enhanced by food access (FAO, 2013).

Food access entails the ability by individuals to obtain foods requisite for a nutritious diet (Chung et al., 1997). According to Barrett (2010), access to food is built on the two pillars of economic and physical access, and reflects the demand side of food security. Economic access to food is greatly determined by the purchasing power that emanates from disposable income, market food prices, and the access to social support. Physical access on the other hand entails availability and access to quality infrastructure such as roads, communication and food storage facilities as well as additional tools that are set up to facilitate the functioning of markets (FAO, 2013). In this research study, social access to food is viewed as another dimension of access, and is evaluated through the theory of access. The challenges associated with adverse shocks characterising transitory food insecurity such as unemployment and price hikes are accentuated by food access, the dynamics that together bring forth a sturdy relationship between food security and poverty (Barrett, 2010; FAO, 2008; Khan and Gill, 2009; Chung et al., 1997), a relationship that is arguably even more pronounced in highly monetary economies. According to FAO (2013), improved economic access to food can be traced to reductions in poverty levels, underlining the relationship between food insecurity and poverty. However, such a financial-oriented view is confounded by Banerjee and Duflo (2006), who argue that an increase in income does not directly ameliorate food security, owing to varied food preferences that see some groups opt for less nutritious choices associated with higher income such as fast food and alcohol (Banerjee and Duflo, 2006). In a similar manner to food availability, food access is not a sufficient component by itself to ensure adequate food and nutrition status, underlining the significance of food utilization (Barrett and Lentz, 2009).

Food utilization refers to the manner in which human body utilizes food nutrients, and it entails the process leading to provision of sufficient dietary requirements and energy levels for a healthy and active life. Among the factors that influence food utilization include food preparation processes, diet diversification, and the dynamics of intra-household food distribution (FAO, 2008). The physical and mental development of children from an early age exceedingly hinge on food utilization. Children that suffer from malnutrition in early stages of life are more likely to suffer from overweight and chronic

diseases later in life, in addition to being stunted, a factor that has exposed many developing countries to the 'double burden' of an undernourished and overweight populace. A person's health has a two-way influential effect. On one hand, one's health condition determines the extent to which the body can maximize the absorption of nutrients from the food consumed. On the other hand, poor food utilization negatively impacts on an individual's health, creating a vicious circle between health and food utilization (Pieters et al., 2013; UNICEF, 1998).

The stability dimension of food security is built on the three other factors comprising food availability, access and utilization. Food stability entails having adequate nutritional intake throughout, and as such periodic failure to ensure adequate nutrition intake renders one food insecure. This means that food has to be available and accessible, and be utilized in a manner that ensures nutritional requirements are met at all times. The close relationship with all the three other dimensions of food security means that a myriad of factors can threaten food stability, and they include climatic, economic and political instability (FAO, 2008: 1).

2.23 Measuring Food Insecurity: A Critical Review

In measuring food insecurity, the FAO employs an approach that revolves around the four key dimensions of food availability, access, utilization and stability, with each dimension comprising a number of indicators. Food access is categorised into physical access and economic access, while stability comprises vulnerability and shocks, and each of these categories comprise distinct indicators. In the analytical part, the FAO uses a correlation matrix that explores the relationships between indicators, which form the basis for explaining possible causal relationships (FAO, IFAD, and WFP, 2013). The FAO utilizes an objective approach to research as showcased by a set of predetermined questions addressed to potentially food insecure populations. A table outlining the four dimensions of food security and their respective indicators as employed by FAO is contained in appendix 5.

The measurement of food insecurity constitutes one of the highly disputed and critiqued tasks in efforts to establish and inform on the food situation worldwide. To begin with, the subsisting FAO indicators have drawn numerous criticisms, in particular due to dearth of accuracy in the information gathered (Gabbert and Weikard, 2001; Nube, 2001; Smith, 1998; Svedberg, 2002). The number of food insecure people in the world is grossly underestimated if the definition of food security by FAO is used as the basis to set apart the food secure from the food insecure populations. For instance, at a time when the food insecure were estimated to be around 800 to 900 million people, the numbers for iron deficient people stood at around 2 billion (Pinstrup-Andersen, 2009: 6). The assumption of a clear borderline between food secure and insecure populations thus presents a critical challenge, as evidence reveals a rather porous borderline that is susceptible to shifts depending on the measurement approaches used. Secondly, when households constitute the unit of measurement, some members may be food insecure despite the household being able to meet the preferred foods that provide required energies for a healthy and active life. In such cases, intra-household food allocations and dietary changes form the basis of

identifying approaches that can ameliorate and ensure food security in a household, and as such different approaches of measuring food security are required (Pinstrup-Andersen, 2009), as opposed to the household level employed by the FAO.

The global food crisis in 2008 provided a critical check for food security measurements, which revealed the inadequacy of institutions, both international agencies and national governments, in monitoring food insecurity (Headey and Ecker, 2013). In the current era of climate change, such inadequacies in measurements and monitoring will prove highly costly and could significantly expose many countries to unexpected food challenges due to potential and unpredictable severe weather occurrences (IPCC, 2012). Based on these criticisms on monitoring food security, a critical question remains as to whether the persisting definition and measurements of FAO ought to be disaggregated to intelligibly inform policy and programmes aimed at bolstering food security (Pinstrup-Andersen, 2009).

As a highly complex, detailed and diverse subject, measuring food security becomes a gargantuan task. This view of food security is illustrated by numerous efforts to conceptualize the concept, with around 200 definitions of 'food security' already in existence in early 1990s (Smith et al., 1993). In a manner arguably indicative of the ambiguity that surrounds food security, the FAO through the Rome Plan of Action set forth a conflated agenda to realize global food security, which would require international action on a host of subjects including poverty eradication, environmental protection, conflict prevention, gender equality, population policies, land reforms and international trade (FAO, 1996). These copious topical interlinkages have seen food security labelled a 'utopian goal' by some (see Alpoek, 2009), as it would entail addressing a conglomeration of numerous global challenges. While such a view could even discourage credibility of food security measurements heretofore, it can also form a critical basis for underlining what a vital subject food security is, and the need for efforts to intelligibly deconstruct the seemingly conflated subject in a manner that fits different localities worldwide.

In cognizance of the discussion hereby, this study attempts to adopt a holistic approach in assessing the status of food security and its direct and indirect linkages with foreign agribusiness investments in Naivasha, Kenya, by taking into account not only the measurement dimensions, but also the situ-specificity of the research setting. A more detailed explanation of the approaches employed in the research is contained in the Methods and Methodologies chapter of this thesis.

2.24 Status of Global Food Security

The world is faced with an unrelenting challenge in food security. In 2013, FAO estimated that around 842 million people, 12 per cent of the world population, were food insecure. A disproportionate regional representation characterises the figures, with 827 million of the undernourished people hailing from the developing regions² (FAO, IFAD, WFP, 2013). Global food insecurity is variably affected by an array of factors, a critical feature that underlines its complexity. For instance in 2004, 8 per cent of the global food

² The FAO depicts the following as the 'developing regions': Africa, Asia, Latin America and the Caribbean, and Oceania.

insecurity was attributed to catastrophes such as droughts, wars and earthquakes, while chronic hunger accounted for a mammoth 92 per cent of food insecurity in that year (Barrett, 2010: 825). The figures inform on what a long-term challenge food insecurity has been, a fact that is confirmed by the global progress which has been too slow to realize either the goal of halving the number of people living in hunger or halving the proportion of hungry people in the global population (FAO, IFAD, WFP, 2013).

The highest prevalence rates of undernourishment are in Africa, which were recorded at 24.8 per cent, a proportion that actually marked an improvement from 32.7 per cent in the last two decades. The poor performance in the continent greatly results from deficient infrastructure that significantly inhibits market integration. Progress that has been noted in the region is attributed to improved communication and technology, and increased remittances that have spurred small-scale investments in agriculture leading to increases in agricultural production that have in turn buttressed food availability (FAO, IFAD, WFP, 2013). As such, food production has been central to improvements noted in food security in the continent. In order to greatly make strides towards the MDG goal of halving the proportion of undernourished people in the world, a focus on food access through safety nets is emphasized. In particular, cash transfers and vouchers are underlined, as they can augment consumption, agricultural investments, and subsistence production of food (ibid). These approaches thus point to financial capital as the primary approach to enhance food security, and food availability through own production at a subsistence level. Such food production is envisaged at the small-scale level, underlining the significance of smallholder farmers in ameliorating food security in Africa. At the same time, the approaches underlined are notably economic, critically highlighting possible gaps between theory and practice given the more overarching definition of food security adopted by the FAO.

Looking into the future, the growth in population and incomes by 2050 will demand a 70 per cent increase in global food production, a figure that will need to be augmented by 100 per cent in the low and middle income countries. While intensification on presently cultivated land in various parts of the world will address the food demands of 2050, in Sub-Saharan Africa and Latin America expansion of cultivation area will still be feasible to meet the significantly high demands. In addition, irrigation through efficient use of water resources has the potential to realise highest gains in agricultural production in SSA and Asia (FAO, 2011). As such, water resources will be key to future food availability through irrigation agriculture.

2.3 Key Development Theories

The study is couched on four major theories: livelihoods approach, stakeholder theory, access theory and institutionalist approach have been chosen based on their relevance to the research study, the potential to facilitate the process of delving into the study through deconstruction of key research findings, and positioning the study in a suitable development context. In the following section the content of the theories and their anticipated role in the research are presented.

2.31 A Livelihoods Approach

This research embodies a livelihoods approach that traces its origins to the works of Robert Chambers and Gordon Conway, who view a livelihood as the means of attaining a living that entails livelihoods capabilities and assets, both in the tangible and intangible forms (Chambers and Conway, 1992). The livelihoods approach is built on actor-based experience drawing from the micro lives of the individual, household and community, and adopts an optimistic approach to development through the belief in the ability of households to be active and proactive in addressing livelihood needs (Johnston, 1993). According to Appendini (2001:24), the guiding objective of the livelihoods approach is “to search for more effective methods to support people and communities in ways that are more meaningful to their daily lives and needs, as opposed to ready-made, interventionist instruments”. Considerable emphasis is given to the household as a unit of research, as it acts as a mediating point for agency and structure, and provides feasibility in collection of empirical data (de Haan and Zoomers, 2005; Schmink, 1984).

The livelihoods approach is made more comprehensive by De Haan and Zoomers (2005), who underline the significance of access, and argue that the opportunities for ameliorating livelihoods are governed by social relations, institutions and organizations, and that power dynamics greatly explain the processes of accessing the various opportunities. The approach views communities as differentiated rather than static entities, with varied identities and conflicting values and claims over resources, while access to resources is regulated and shaped by institutions that are continually underpinned and reshaped by livelihoods (de Haan and Zoomers, 2005). In the research study, this view infers that the households of employees working in the floriculture industry are not a homogenous group, but rather collective units that share experiences while at the same time are differentiated by their particular identities and goals, or rather, livelihoods, with further differentiation at the individual level.

2.32 Stakeholder Theory

The stakeholder theory is widely attributed to Edward Freeman following his publication ‘*Strategic Management: a stakeholder approach*’ in 1984. The theory is built on the assumption that ethics and values are intrinsic to the conduct of business (Freeman, 1994). In this view, the separation thesis that ethical values and economics can be distinctively drawn apart is rejected outright (Freeman et al., 2004). Business activities, such as the foreign flower agribusiness investments in Naivasha, Kenya, thus ought to naturally impact positively on their stakeholders. A capitalistic perspective postulates that the principal aim of managers is to maximize returns to stockholders, and their ability to do so is limited by government interventions. However, the subsistence of negative externalities, moral hazards, and monopoly power substantiate the need for external interventions, especially since businesses look to internalize benefits while externalizing the costs (Freeman, 1984).

Stakeholders of a business comprise different groups. Below, the stakeholder model adapted from Donaldson and Preston (1995) outlines the different stakeholders of a business:

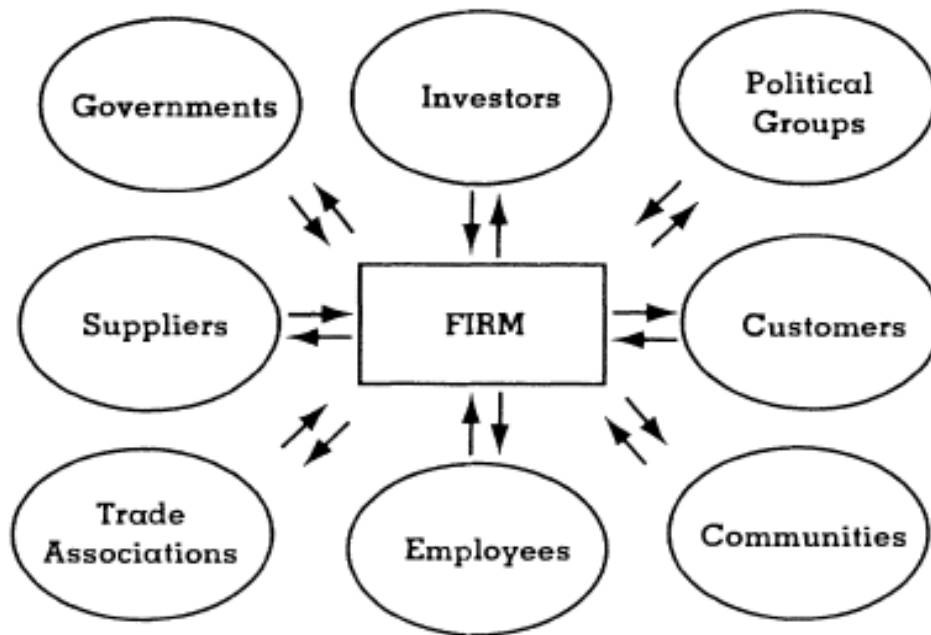


Figure 3: The Stakeholder Model. Source: Donaldson and Preston, 1995.

Among the stakeholders identified in the model, the flower farm employees and adjacent local communities constitute the locus of the research study. While the model indicates two-way impacts between the stakeholders and the firm (agribusiness investments), the research study looks into how the floriculture industry in Naivasha impacts directly and indirectly on local food security among the employees and adjacent local communities. In light of the stakeholder theory, the dynamics of the impacts are delved into to ascertain the processes and motivations shaping up the resultant impacts.

2.33 Access Theory

A third theory on which this research study is built is access theory, developed by Ribot and Peluso (2003). The theory is premised on the view that access, the ability to derive benefits from things, illustrates one's 'bundles of powers' over given property. The theory is an improvement to the previous view of access as the 'right to benefit from things', an illustration of one's 'bundles of rights' over property. A principal focus of the theory is the processes through which beneficiaries of a given property accrue benefits (Ribot and Peluso, 2003). The theory underlines the role of social relationships in processes of benefiting from property, which creates an important platform for grounded analyses into the dynamics of how stakeholders focussed on in the research accrue benefits from given property.

The 'bundles of power' considered in access theory facilitate the means of access, and as Foucault (1978) postulates, power is influenced by positionality and the 'imbrications of men and things', such as is the case with formal powers. Terms of access are notably influenced by the political-economic

circumstances, and as such dictate which groups emerge as beneficiaries of a given set of resources. Access control is further embedded in laws and regulations, which act as empowerment tools of administrators in a particular field. In order to gain or maintain access to resources, potential users are coerced to invest in good relations with the relevant agencies (Ribot, 1995). This relationship-based scenario compromises the sanctity of user rights in that the agencies with the ‘bundles of power’ can confer access based on various modes of favouritism that can be changed at will (Peluso, 1992b; Ribot, 1999).

In this study, access theory provides fundamental ideas of inquiring into the processes through which foreign agribusiness investments impact directly and indirectly on local food security. By looking into different actors and the relationships that bind them and mediate the processes of attaining and constraining ‘bundles of power’, the direct and indirect linkages between the local food situation and agribusiness investments are established. The application of access theory is facilitated by the institutionalist approach that is discussed next.

2.34 Institutional Approach

The role of institutions in the practice of foreign agribusiness in Kenya is investigated through the notions of the institutionalist approach. Douglas North depicts institutions as “rules, enforcement characteristics of rules, and norms of behaviour that structure repeated human interaction” (1999:1321). The Kenyan agribusiness field is governed by sets of rules that are enforced by various agencies, which aim to structure the manner in which agribusiness is conducted in the country. The processes involved in the application of rules are costly, despite the fact that utility is gained not from these structures but rather from goods and services. On the one hand, institutions can be viewed as constraining elements in the processes of conducting business, especially with the view that ethical values are intrinsic in the conduct of business. On the other hand institutions can be embraced as facilitators of agribusiness in the country, drawing from the perspective of businesses tending to internalize gains while externalizing costs. Numerous literature however supports the view that institutions constrain the means and needs of actors in an economy, a restriction that results in the advent of shared ideologies that ensure responsible social actions from actors that would otherwise seek selfish benefits through irresponsible approaches (Friedland and Alford, 1991; Scott, 2001).

The institutionalist approach enables the study to look into the roles and impacts of institutions, such as the certification standards and the Kenyan government, in structuring and influencing the activities of the floriculture industry in the country. A look into the manner in which different institutions impact on the floriculture industry facilitates the process of analysing the direct and indirect linkages between foreign agribusiness investments and local food security. As such, the four theories build on and complement each other and shape the research process in a manner that is clearly illustrated by the conceptual framework presented in the following section.

3. Regional Thematic Background

This chapter presents an informative regional background of the research setting. The geographic and demographic contexts, followed by the political and socio-economic contexts of Kenya, provide a key basis for contextualizing the research study carried out in Naivasha. The food security situation in the country, followed by the national food security and nutrition policy give a clear picture of the country's performance on food security and the future plans on ameliorating food security in the country. Agribusiness in Naivasha grants an important comprehension of the floriculture industry as well as the setting of the research, and the agribusiness strategy further informs on the Kenyan government's future approaches to agribusiness. As such, this chapter offers an important comprehension of the national and local level basis for contextualizing the research study.

3.1 Geographical and Demographic Context

Kenya is located in the east coast of Africa at 6°N and 6°S, bordering five countries: Uganda to the West, Tanzania to the South, South-Sudan to the northwest, Ethiopia to the North, and Somalia to the East. The Indian Ocean is in the southeast, and serves as the chief gateway to East Africa's international activities through the Mombasa port, and in the near future through the Lamu port that is primarily designed to serve Juba and Addis Ababa, Southern Sudan and Ethiopia capital cities, respectively. The country has an area of 582,646km², and straddles the equator leading to small temperature variations of around 2°C during the coolest seasons in the year. Kenya's diverse topography rises from a warm Coast that averages 29°C towards the Eastern Plateau and the Great Rift Valley, where the central highlands are cooler with temperatures dropping as low as 15°C. The country experiences a bimodal type of rainfall that features a period of short rains between the months of October and December, and a wetter long rain season in the months of March to May. However, the intensity, duration, and the onset of the rainy periods vary from one year to the other (McSweeney et al., 2010).

An important and critical feature of Kenya's climatic conditions is the occurrence of extreme weather conditions that are associated with major negative impacts. In the Northern parts of the country, severe droughts are experienced almost every year. This results in the drying of crops and vegetation cover, leaving the land bare before the rainy seasons. During the wet seasons, the opposite scenario is experienced with floods causing insurmountable damage to an extent of displacing families. The extremity of weather conditions renders the country highly vulnerable to seasonal weather changes (Voorpijl, 2011; Wolf, 2011).

A large proportion of Kenya's land is arid and semi-arid, constituting around 39 per cent and 41 per cent respectively. The arid and semi-arid lands (ASAL) are primarily used for wildlife management and pastoralism, and these areas account for almost half of Kenya's livestock production. Around 7 per cent of the land is dry sub-humid, and is mainly under agro-pastoralism activities owing to its medium potential qualities. The remaining 13 per cent is moist sub-humid to humid, and comprises the high

potential land for rain-fed agriculture. In fact, most of Kenya’s agriculture is rain-fed (Ministry of Environment and Natural Resources, 2007). The presence of many lakes coupled with the favourable climate and landscape make Kenya a suitable location for agricultural activities (Voorpijl, 2011).

Kenya is characterised by a remarkable ethnic diversity, with over 40 distinct ethnic groups. The country has two national languages, Kiswahili and English. The current population is estimated to be over 43 million people, with an annual population growth rate of 2.7 per cent that entails an increase of around 1 million people per year. Life expectancy is 61 years, and the demographic pyramid depicting Kenya’s population with a significant youth bulge as shown below:

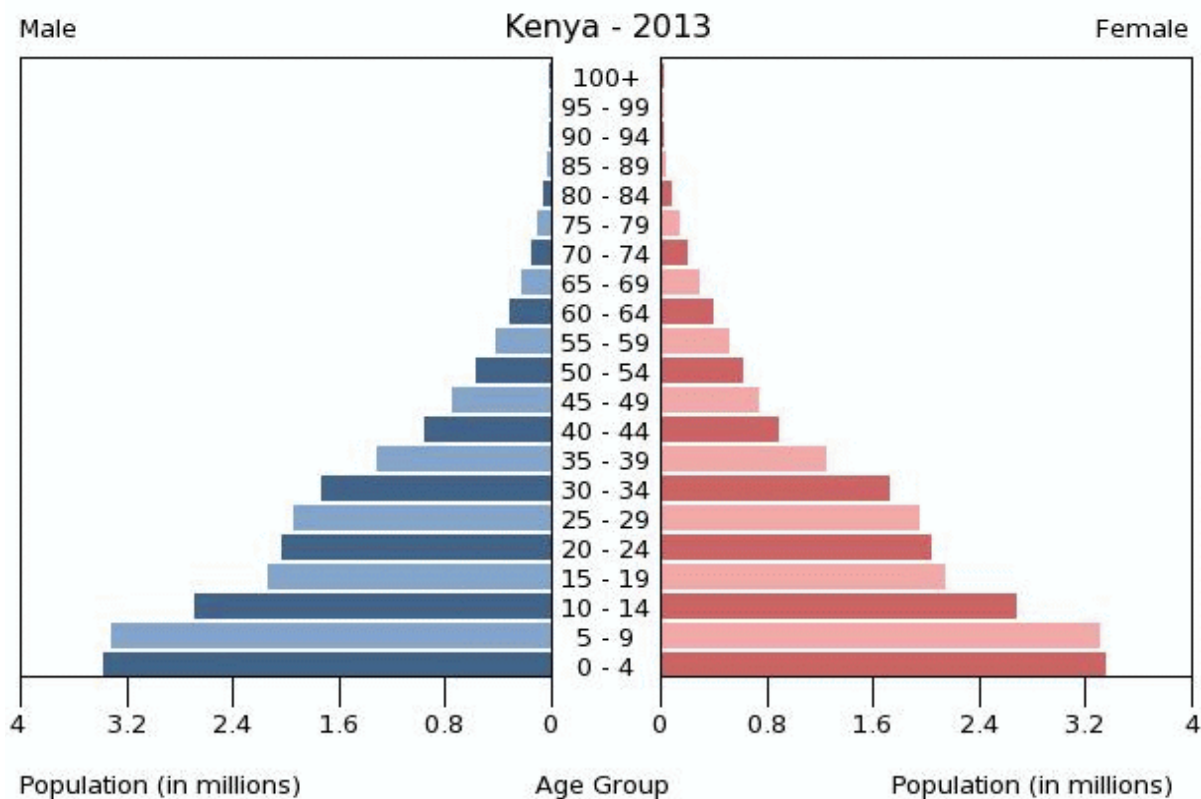


Figure 4: Kenya’s demographic pyramid. Source: CIA World Factbook (2013).

As the pyramid above demonstrates, majority of the population comprises the youth, with 42.4 per cent being 0-14 years, 18.8 per cent is 15-24 years and 25-54 years constitutes 32.4 per cent. As such, an enormous proportion of Kenya’s population is below the working age, 15 years, which translates to a notable dependency ratio and thus a significant burden on the working population.

3.2 Political Context

Kenya attained independence in 1963 from the British and has had four presidents since then. Until 1991, Kenya was a single party state following a constitutional amendment in 1982 that had made the country a *de jure* single party state. In December 1991, Kenya became a multiparty state with general elections being held in 1992 (Patel, 2001). Since the return to a multiparty system, the general elections in Kenya

have been marred by ethnic violence, bar the 2002 general elections. The most popular occurrence of ethnic violence was in 2007, following the disputed results that declared victory for the former president, Mwai Kibaki. However, it is noted that the ethnic violence that occurred in 1992 and 1997 was of massive proportions, with the casualties from the 1992 violence eclipsing the numbers of 2007 (Norad, 2009). As such, politically ethnic-fuelled violence has been a scar for Kenya, with far-reaching negative impacts on the country. The floriculture industry in Kenya, with its multicultural labour force, was greatly affected in 2007 with flower exports reducing by 24 per cent due to the violence (Ksoll et al., 2010).

Kenya's political arena has ameliorated following a smooth transition during the 2013 general elections. In the recent past, Kenya has undergone major political changes with the promulgation of the New Constitution in August 2010 being the outstanding highlight (AfDB, 2014). The New Constitution gave way for a devolved government, and devolution effectively commenced in March 2013 after the general elections that included the election of the County Governments. With regards to taxation, the Counties are entitled to raising local taxes following authorization by the Parliament, with exception to property and entertainment taxes (AfDB, 2014). With the new law therefore, floriculture agribusiness companies could be subjected to additional taxation should the County government impose additional taxes to those already imposed by the national government.

Albeit slight improvements, corruption has notoriously plagued the country, with Kenya being ranked 136th out of 177 countries on Transparency International's Corruption Perceptions Index in 2013, eleven places above its ranking of 147 in 2008 on the index. In the Mo Ibrahim Index of African Governance, Kenya ranked 21st out of 52 African countries, with national security scoring the lowest and registering the largest decline in 6 years (IIAG, 2013). Presently, a major challenge facing Kenya is insecurity that has been compounded by political instability facing South Sudan and Somalia, in conjunction with ongoing war against the Al-Shabab. The recruitment of youthful Kenyans into terrorist activities has been primarily blamed on economic hardships and dearth of employment opportunities (AfDB, 2014).

3.3 Socio-Economic Context

Kenya is a low-income level country, with a GDP valued at 40.70 billion US dollars as of 2012 (World Bank, 2014), representing the largest economy in East Africa. The economy of Kenya is greatly service-based, with the service sector contributing 63.4 per cent of real GDP in 2013. The agriculture sector contributed 20.7 per cent, while the industrial sector accounted for 15.9 per cent of the GDP in 2013. In the recent past years, the GDP has grown at a moderate pace compared to the rest of East African countries, as illustrated on the table below:

	2008	2009	2010	2011	2012
Burundi	5.0	3.5	3.8	4.2	4.0
Ethiopia	11.2	10.0	8.0	7.5	7.0
Kenya	1.5	2.7	5.8	4.4	4.6
Rwanda	11.2	4.1	7.2	8.3	7.7
Tanzania	7.4	6.0	7.0	6.4	6.9
Uganda	7.7	7.0	6.1	6.7	2.6

Figure 5: GDP growth among East African countries.
Source: International Monetary Fund (IMF) (2013).

Between 2008 and 2012, Kenya's exports and imports both increased, but a major trade deficit was recorded during that period. The exports accounted for 27 per cent of GDP, while imports on the other hand accounted for a notable 47 per cent of GDP. The remittances flowing into the country significantly cushioned

the trade deficit, as the amounts increased more than twice from USD 611m in 2008 to USD 1277 in 2013. The levels of foreign direct investments (FDI) lagged behind those of other East African countries, although there was a rise from USD 605m in 2009 to USD 994m in 2013 (AfDB, 2014). Domestic demand was the primary source of economic growth in Kenya, with private consumption accounting for a mammoth 77.3 per cent of the GDP in 2012. The low contribution of external demand to the country's GDP was significantly due to low export volumes comprising mainly of lower value primary exports, juxtaposed with high value non-food industrial imports. The agriculture sector accounted for 65 per cent of the exports, providing 60 per cent of the total employment including 18 per cent of all formal employment (KIPPRA, 2013). In this view, Kenya's government's focus on adding value to agricultural products through incorporation of key industries such as processing and packaging is corroborated.

While the services sector has contributed the largest share in the country's GDP growth, the agriculture sector still constitutes the single largest sector accounting for almost a quarter of the country's GDP (KIPPRA, 2013). The proportion of public expenditure on agriculture and rural development, however, has been relatively low and on the decline compared to other sectors. The country's private sector has been the lifeblood of the economy, contributing 80 per cent of the GDP and employing 80 per cent of the formal workforce. The key sectors dominating the private sector are the ICT, tourism and finance. A number of challenges facing the private sector include poor infrastructure, corruption, low-trained workforce and an unfavourable regulatory environment (AfDB, 2014).

In the Global Competitiveness Report (2014), corruption unsurprisingly ranked as the most limiting factor for doing business in Kenya, followed by access to financing and unfavourable tax rates. Other factors undermining Kenya's competitiveness included vulnerable employment among a significant portion of the population, coupled with stagnant social mobility that exacerbates poverty levels in the country. The African Development Bank (2014) in fact noted that economic growth in Kenya has been highly non-inclusive, and has been characterised by skewed income distribution. According to the World Bank's ease of doing business, Kenya ranked 129th, although the number of registered companies increased from 166,793 in 2008 to 225,048 in 2011. The country's competitiveness improved from a ranking of 106 out of 144 countries in 2012/13 to 96 in 2013/14. Previously, among the factors negatively affecting the competitiveness of the country's economy were poor ethical performance by firms, low

investor protection, and questionable integrity of auditing and reporting standards as well as lack of protection of minority stakeholders (KIPPRA, 2013).

The Kenyan economy boasts a relatively high employment to total population ratio among working age population, people aged between 15 and 65 years, as it stood at 69 per cent in 2009. However, this ratio is not evenly spread out, and it is significantly lower for the age category 15-24 years, which stood at 43 per cent in 2009. The informal economy holds the lion's share of employment opportunities, rising from 70 per cent in 2000 to 83 per cent in 2012. This dominance was for instance corroborated in 2009 where out of 445,900 employment opportunities that were created, a mammoth 88 per cent of those emanated from the informal sector, a ratio that creates a significantly imbalanced dichotomy between the formal and informal employment. The sheer dominance of the informal economy in Kenya presents an overwhelming challenge in that the informal sector is immensely characterised by low productivity and low wages, in addition to family labour that is usually unpaid culminating in potentially lower quality of employment (KIPPRA, 2013).

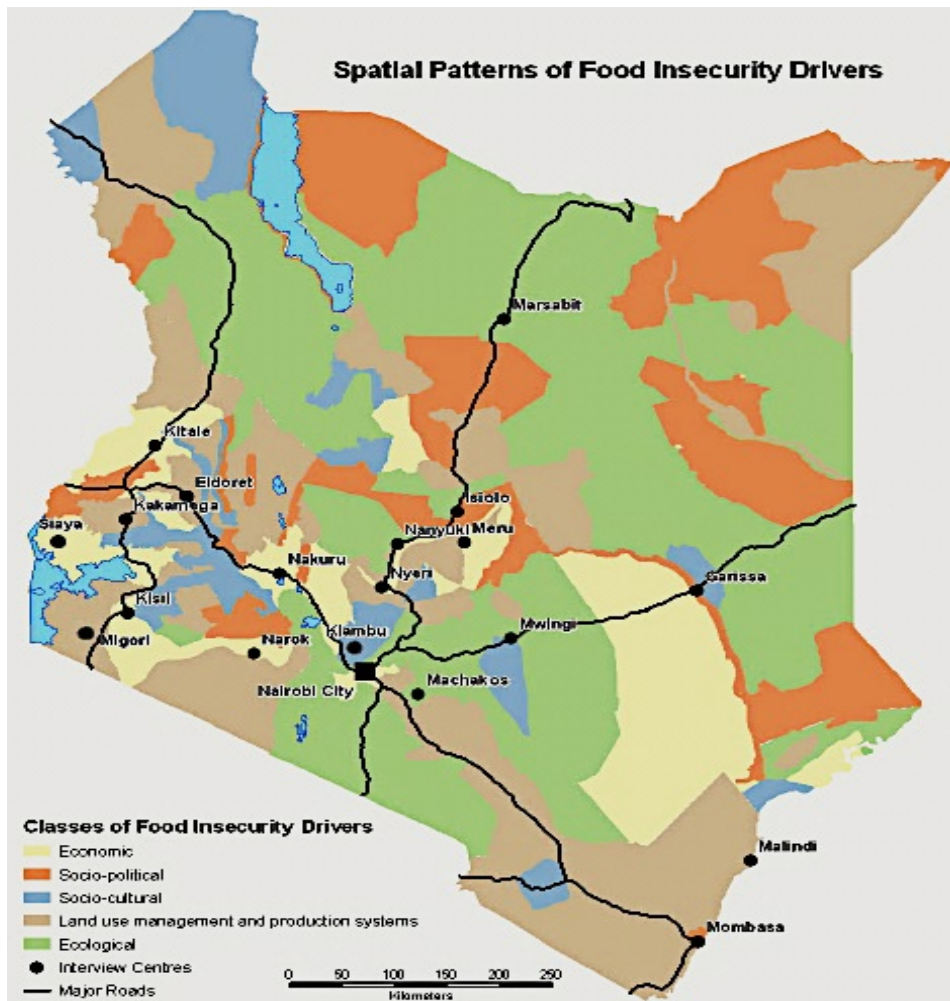
The labour force at the disposal of Kenya's economy possesses low formal education. A noteworthy 10 per cent of the population has never attended school, while the proportion that has at least completed primary school education, or enjoyed partial secondary education constitutes 65 per cent of the population (KIPPRA, 2013). The high expenditures on the education sector are indicative of government efforts to address this shortcoming in the country.

3.4 Status of National Food Security

A perennial recipient of humanitarian food assistance, Kenya's food insecurity remains a grave issue. According to the Global Food Security Index (GFSI) (2013), Kenya ranked 80th out of 107 countries, a year in which more than 2 million people were in need of humanitarian food assistance, underlining the extremities of food insecurity in the country (Kenya Food Security Outlook, 2013). Over 10 million Kenyans suffer from chronic food insecurity and poor nutrition. The already high number of food insecure people doubles in cases of transitory food insecurity occurring due to droughts and floods. The crippling state of food insecurity has been reflected among children, 35 per cent of whom are stunted, and among adults with 16 per cent suffering from anaemia due to iron deficiency. In addition to compromising livelihoods, undernourishment culminates in a less productive populace that greatly constrains Kenya's development, a factor that underlines the significance of food security in national development agenda (GoK, 2011).

There are numerous drivers of food insecurity in Kenya that can be categorised into economic, socio-political, socio-cultural, ecological, and land use management and production systems (Grimm et al., 2012). The geographical diversity that characterises Kenya coupled with the situ-specificity of food security aspects leads to a notable regional differentiation in the chief causes of food insecurity. In northern Kenya, lack of adequate water and varying rainfall have been highly responsible for food

insecurity, as well as poor infrastructure and lack of government support that have greatly marginalized the region. Among the pastoralists, conflicts and cattle rustling have devastated food security. The south-eastern part of Kenya that constitutes Tana River and Garissa among others, suffers from inconsistent rainfall and inadequate water, and poor land use and agricultural practices. Recently, the government of Kenya has engaged in a national irrigation project in Tana River County in efforts to bolster food availability in the country. In the high agricultural potential areas comprising south-western Kenya, central and western highlands, and the Rift Valley, food insecurity has chiefly been driven by adverse economic situations, deficient land use practices and water management, as well as land access-led conflicts (Grimm et al., 2012). The map below shows Kenya's spatial patterns of the drivers of food insecurity:



Map 1: Spatial patterns of food insecurity drivers in Kenya. Source: Grimm et al. (2012).

At the national level, the country's food security faces a number of critical emerging issues, among them climate change, whose impacts are anticipated to culminate in more frequent droughts and floods that will significantly exacerbate food insecurity in the country (GoK, 2011). National food stocks have been in decline since the mid-1990s, a trend akin to the global stocks that have been declining by 3.4 per cent on an annual basis. The decline in Kenya's food stocks has been taking place against a backdrop of a rise in competing uses of agricultural land that include leasing land for production of export products,

although the government maintains that insuring food security for the citizenry remains the principal priority (GoK, 2011). Based on this background, the Kenya's Food and Nutrition Policy is reviewed in the next section.

3.5 Kenya's Food and Nutrition Policy

In the context of the above background on the status of food security in Kenya, the national food and nutrition security policy (FNSP) constitutes an important component in efforts geared towards improving the food security situation in the country. The primary aim of the FNSP is that, "...all Kenyans, throughout their life cycle enjoy at all times safe food and water in sufficient quantity and quality to satisfy their nutritional needs for optimal health", (GoK, 2011: 9). The country's policy is highly embedded in FAO's depiction of food security as illustrated by the following definition:

Food security is said to exist when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. This requires a nutritionally diverse diet (GoK, 2011: 1).

The policy foregrounds the fact that Kenya has immense work ahead in the efforts to insure food security by taking into account UN's report that the country was unlikely to meet the 2015 goal of halving the population living in extreme poverty and hunger. The efforts to meet this seemingly unassailable goal have been illustrated by GoK's alignment of its initiatives towards food security with international commitments, comprising the World Food Summit of 1996, the MDGs declaration to end hunger and extreme poverty, the Comprehensive Africa Agriculture Development Programme (CAADP) and the New Partnership for Africa's Development (NEPAD) (GoK, 2011). However, public expenditure on the agriculture sector is only 4 per cent of the GDP, a significantly lower percentage against the 10 per cent agreed upon in the Maputo declaration, that was meant to realize an annual 6 per cent growth in the agricultural sector in the involved countries (KIPPRA, 2013).

Domestically, fortification of linkages between key sectors that offer massive potential for perking up food security in the country will be implemented. Based on past outcomes, linkages between the agriculture sector and the health sector offer such potential for ameliorating food security in the country, and will therefore be prioritised in future undertakings. The FNSP underscores the role of awareness in promoting food and nutrition security in the Kenya. In particular, schools provide unique settings for knowledge dissemination to masses. By partnering with the Ministry of Education to incorporate nutrition and food security components in the school curriculum, important strides can be made towards having a populace notably informed on the topic. In addition, the introduction of meal programmes in schools where food is sourced from surrounding communities and school gardens, a win-win situation can be

created for students and local communities. Along the educational lines, initiatives will be put in place to sensitize the general public on nutrition security (GoK, 2011).

Among the components of food security to be addressed is food availability. In the past three decades food availability per capita, generally perceived as the supply of maize, has shrunk by over 10 per cent against an annual increase of 3 per cent in consumption. Maize is a staple food in Kenya but the huge dependence on it has constrained nutritional diversity, negatively impacting food security in the country. The policy pinpoints local agricultural production as the prime way to address inadequate food availability in the country. The current constraints to food production include low soil fertility, climate change, and lack of access to credit, and the government intends to surmount these obstacles mainly through research and dissemination of suitable technologies, among others. An onerous challenge facing the said efforts to ameliorate food availability is the fact that majority of Kenya's agriculture is rain-fed, and thus enormously vulnerable to extreme weather changes such as droughts and floods (GoK, 2011).

Beyond food availability, food access has been a tremendous obstacle to food security. With the majority of Kenyans depending on markets for food, access to food has been stifled by the tremendous incidences of poverty in the country, with low incomes being the main constraining factor (GoK, 2011; KIPPRA, 2013). In response, the FNSP highlights employment creation as a nostrum to poverty and thereby food access, but at the same time foregrounds the need to augment the low wages in the commercial agricultural sector. A review of the minimum wages in the sector will thus be conducted while taking into account nutrition and food needs, in addition to inflation and labour productivity (GoK, 2011: 17). With a significant proportion of Kenyans depending on markets to address their food needs, the government places markets at the core of the efforts to promote national food security by adopting a focus on infrastructural improvement to lower transportation costs and ultimately the cost of foodstuffs.

The FNSP, however, does not in particular underline the role of agribusiness in bolstering Kenya's food security. The main approach outlined views food security as a process that begins with food production, followed by delivery of agricultural (food) products to the market, where they can then be accessed to address people's food needs. Such an approach contrasts with the emphasis given by the EU on the significance of agribusiness in being central to addressing the challenge of food insecurity within African countries. The underlined role of agribusiness, referred to as commercial agriculture in the FNSP, is one of a mediating factor through provision of employment that guarantees financial capital necessary to access food from the market. The EU on the other hand views agribusiness as laden with the potential to reach and uplift many smallholder farmers in African countries. As such, besides providing employment opportunities, the local population can engage in productive agriculture that empowers them to meet their food needs. It is interesting that both the FNSP and EU's approach recognize the significance of linkages with other sectors in the economy in impelling food security. A closer look into Kenya's agribusiness strategy further provides a sturdy basis for investigating the role of agribusiness in promoting food security in the country.

3.6 The Floriculture Industry in Naivasha, Kenya

The heart of Kenya's flower agribusiness investments is the Lake Naivasha basin in Naivasha Sub-County in Nakuru County, formerly in the Rift Valley province. The basin is a hub for numerous economic industries that include the lucrative floriculture industry, geothermal and hotel industry. The comparative advantage of the basin rests on the availability of quality water, favourable climatic conditions, relatively quality transport network, and nearness to Nairobi and importantly, the Jomo Kenyatta International Airport, which facilitates the transport of fresh agricultural products to markets abroad (Nyangena and te Welde, 2012).

The advent of the floriculture industry in Naivasha is traced back in the 1980s, but it was in the 1990s that the industry experienced extremely fast growth that was accompanied by rapid increase in population in the area. While in 1969 there was an estimated population of 7,000 people, the present-day population exceeds 300,000 people. The fastest population growth was recorded in the decade between 1989 and 1999, which went up to 64 per cent. Population growth rate that has reduced to 13 per cent, but it is still extremely high relative to the national 2.7 per cent annual growth rate. Unfortunately, the infrastructure serving the population has not kept pace with population growth (Nyagena and te Welde, 2012; World Bank, 2014).

Kenya's floriculture industry primarily exports to the European Union (EU) where it accounts for 20 per cent of all the roses, and 25 per cent of all the flower imports, followed by Colombia and Israel which respectively account for 17 per cent and 16 per cent of all flower imports into the EU (Nyangena and te Welde, 2012). The floriculture industry in Naivasha is the largest in Kenya, and contributes 70 per cent of the country's cut flower exports. A key player in Kenya's economy, the industry contributes 10 per cent of the country's foreign exchange revenues, 2 per cent of the GDP, and directly employs between 50,000 and 60,000 people, and an additional 500,000 indirectly through backward and forward linkages involving services such as banking, packaging, transport and farm inputs. The sector's contribution to economic development has particularly been highlighted by Naivasha's 8.3 per cent ratio of formal employment to population, which clearly trumps the national 5.1 per cent ratio (Mekonnen and Hoekstra, 2010; WWF, 2011). Additionally, poverty incidence in areas around the flower farms ranged between 30-40 per cent in 2003, a percentage lower than the national level that was approximated at more than 50 per cent (CBS, 2003).

Despite the positive impacts highlighted, the floriculture industry in Naivasha is faced with numerous challenges. The labour conditions of employees in the industry have extensively come under the microscope for various reasons. The terms of employment raise concern in that temporary, seasonal and casual labourers comprise 65 per cent of the labour, exposing them to critical income and job insecurities (Lawrence, 2010). Employees in the industry experience abject treatment especially women for whom sexual harassment has been a predominant issue. During the peak periods, employees are coerced to work

overtime. All the while, most of the incidences are not reported owing to immanent job insecurity in the industry, a possible illustration of the desperate and vulnerable nature of the employees (Nyangena and te Welde, 2012).

Beyond the plight of the employees, the firm establishment and expansion of the flower industry has come at a cost of displacement of some population groups. The Maasai who practised pastoralism on the tracts of land currently under flower cultivation have since been displaced and, even access to the lake to water their animals has been restricted following ownership of land by agribusiness investors. In addition, the lake water has been polluted rendering it virulent for animal consumption. Following recent developments in part by the national government, important corridors are being established to enhance access to the lake by pastoralists, and consequently mitigate pastoralist-farmer conflicts over water access (Nyangena and te Welde, 2012).

In a different turn of events, numerous developments in Naivasha have also impacted on the floriculture industry. In the past half a century, the upper catchment of the Lake Naivasha basin has undergone myriad changes that have consequently affected water inflows into the lake. One of such changes entails small-scale rain-fed agriculture that has led to deforestation as the quest for arable land has intensified. The land, divided into small plots unable to foster crop rotation or diversified farming, has been left infertile. The already dire situation has been exacerbated by continued population growth that has coerced further land sub-division and deforestation (Kut and Agevi, 2007).

Diminishing forest cover due to anthropogenic pressures has culminated in extreme siltation of the lake during the rainy seasons, and subsequent lake decline during the dry season. In addition to siltation, sediment and nutrient loads into the lake have resulted from overgrazing of the riparian land and the imperative use of fertilisers by farmers owing to low soil fertility (Everard et al., 2002). The huge amounts of sediment deposits into the lake by the two main rivers, Gilgil and Malewa, feeding into Lake Naivasha, have largely reduced the depth of the lake. As a result, the lake is exposed to extremely high levels of water loss via evaporation, which accounts for about 60 per cent of the lake's water output, an enormous proportion compared to abstraction that accounts for around 10 per cent to 20 per cent (Nyangena and te Welde, 2012).

In response to the glaring realities, WWF and CARE International enacted a Payment for Environmental Services (PES) scheme in 2008 to promote sustainable agricultural practices among upstream communities. The outcome would be increased productivity and reduced environmental impacts, and enhanced inflows into Lake Naivasha, and thereby create a win-win situation for both upstream and downstream communities, of which the floriculture industry is part.

At the international level, the floriculture industry in Kenya is faced with policy challenges that influence access to the EU market. Kenya has enjoyed a privileged non-reciprocal market access to the EU that emanated firstly from Lome Conventions for the years between 1975 and 2000, after which followed the Cotonou Agreement spanning the period between 2000 and 2007. The preferential trade was primarily

aimed at spurring industrial development among African, Caribbean and Pacific (ACP) countries, of which Kenya was part. Following the expiry of the Cotonou agreement in 2007, Kenya along with other East African countries have been engaged in negotiations with the EU over a comprehensive Economic Partnership Agreement (EPA) that looks to sustain and improve previous trade relations. The EU has notified Kenya and other ACP countries that the duty free access of the EU market will cease by 1st October 2014 should they not have signed an EPA (GoK, 2014).

Among other East African countries comprising Uganda, Tanzania, Rwanda and Burundi, Kenya boasts the largest economy in the region. However, given her trade relations with the EU, Kenya's economic progress could prove to be the undoing of her preferential treatment. Should Kenya be classified as a developing country, the preferential access to the EU market will halt translating to a 16 per cent duty on horticultural products (Kinyanjui, (n.d)). It is conceivable that such measures will impact greatly on the floriculture industry in Kenya, and ultimately the workforce in the industry should companies extend the increased costs of doing business to the employees. As such, the floriculture industry in Kenya is confronted with both endogenous and exogenous forces that have far-reaching consequences to stakeholders in the industry not least the employees.

3.7 Kenya's Agribusiness Strategy

The Ministry of Agriculture in Kenya laid down a strategy to revamp the underperforming agribusiness sector in the country that will be implemented within a period of 8 years. In Kenya's Vision 2030, the agricultural sector is foregrounded as one of the key sectors to propel the country towards reaching the targeted annual economic growth of 10 per cent. The overriding goal as outlined in the Vision 2030 is to transform subsistence farming that is presently characterised by low levels of productivity and value addition to 'an innovative, commercially oriented, internationally competitive and modern agricultural sector' (GoK, 2007).

The strategy recognizes the agricultural sector as fundamental to Kenya's food security, and to the economy through foreign exchange earnings. The overriding goal, however, is modernizing the agricultural sector which should impel Kenya's economic growth. The approach draws from the global experience that in countries where poverty has been sustainably eradicated, increased economic growth was attained as a precursor, and the agriculture sector in Kenya provides such a significant opportunity towards augmenting economic growth. The unexploited potential in the sector can be markedly realized by increasing the market value of primary products through incorporation of processing, branding, quality certification and accreditation operations in the value chain (GoK, 2012).

After production, markets at different levels constitute another area of intervention. International markets provide a platform for maximising income from high-value exports, and creating employment in the local economy. At the regional level, the country ought to focus on areas in which it has competitive and comparative advantage while the inclusivity within the value chain should be prioritised with a focus

on the domestic market. In order to reap maximum benefits from the market, the traditional trap of a supply-driven market should be overcome by employing a demand-driven approach facilitated by the availability of up-to-date information on the markets. To further ameliorate functionality of the markets, infrastructural development that includes establishment of modern agri-food markets will be undertaken (GoK, 2012).

A critical factor in the processes of modernizing the agricultural sector is governance. In the current state, governance structures in charge of the agribusiness sector are not in harmony and this has resulted in multiple taxation and licensing in addition to high cost of inputs. These factors, in addition to political interference that has impeded policy implementation, have greatly enfeebled the ardour of potential agribusiness investors. As a way forward, uncertainty in the policy environment needs to be trumped in order to raise confidence among investors. According to the strategy, the existing agribusiness policies and laws will be harmonised and a body charged with the overall mandate over the sector will be established. As a way to ensure commitment by all key stakeholders, the government, private sector and development partners will finance the implementation of the strategy (GoK, 2012).

The agribusiness strategy is notably built on modernization ideologies, with the primary aim being to modernize the agriculture sector and move away from traditional agricultural practices. In this view, the ‘traditional’ and the ‘modern’ are viewed as the two polar points of a linear continuum, with the ‘traditional’ being the primary obstacle to development (economic growth) (Kimakowitz, 2012). By predicating the achievements of poverty alleviation by other countries on an economic growth-first approach, Kenya’s agribusiness strategy intimates there is an evolutionary path that can be replicated to attain similar goals. The strategy views food security in relation to agricultural production, without any explanation on how production will indeed reach not only the consumer, but also groups that are acutely faced with extreme food insecurity. Economic growth is greatly treated as the end of agribusiness activities, instead of being a means to improving the quality of life. As such, it is not surprising that food security is only brushed past in the strategy, raising questions on the extent to which Kenya’s future agriculture is actually tailored towards addressing the challenges facing Kenya, with food insecurity proving an insurmountable challenge.

4. Conceptual Framework, and Methods and Methodologies

In this section the conceptual framework for the research study is presented and explained. Following the framework are the research methods and methodologies that inform on how the research for this study was carried out, and the justification for employing the selected methodological approaches.

4.1 Conceptual Framework

The organization of the research study is greatly informed by the theoretical background, which facilitates the establishment of essential factors and variables and the presumed relationships among them. The study is visualized through the following conceptual framework:

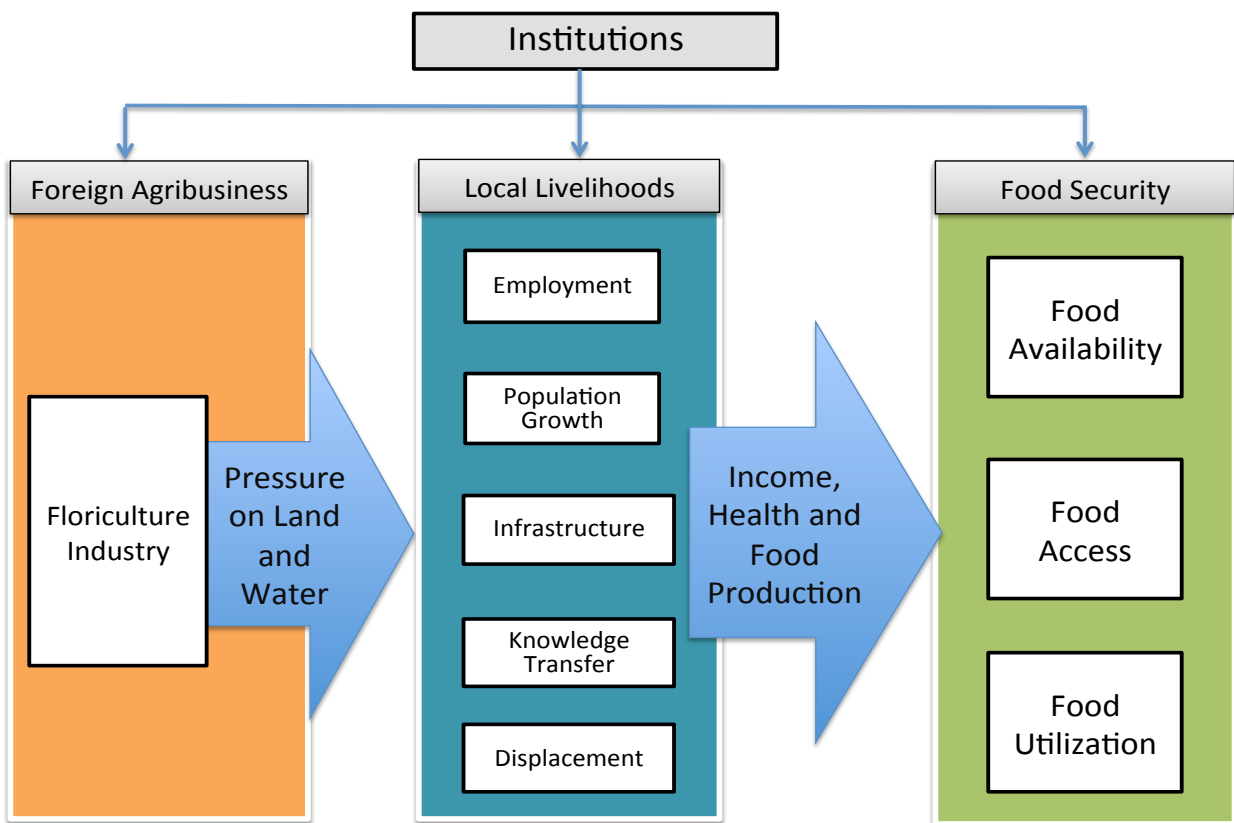


Figure 6: Conceptual framework for the research study in Kenya.

The conceptual framework above illustrates a web of processes that are originally driven by the floriculture industry, resulting in impacts on local livelihoods and food security. Institutions are hypothesised as having an overarching influence on the conduct of business, people’s livelihoods, and local food security. In this research study, institutions are primarily viewed in the lens of government institutions and certification bodies that regulate the conduct of agribusiness in Kenya. In line with the institutionalist approach, government and certification institutions hypothetically constrain agribusiness investments by enforcing regulations, referred to as the ‘rules of the game’.

Flower agribusinesses hinge on land and water to practise agriculture, exerting significant pressure on these resources. The competition for land and water that emanates from the entry of the floriculture industry restricts food production and thereby hampers food availability. The conduct of agribusiness, however, generates employment opportunities that are vital in a country faced with high unemployment rates. By generating income, households are able to address their livelihood needs. According to the UU IDS (2013), the contributions of foreign agribusiness investments to food security in various African countries have mainly been associated with the offer of employment to local populations. Employment in the industry instigates population growth by attracting labour from other localities. Unfortunately, the rapid growth in population has not been matched by a similar increase in resources necessary to support local livelihoods (Nyangena and te Welde, 2012). The floriculture industry is postulated to play a key role in improving infrastructure to facilitate the conduct of business in Naivasha area. The improved infrastructure is postulated to facilitate food access among local populations, which is key to bolstering food security (Kassie et al., 2012). Given the wealth of resources and technological advancement of the floriculture industry, a further hypothetical contribution to local livelihoods is the transfer of agricultural knowledge to local agricultural practitioners and in particular smallholder farmers. In the event that local food production is augmented following ameliorated agricultural practices, food availability and thus food security is enhanced.

Despite the positive contributions highlighted thus far in the model, the floriculture industry is argued to have disrupted local livelihoods by displacing households from the large tracts of land currently under flower production. The displacement fetters local livelihoods, which among other impacts handicaps important means of addressing their food needs culminating in food insecurity among the affected groups. Another major critique of the floriculture industry by previous research entails the poor working conditions in the industry that imperil the health of the workforce. Poor health is a severe detriment to food utilization by the affected individuals, which in return compromises the health of an individual, resulting in a two-way impact.

As such, there are diverse ways in which the floriculture industry impacts on local livelihoods and food security, and a livelihoods approach is employed in investigating these impacts by delving into the livelihoods of the households of employees in the industry. A further investigation of household dynamics is facilitated by access theory, informing on how social capital is a fundamental tool for households dependent on wages from the floriculture companies. With institutions having overarching influence over the different facets of study, an institutional approach is used to scrutinize the manner in which institutions impact on the conduct of agribusiness, local livelihoods and food security. In addition, the presence of the floriculture industry is anticipated to impact on different stakeholders, hence the use of the stakeholder theory. The conceptual framework thus informs on key presumptions of the research study, thereby setting a strong basis for conducting research in Naivasha, Kenya. The following section

informs on the research setting and research methodologies that were utilized, as well as the limitations to the research study.

4.2 Research Setting

The field research was primarily carried out in Naivasha Sub-County, the hub of Kenya's floriculture industry. The Sub-County is in Nakuru County, and in the formerly Rift Valley Province. Being home to Kenya's biggest and most established floriculture industry, Naivasha constituted an apt setting for studying the impacts of foreign agribusiness investments on local livelihoods and food security. The floriculture industry is situated adjacent the freshwater Lake Naivasha, which acts as the primary source of water. The large-scale nature of the industry translates to occupancy of swathes of land, and combined with the significant dependence on the lake waters, Naivasha presents a location apposite to the research study.

The floriculture industry in Naivasha is particularly popular around Kenya for its provision of employment to diverse groups of people, with labour hailing from all over the country. As immigrants constitute a notable percentage of the population in the area, the dynamics of local food security provide an interesting case that involves both indigenous and immigrant groups. In such manner, the usual dependence on subsistence farming in rural areas to address many of the household food needs is hypothetically challenged with the entrant of immigrant groups working in the floriculture industry, presenting a unique case of differentiated livelihoods in a rather rural setting.

Nairobi constituted a secondary research setting, as it is home to important respondents such as the Kenya Flower Council and the Dutch Embassy. The nearness to Nairobi from Naivasha greatly facilitated the conduct of interviews.

4.3 Research Design

The first phase entailed desk research in the Netherlands, exploring existing literature on foreign agribusiness investments in Africa, status of food security in Kenya, and possible direct and indirect linkages between the two topical dimensions. In this first phase, Naivasha Sub-County was identified as the ideal research setting with its recognized status as the heartbeat of Kenya's floriculture industry. The existence of the industry for around three decades presented an opportunity to look into long-term impacts of the industry on the local food security situation based on not only short-term views, but also long-term experiences. The desktop research culminated in a research proposal³ that acted as a key reference point for the research study.

The second phase of the study entailed conducting field research work in Kenya. As earlier informed, Naivasha and Nairobi were primary and secondary settings for the research, respectively. At first, a strategic visit to Naivasha was done to identify the key research focus areas. The South-Lake

³ This can be accessed through direct request to K.E.Kirigia@students.uu.nl

region, home to many floriculture agribusiness investments and comprising the three towns of Kwa Muhia, Karagita and Kamere was chosen. The towns are the chief residential places for employees working in the floriculture industry.

Field research was carried out for 11 weeks, with a lion's share of that period being spent in Naivasha and living in Kwa Muhia, among households of employees in the floriculture industry. This facilitated participatory observation during the research, granting an important entry into the day-to-day lives of households in their domestic quarters. For instance, by sharing a single source of water (tap) and sanitary facilities with the households, the challenges involving water access and sanitation became evident through a real life experience. In addition to participant observation, living among people working in the floriculture industry facilitated identification of further respondents in the research study.

Purposive sampling and snowballing techniques were used to select the sample of the research study. The primary respondent group in the field research were employees in the floriculture industry, a choice that was motivated by a number of reasons: working in the floriculture industry exposes employees to the day-to-day activities of a floriculture agribusiness, and the conditions under which work is carried out. In addition, the workforce is the primary target of developmental initiatives that are implemented by the industry, and thus provides a strong basis for scrutinising responsible business.

First-hand experiences by the workforce were deemed highly important for the research study, in a bid to establish the impacts of the industry on local livelihoods. This group also forms the majority of the population in areas around the floriculture industry, and are therefore well positioned to experience impacts arising from the floriculture companies in the area. In addition, the intensive engagement of the employees in the floriculture industry aids in reflecting on real experiences that facilitate identification of linkages between the industry and the food situation in Naivasha. The relatively easier reach of employees as opposed to floriculture companies enables involvement of employees in the research, with some respondents even working in companies that may not participate in the research. This favourable reach of employees attenuates the dearth of involvement of multiple floriculture companies.

Operationalization in the research was enacted at different levels. Firstly, interviews involving employees in the floriculture industry looked into the status of food security at the household level. The household was chosen as the fitting unit of research since a household comprises the structure around which food consumption takes place. Heads of households primarily assume the duty of providing for their families, and therefore were the most fitting respondents in the research on household food dynamics. In the research, a total of 35 households were interviewed, with 12 women and 23 men taking part. While it would have been interesting to have an equal gender representation, the nature of work at the floriculture industry made it difficult to reach women. Employees only come from work in the evening, and this is the time when women engage in food preparation for their households, making it difficult to involve more women in the research. However, analyses of the data collected did not show any significant differences between responses given by women and men.

Besides employees in the floriculture industry, the research engaged other respondents with relevant knowledge on the industry. The table below shows the different categories of respondents besides the households of employees:

Respondent Category	Number of Respondents in a Category
Horticulture (including floriculture companies) Farms	5
Non-Governmental Organizations (NGOs) and Institutes	11
Kenyan Government Officials	3
Business Operators	7
Farmers (Maiella)	5
Dutch Embassy	1
Key Informants	1
Total	33

Table 1: Categories of respondents in the research study.

The horticulture farms, which include companies in the floriculture industry, were engaged in the research for their central role in utilizing land and water resources in Naivasha area, hence the hypothesis that their actions impacted on local food security situation. Out of the five agribusiness companies interviewed, two of them were floriculture companies, one was a flower breeding company, another cultivated vegetables mainly for export, and the final one engaged in fodder crops and beef production. While the research aimed to primarily involve floriculture companies especially due to their dominance around Naivasha, it proved extremely difficult. For instance, requests for interviews were turned down outright, while emails were not replied at all. In some cases, the company continually postponed the interview date until the fieldwork timeline was over. The involvement of agribusiness companies that did not engage in floriculture agribusiness was an alternative plan based on the fact that those companies employed locals, and used water and land resources similarly to the floriculture agribusiness.

The other category groups were strategically involved in the research for their offer of specific information that complemented and corroborated research findings from the employee households in Naivasha and the floriculture industry, and as such ensure validity in the research. The NGOs interviewed were engaged in a broad range of topics surrounding floriculture activities such as certification, workers' rights, and natural resource management, while the institutes, three of which were parastatals, mainly dealt in water and environmental management. All of the NGOs were based in Kenya, while one is based in the Netherlands. Interviews with government officials elicited important information about the Naivasha area and the impacts of the floriculture industry from a government's perspective, as well as the relationship between the agribusiness investments and the government. In order to comprehend food market dynamics

among households in the area, business operators dealing in food were interviewed, providing valuable information especially with regards to food access and availability. The aspect of food availability was further investigated through interviews with smallholder farmers in Maiella, who also provided essential information about knowledge transfer and other impacts from the presence of the floriculture industry in the area. At an international institutional level, the Dutch Embassy in Nairobi was interviewed to find out more about the relationship between foreign investors and their governments, with the Dutch case as an example. Finally, an interview with one key informant, a primary school teacher, informed greatly on the status of food insecurity based on experiences with primary school children.

Data collection was the core activity in the field research. Semi-structured interviews were used to collect data among all the respondents outlined in the table above, while little-structured interviews were used to gather information especially from local members of the community around Naivasha area. Majority of the respondents were interviewed away from their place of work, as they felt more comfortable to respond to questions without the fear that the employing company would rebuke them for any critical information given. In cases where interviews were conducted at the workplace, respondents were assured of confidentiality. The semi-structured interviews were preferred in the research as they granted respondents an opportunity to share information that transcended the list of questions, and as such illuminate on important topics that ensured a deeper comprehension on the intricate relationship between the floriculture industry and local livelihoods and food security. In addition to semi-structured interviews, narratives in the form of little-structured interviews were greatly facilitated by the use of Kiswahili, a national language in Kenya that was used in the research area given the multicultural background of the residents. Preliminary data analysis was carried out in tandem with data collection, and as a result the questionnaire⁴ was continually improved during the data collection process to incorporate additional important topics in the list of questions, an approach hailed by Creswell (1994). Given the short duration of the research study, the continual improvement of the questionnaire proved vital in ensuring coverage and collection of essential data in the field research.

A triangulation approach was used in collecting both qualitative and quantitative data, with majority of the data being qualitative in nature. The collected information was transcribed and coded to identify key themes arising from the research. In order to ensure internal validity of the data collected, confirmatory questions were used as well as engaging the respondents in an explanatory conversation to illuminate further on their responses.

The data analysis was carried through the use of Microsoft (MS) Excel and the Statistical Package for the Social Sciences (SPSS) version 21. Through MS Excel, quantitative data was analysed and in various cases diagrammatic representation of the data was done. In addition, MS Excel enabled counting of cases illuminating certain thematic dimensions in the qualitative data. SPSS was used to analyse quantitative data, and was particularly handy in dealing with categorical data and multiple response cases.

⁴ Final versions of questionnaires for select categories are contained in the appendix.

4.4 Research Challenges and Limitations

The research encountered a number of challenges and limitations. An immense challenge was the difficulty in reaching floriculture companies, who turned down requests to participate in the research. As a result, only two floriculture companies were interviewed, and the inclusion of non-floriculture agribusiness companies in Naivasha was used as an alternative approach to deal with the difficulty of reaching floriculture companies. The non-floriculture companies were included since they also depend on land and water resources to conduct business, and generated some information that could be contrasted with that from the floriculture companies.

The households interviewed in the research were purposively selected, with the snowball method being used to reach additional respondents. The lack of a randomized sample limits the external validity of the research, especially given the high number of employees in the floriculture industry in Naivasha. As such, the quantitative findings would best be used for greatly informing on the research sample. As an attempt to overcome this challenge, respondents were engaged in in-depth interviews to give detailed information as opposed to only responding to the already prepared set of questions. As such, the research draws conclusions from detailed information gathered from the respondents.

Another limitation to the research arises from the utilization of the four-dimensioned food security concept as defined by FAO (1996). A look into the status of food security from the household level is undermined by intra-household level variations, which could translate to different levels of food security among the members of a household (Pinstrup-Andersen, 2009). Such a focus would supplement findings at the household level, and therefore inform on the patterns of food security among persons working in the floriculture industry relative to those not plying their trade in the industry.

Females are the dominant group in the floriculture industry, comprising around 60 to 70 per cent. However, participants in the research were skewed towards males, as it was more difficult to reach women respondents compared to their male counterparts. The difficulty, it was found, was greatly due to time constraints, since employees only came from work in late afternoon and early evening. The women are tasked with domestic chores especially cooking, while men could be available during that time. During the off days, it was still difficult to reach women as they undertook domestic chores that are not carried out during the week, such as laundry and general cleaning. Arguably, this is an indication of the extent to which women are limited from engaging in additional activities outside work and domestic chores.

The duration of the field research was only 11 weeks. This is a short time to thoroughly investigate factors influencing livelihoods and food security, especially in localities such as Naivasha where seasonal weather changes, for example, play a significant role. However, by involving different categories of respondents that have lived in Naivasha for a long time, it was possible to gather information based on years-long experiences in the area. As such, while the research faced various challenges and limitations, various approaches were employed to attenuate potential negative impacts on the study and thus insure the quality of the study carried out in Naivasha.

5. Competition for Resources: The Winners and Losers

This research study was built on the premise that floriculture agribusiness investments in Naivasha principally depend on land and water resources, the very resources that food production hinges on. As the floriculture industry competes for these meagre resources, it was postulated that food production is constrained and local food security impeded. Through this research that involved employees in the floriculture industry, floriculture companies, business operators dealing in food, and farmers in the adjacent food-producing communities, essential findings were uncovered that inform on the intricate relationship between the floriculture agribusiness investments and the natural resources of land and water, and the subsequent impacts on local livelihoods and food security.

5.1 Flower Agribusiness Companies: A Rundown

The Naivasha area is home to multiple floriculture companies, whose number is around 68 according to an interview with A01, one of the flower breeding companies in Naivasha. While the floriculture industry in Kenya comprises small, medium and large enterprises, a classification that is based on the land area cultivated and the number of employees (Bolo, 2008), majority of the floriculture companies in Naivasha are large-scale agribusiness investments. The lion's share of the companies is in the hands of foreigners, particularly from Europe, with others under the ownership of Asians, Americans and Kenyans. For instance, two of the three floriculture companies that participated in the research were under Austrian ownership, while the other was under Dutch ownership. A highly common feature of floriculture companies is joint ownership, with owners of different nationalities. Characteristic of a growing industry, the two floriculture companies interviewed were only established in 1999 and 2000, while the breeding company was established in 1986.

The main types of flowers grown in Kenya for export are roses, carnations spray and standard, statice, alstromeria, lilies and hypericum (KFC, 2014). While there are many other types that are usually cultivated, the farms that participated in the research mainly cultivated roses and hypericum flowers. Flower cultivation responds to demand from foreign markets in Europe, and particularly the Netherlands. While there is a permanent workforce in the flower companies, seasonal and casual labour fluctuates in response to varying demand. The floriculture industry in Naivasha has been expanding notably in the past decade as illustrated by the number of employees in the two flower companies; company A02 had 600 employees in 2004, and 1200 employees in 2014, while company A03 had 200 employees in 2004, a number that has risen to 600 in 2014. These numbers, when compared to agribusiness investments focussing on vegetable production for example, show that the floriculture industry has an extremely high direct uptake of labour. For instance, one of the farms that cultivated vegetables both for export to the United Kingdom and Kenyan local market indicated having 240 hectares of land, and around 300 employees with only half of those having permanent contracts. The offer of employment opportunities is

thus one of the standout contributions of the floriculture industry in Kenya, a major comparative advantage from a Kenya's economy perspective.

In reflection to the main attraction feature, the floriculture farms are clustered around Lake Naivasha which is the primary source of water for flower cultivation. Besides the availability of water from the lake, companies A02 and A03 informed that the nearness of Naivasha to the JKIA in Nairobi, favourable climatic conditions that facilitate fast growth of flowers, and availability of cheap labour significantly made Naivasha an attractive location for engaging in floriculture agribusiness. Based on personal observation, there are numbers of people searching for work in the flower companies everyday usually camping outside the flower farms, or at the sub-chief's place from where companies recruit new employees. Usually, employees are first offered a casual contract for a period that ranges between three weeks to three months depending on the employing company, after which a seasonal contract is offered for a period between three and eight months, before finally being granted a permanent contract.

The leading expenditures for the flower companies are external inputs such as fertilizers and agricultural chemicals, and labour. Due to changing weather conditions in the recent past, the flower companies indicated that expenditures on chemicals have skyrocketed as they battle to ensure quality flower production in the face of erratic weather conditions. In fact, the two flower companies cited weather changes as the biggest challenge in the floriculture agribusiness, a plight that could trouble the industry even more due to climate change.

Operating mainly as enclaves of agribusiness investments, the floriculture companies have strictly controlled access under security throughout, and as observed, workers undergo checks when departing the companies' premises. Inside the companies, there are multiple departments ranging from on-farm to office activities. Although the duties are clearly stratified, the 'general workers' comprise the majority of the employees and undertake duties that include planting, pruning, spraying, harvesting and packaging. According to company A03, the three processes that demand most labour are the on-field activities that entail weeding, pruning, and spraying, followed by grading and thirdly planting, while harvesting ranks fourth.

The floriculture industry is principally regulated by government institutions and certification bodies. The Kenya Flower Council (KFC) is the predominant local certification body, with more than 70 members. Flower companies have to meet stringent requirements in order to obtain certification from KFC, which operates on two levels comprising Silver and Gold Certification Standards (KFC, 2014). In addition, the floriculture industry in Naivasha has a representative NGO, Lake Naivasha Growers Group (LNGG), which advocates for the industry within Kenya as well as influencing corporate social responsibility activities undertaken by flower companies. The Kenyan government regulates among other things, minimum wages in the industry, and the use of natural resources through environmental regulations that are monitored by bodies such as the National Environment Management Authority (NEMA).

5.2 Impacts of the Floriculture Industry on Land and Water

The floriculture industry in Naivasha has had varied impacts on land, water and livelihoods since its inception in the 1980s and its marked growth in the 1990s. Naivasha is the heart of Kenya's floriculture industry, accounting for 44 per cent of Kenya's land area under floriculture, a significant amount of land area considering the total area under floriculture in the country is more than 2000 hectares (Bolo, 2008). From the research study, one of the companies possessed 45 hectares, while the other was in possession of 31 hectares. In both cases, land was purchased from previous owners, while 12 of the 45 hectares had been leased from a group-owned land. According to one of the NGOs looking into the activities of the agribusiness investments in the area, the sheer dominance of the floriculture industry with regards to land uptake has diminished land for other potential activities, hinting at a possible negative impact on food production and hence local food security.

The view that the floriculture activities have diminished land that could otherwise have been put under food production was however strongly challenged. An interview with the Lake Naivasha Riparian Association (LNRA) informed of the chief factors that have curtailed food production in the area. Firstly, the soils around Lake Naivasha are less fertile and have an extremely low water holding capacity, qualities that make the land unsuitable for food production. This finding contradicts previous claims that the quality of soil around Naivasha counts as one of the key factors that have facilitated the establishment of the floriculture industry in the area. This contradiction raises the question as to how the floriculture industry engages in agricultural activities in an area burdened with poor soils for agriculture. One of the flower companies, A02, informed that since soil quality in Naivasha area is extremely poor, pumice - a soil-like substance obtained from the areas around Mt. Longonot, Kenya – is used in the cultivation of the flowers. With such poor soil qualities, water from Lake Naivasha notably becomes the primary natural resource that has seen the floriculture industry thrive in the Naivasha area while food production for local markets, less lucrative in comparison to floriculture agribusiness, takes place outside the area occupied by the floriculture industry. The Naivasha area receives low rainfall, disqualifying rain-fed agriculture as a feasible agricultural approach. Agricultural production is thus rendered an extremely expensive venture, with a paramount need for irrigation and application of external inputs that can enhance soil fertility.

Land use prior to occupancy by the floriculture industry provides another basis for investigating the manner in which food production in Naivasha has been inhibited and livelihoods disrupted. As informed by one of the agricultural officers in Naivasha, the Maasai were the main occupants of the land currently occupied by the floriculture industry, using the areas as pasturelands. Besides pastoralism, land practices prior to the advent of the floriculture industry intimate that crop production was not a dominant activity in the area. For instance, a huge portion of land under flower company A02, currently in possession of 31 hectares, was previously forested land around the lake that was converted to arable land. The other portion was under tomato cultivation on small-scale irrigation. According to A02, the high costs

of irrigation farming were central to the farmer's decision to sell the land. The land for flower company A03, 45 hectares, was previously used for export agriculture focussing on the production of vegetables, cowpeas and French beans, and the rest was pastureland. The pastoral community, the Maasai, experienced the wrath of large-scale agribusiness investments as pastureland was converted into floriculture land. WWF informed that land ownership by floriculture companies has restricted access, blocking corridors used by pastoralists to water their livestock at the lake, a potential source of water conflicts. In efforts to rectify the precarious situation between pastoralists and floriculture companies, LNGG and Lake Naivasha Water Resource Users Association (LANAWRUA) informed that arrangements were in place to ensure corridors were established to facilitate pastoralists' access to the lake. As such, rather than arable farming, it is pastoral livelihoods that have been significantly impacted upon by the advent of floriculture following private ownership of huge tracts of land in Naivasha area. The restricted access to water points due to change in land ownership can be viewed in the lens of the theory of access with ownership of land being reflective of the 'bundles of power' that control access to resources that fall under private territories.

Land ownership around Lake Naivasha dates back to the colonial period. As two business operators in the hotel industry informed, land around the lake is in the hands of a few individuals, mainly foreigners, who acquired it during the colonial period. This finding confirms the assertion by Bolo (2008) that majority of the land around Naivasha was under white settlers and the national government, who leased it to large-scale agricultural investors. Besides the floriculture industry, the hotel industry has taken up huge chunks of land along the lake, serving both local and foreign tourists. As such, land ownership and access that has been centred on mega-money projects that have subsequently made it impossible for any small-scale agriculture with less financial clout to gain access to land in the areas adjacent the lake. This restriction and competition for land around the lake means that the opportunity cost of using such land is extremely high, hence the dominance by the lucrative floriculture and hotel industries. Also, it intimates that the pastureland used by pastoral communities prior to the floriculture industry was arguably under the individuals that had claimed ownership during the colonial period, while the pastoral communities only had user rights. In a scenario faced with the 'official' and the 'unofficial' land rights, it arguably became the case that the pastoral communities lost out despite being the indigenous groups with user rights over the land. Following the considerable diminution of pastureland, livelihoods among pastoral communities have been disrupted, and have been forced to lead more sedentary lives and adopt mixed farming as illustrated by Maasai community settlements in Maiella, a major food producing area in Naivasha Sub County.

Agricultural practices as exemplified by the floriculture industry pointed to the fact that huge investments are requisite in order to engage in agriculture in the area. According to Bolo (2008), flower production on a single hectare requires approximately US\$50,000, besides having to invest more capital to fortify marketing networks. Interviews with two flower companies informed that the floriculture industry

is highly lucrative, substantiating the view that massive financial capital is requisite to practise agriculture in the Naivasha area. According to flower companies A02 and A03, flower exports garner tremendous value by having almost all of the processes in the flower sector undertaken within the country. The use of highly advanced technologies in the floriculture industry is indicative of the high financial returns. In addition, notable investments are directed towards external inputs, suggesting that for small-scale farmers, such an expensive undertaking would not be feasible, and more so in an area where competition for land and water is against such powerful players as those in the floriculture industry.

Competition for land has been centred in the areas around Lake Naivasha, thanks to water being a core factor of agricultural production. Demand and dependence on water has strongly determined the location of the floriculture industry, rendering water the lifeblood of the industry. Rivers Malewa and Gilgil play a paramount role in feeding Lake Naivasha, a dynamic that has brought other actors into the fold in the form of upstream communities. Agricultural activities among upstream communities influence inflows into the lake, and subsequently the volume of the lake and water access (Everard et al., 2002). The dependency between upstream and downstream communities, coupled with competition for water among the various actors, has necessitated the need for sound management of the lake waters. Through the Water Resource Management Authority (WRMA), the government of Kenya has taken to task the role of water management. While the water management tasks are carried out in collaboration with other partners such as the Water Resource Users Associations (WRUAs), it is WRMA that has the overall duty of managing waters resources countrywide and gives certificates to water users such as the floriculture companies. Despite government regulation, it has become increasingly important to engage upstream communities in water management efforts, and a PES scheme has been founded as a result.

5.3. The PES Scheme

In 2008, WWF and CARE International established a PES scheme that was implemented in partnership with WRMA to foster sustainable agricultural practices among upstream communities, illustrating harmonization of water management efforts. The PES scheme aimed to insure quality water inflows into Lake Naivasha, better livelihoods among upstream farmers, and propel sustainable economic development (Nyongesa and Muigai, 2012). Following the severe drought of 2009 that led to extremely low water levels in Lake Naivasha, multiple actors backed the PES scheme and particularly the floriculture industry. The low lake levels also raised international concerns, and businesses had to engage in conservation efforts of the lake to show their commitment to responsible business practices. Through LANAWRUA, negotiations are in progress to engage even the hotel industry around Naivasha to support the PES scheme. By 2012, the PES scheme had 785 service providers, who comprised a mere 4 per cent of the farmer households in the upstream communities (FAO, 2013).

According to WWF, the scheme has impelled economic development among upstream communities through ameliorated agricultural production that has generated surplus produce for farmers

to sell in the market. The main beneficiaries have been dairy farmers, who have been introduced to a species of napier grass that is resistant to frost, bolstering dairy farming in the upstream areas. Further, the adoption of sustainable farming practices has curtailed soil erosion and in turn curbed siltation of Lake Naivasha. The floriculture industry has been a key player in the PES scheme, contributing financially to the tokens given to encourage sustainable agricultural techniques among upstream farmers. While the tokens could be viewed as being key in impelling responsible agricultural practices, WWF informed farmers obtain only US\$17 per year, while vouchers for agricultural inputs are tightly regulated such as having select shops where farmers can get the inputs. The regulations and compensation in kind have been put in place to ensure that farmers do not use the tokens for purposes other than agricultural practices and thus facilitate water security for downstream communities. The demand and competition for water has thus accentuated the need for efforts to conserve the Lake Naivasha basin. As a result, a win-win situation has been created for both upstream and downstream communities, with upstream communities augmenting their potential to insure local food security from improved agricultural practices and economic returns, while downstream communities have experienced insured inflows into Lake Naivasha.

5.4 Institutional Regulation

Among downstream communities where the floriculture industry is a chief actor, WRMA has embarked on managing access to water through among others, controlled abstraction amounts. The floriculture companies are required to have a meter that checks the amounts abstracted, and the volumes differ depending on the lake levels. A number of water monitoring boards indicating lake levels have been set up in the areas around the lake to ensure abstraction levels are keenly observed. The photo below shows one of the water monitoring boards next to the Finlays Flower Company in Naivasha:



Figure 7: Water monitoring board along South Lake Road, Naivasha, 2014. Source: Personal Data.

It is in this technological approach that the ‘bundles of power’ of the floriculture companies have been demonstrated. As WRMA informed, the financial power of the companies has drawn top-level engineers

among other competent human capital into the industry in addition to top-notch physical technologies. This accumulation of valuable resources has created a significant knowledge and technological power imbalance between the floriculture companies and the institutions that are meant to monitor and ensure the industry conforms the set regulations. As one of the WRMA officials informed, ‘...sometimes we go to engage in water management programmes and they are the ones advising us. This makes you wonder the extent to which we can actually monitor them, and enforce necessary regulations that might impact negatively on them’. Given this imbalance, the government is rendered less of a constraining factor in the conduct of floriculture agribusiness, challenging Douglas North’s view of institutions as ‘constraining factors’ in the conduct of business. This scenario illustrates the power that such companies wield over local governments in the global south, a feature Madeley (2008:22) refers to as ‘power without ownership and responsibility’.

Besides Lake Naivasha, floriculture companies have drilled boreholes from which they obtain water in the event that the lake levels are too low to adequately support floricultural activities. The use of boreholes, however, impacts on groundwater and hence the water table of Naivasha area and WRMA therefore monitors and regulates water amounts abstracted from boreholes by floriculture companies. Sustainable use of water is therefore paramount, and some floriculture companies have created wetlands to purify water before discharging it to the lake. The photo below shows a wetland of one of the flower companies along the South Lake road in Naivasha:



Figure 8: A wetland, in one of the flower companies along South Lake Road, Naivasha, for purifying water before discharging it into Lake Naivasha. Source: Personal Data.

These efforts towards restoring and maintaining Lake Naivasha intimate a genuine will among the stakeholders, particularly the floriculture industry, to engage in responsible business. However, pollution of the lake waters by the floriculture industry confounds the seemingly genuine efforts, and as NEMA informed, some of the companies responsible for lake pollution escape punishment through corrupt means. On one hand, by bribing relevant authorities the agribusiness companies exhibit a form of illegal ‘bundles of power’ that can be accessed through the use of financial resources. On the other hand, the bribed

authorities constitute ‘constraining institutions’ by being a stumbling block towards attainment of progress that is meant to benefit society. These underhand occurrences critically question the inherence of the will by agribusiness investors as well as local authorities to engage in activities that are beneficial to society, and the claims by the stakeholder theory that values and ethics are inherent in the conduct of business.

5.5 Conclusion

The establishment of the floriculture industry in Naivasha has greatly impacted on land and water resources in the area. Through large-scale investments, tracts of land have been put under floriculture that generates employment opportunities and foreign exchange among others, but this has translated to restriction of pastoralist activities in the area. Being a highly lucrative industry, the floriculture agribusiness has had a competitive advantage over other potential business activities, and has thus dominated the valuable land area around Lake Naivasha. The competition for water resources by the ever-burgeoning industry has generated benefits for upstream communities, whose agricultural practices and in turn, economic development and food security have been bolstered. In this view, the floriculture industry has impacted both negatively and positively on different groups, as well as on natural resources, and therefore efforts towards sustainable use of resources should not only be focused on upstream communities, but also downstream communities. In addition, the disruption of local livelihoods particularly among pastoral communities calls for critical evaluation and policy implementation to protect vulnerable groups against the insatiable quest for economic development.

6. Local Development: An Oversold Dream

The significance of the floriculture industry in Kenya is markedly reflected in its contribution to the country's economy. One of the primary contributions that has popularised the industry is the creation of employment opportunities among an otherwise unemployed citizenry, given Kenya's 40 per cent unemployment rate (KPMG, 2011 est.). Besides the sheer numbers, however, this study looks into the nature of employment and the direct and indirect developmental impacts of the floriculture industry on local livelihoods and food security.

6.1 Labour Force Characteristics

A principal feature of the floriculture industry in Naivasha is the labour mobility and multi-cultural background of its workforce. The labour force hails from different parts of the country, an illustration of the industry's popularity as a major source of employment in Kenya. A strong indicator of labour mobility among respondents in the research was their duration of stay in Naivasha area, which widely ranged from 1 year to 42 years. While such an expansive range could evince a conglomeration of immigrants and indigenous peoples working in the industry, a mean of 11.46 years suggests that most of the respondents only moved to Naivasha in the recent past years. In fact, only two respondents out of 32 interviewees in the research had lived in Naivasha for a relatively longer period: 30 and 42 years, with the majority residing in the area for less than a decade.

Places of origin among respondents were classified in accordance to provinces, the former highest administrative units of the Kenyan government, as opposed to the counties of Kenya, the geographical units envisioned in the devolution of the Kenyan government by the 2010 constitution. The provinces, eight in total, were preferred to the 47 counties as provinces offer a more intelligible geographical image. In addition, the relatively small size of the study sample meant that representation of all counties would not have been possible. Out of 27 respondents who indicated their place of origin, 37 per cent hailed from Rift Valley, 22.2 per cent from Nyanza, with 14.8 per cent and 11.1 per cent hailing from Nairobi and Central regions, respectively. The fact that Naivasha is in Rift Valley, formerly the biggest province in Kenya, explains the high percentage of workers emanating from the region.

Labour mobility is further informed by the mode of housing arrangement among employees in the floriculture industry. Out of 34 cases, 31 respondents lived in rental houses outside of the flower farm premises, while only 3 lived in housing provided by the employer, and none lived in an individual-owned housing. Of the two flower companies, A02 and A03, none provided housing for the general workers, implying that significant majority of the labour force resides outside the premises of the floriculture companies. The dualistic mode of housing may however not hold such stark difference as demonstrated by the research study sample. A critical aspect of the proportions of modes of housing among respondents in the research is the bias towards employees residing outside the flower farm premises owing to the easier reach of those respondents during the research study. The premises of the flower companies have

controlled access, which made it difficult contacting employees housed by the companies. Interviews with a few floriculture and horticulture companies nonetheless confirmed that employers are only able to house some of the employees, while some do not provide housing to their general workers at all, as illustrated by the companies that participated in the research study. A significantly higher proportion of the workforce in the floriculture industry therefore resides outside of the companies' premises. As observed during the period of the research, both rented and company housing comprised one or two rooms, with one room serving as a living place with the other as the bedroom. In households with more than two members, the living place would be converted into a sleeping place during the night.

A monthly house allowance, in addition to the monthly wage, is given to employees residing outside a company's premises. The monthly house allowance ranged between Ksh. 1,500 and Ksh. 10,000⁵, and differed depending on an employee's position at work, with those in supervisory and other higher capacities receiving a higher amount. For instance, two of the respondents working in the capacity of a production manager and laboratory technician received Ksh. 3,000 and Ksh. 3,600⁶ per month, respectively. Interestingly, the higher house allowance did not necessarily mean that the persons stayed in more expensive housing, with the laboratory technician spending only Ksh. 1,200 per month on rent. Out of 31 cases, 9 indicated spending more on house rent than the allocated house allowance.

An important feature of the workforce in the floriculture industry is the age of employees. Among participants in the research study, the ages ranged between 23 years and 51 years, with a mean age of 33.61 years, numbers that point to a rather youthful workforce. Although the sample is arguably not representative of the entire floriculture employee population in the area owing to the small sample relative to the workforce population, the interviews informed that the floriculture industry is less favourable for older people. The industry, characterized by tough physical work coupled with exposure to a host of chemicals, exerts lofty demands on employees under exacting conditions. According to Dolan et al. (2002), a youthful workforce is preferred for the ability to quickly accomplish labour intensive work. A widely held view that illustrates the exacting working conditions in the floriculture industry is that one's health is immensely compromised, and as H33 strongly asserted, "...the work is really hard and sometimes you have to skip lunch because harvesting (of the flowers) has to be done in time (...) the conditions at work shorten one's lifespan, which means it is very difficult to reach 70 years of age." The tough working conditions could thus elucidate on the prevalence of a youthful workforce in the floriculture industry.

6.2 Employment and Working Conditions

The exacting feature of work in the floriculture industry is recognized even by people outside of the industry, with one of the business operators dealing in food informing that, "The chemicals in the flower

⁵ Approximately between 13 euros and 85 euros, based on exchange rates as of 1st July 2014.

⁶ Approximately 25 and 31 euros respectively, based on exchange rates as of 1st July 2014.

farms are slowly killing people. It is only that people have to continue living that they have to work since there are not many options out there.” Thus, in addition to engaging in physically demanding work, the working environment in the floriculture industry impacts heavily and negatively on the employees. However, the dearth of alternative options to meet livelihood needs as illustrated by the high unemployment rate of 40 per cent in Kenya (KPMG, 2011) renders working in the floriculture industry a logical option despite the tough conditions. Working in the industry is thus an extremely costly undertaking for employees, which they arguably pay for with their health. Poor health has numerous negative impacts that limit individuals’ ability to lead an active life that secures resources necessary for a quality livelihood, and at the same time diminishes one’s ability to utilize food, creating a vicious circle of poverty and food insecurity, an interrelationship conceptualised by FAO (2008) as shown on the figure below:

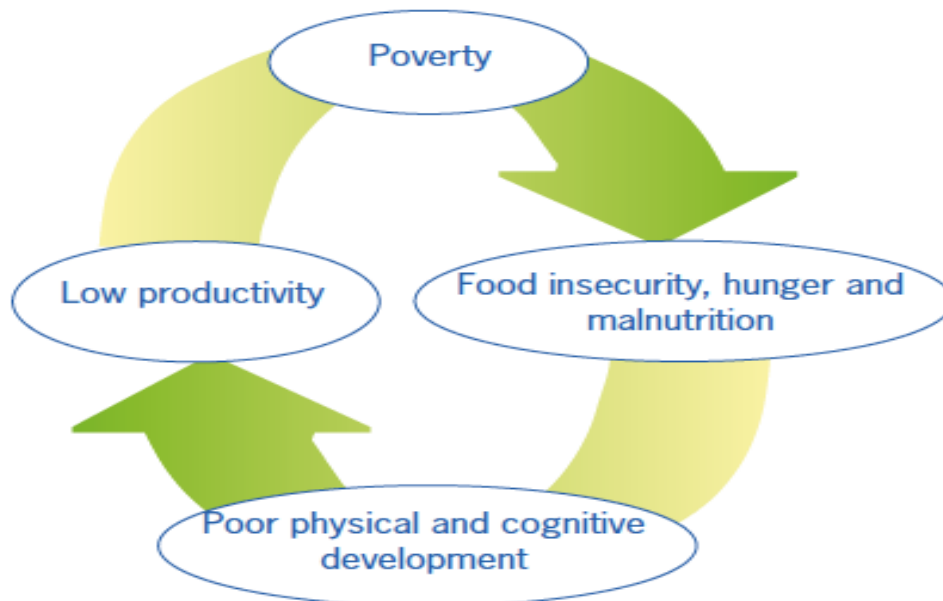


Figure 9: An interrelationship between food insecurity and poverty. Source: FAO, 2008.

Work in the floriculture industry mainly comprises tasks that require low-skilled labour and hence less educational demands (IDS, 2013), and the education background of the research participants offers an intriguing picture of the workforce. Out of 28 cases, 5 had only attended primary school education, while a notable 17 had attended high school education, with 6 studying up to college level. None of the respondents had had attended university education or higher, a finding that corroborates previous findings by the Utrecht IDS department. The impact of education level on monthly household income, however, provides a fascinating dimension. While the education level did not reveal any influence on household income amounts lower than Ksh. 21,000⁷, all those earning more than that amount had attended either high school or college education. The significantly higher incomes were associated with specialised roles

⁷ Ksh. 21,000 is equivalent to 177 euros as of 15th July 2014 exchange rates.

in the floriculture industry, such as being a laboratory technician or a production manager. As gathered from one of the respondents, the floriculture industry did not take into consideration one's education background in the past years. However, the trend has changed in recent years in favour of a more educated workforce. In one of the flower farms, an instrumental factor to this change was communication at the place of work. As it became more difficult for foreign managers to adequately communicate with lowly educated workers owing to limited command of the English language, the need to enhance communication and hence efficiency at work culminated in increased value for higher education background.

The low educational requirements may point either to potential ease of landing a job at the floriculture industry, or extreme difficulty due to competition from numbers of qualified candidates for available employment opportunities. From the research study, the latter situation is usually experienced and it comes with a high level of vulnerability as employees can easily lose their jobs and be promptly replaced by the cheaply available labour. According to H07 the insecurity is particularly so high since there is a huge pool of unemployed labour that is cheaply available to the industry, with the low skills required exacerbating an already insecure situation. In addition, vulnerability among employees increases when they work for a company for many years and their pension accumulates significantly since employers are unwilling to pay the surging pension benefits, arguably viewed as costs for the business. The significance of pension benefits among employees cannot be understated, and according to many respondents pension benefits are a major source of motivation to keep working in the floriculture industry. The contrasting views of pension benefits firstly as a 'burden' to the company, and secondly as a 'motivational factor' to an employee, renders long-term employment in the industry both as an inhibiting and enabling factor. By realizing the vulnerable situation that their longevity at the workplace positions them, employees arguably become subservient servants thereby diminishing voice and therefore 'bundles of power' among experienced figures in the industry.

Employment insecurity in the industry is further informed by the immigrant status of majority of the workforce. While labour mobility illustrates the ability of employees to derive benefits from a far-away industry, it also happens to be the Achilles' heel of their livelihoods as immigrants residing far away from 'home' and clung to a highly fickle employment. As an immigrant, fallback options in case of dismissal from work are restricted due to low social capital that usually can be boosted by familial ties. As a result, employees' dependence on the job increases, which arguably empowers the employers further. It is in this light that some respondents had left their children behind when moving to Naivasha, and in that manner shielded them from possible insecurity that characterizes employment in the industry. As found by Dolan et al. (2002), the situation is even worse for casual and seasonal labourers whose employment is even less secure, substantiating the move to leave children behind with their families in the rural areas. As such, the nature of employment at the floriculture industry greatly disrupts local livelihoods, forcing employees to adopt strategies that limit vulnerability among other household members, instead of actually generating livelihood security that would usually be associated with employment.

Although both men and women face job insecurity, the dominance of the floriculture industry by women culminates in gendered employment insecurity. Gendered perceptions are traced in the activities carried out in the floriculture industry, where most of the work is viewed as comprising ‘feminine tasks’. The ‘feminine tasks’ laden in the flower production processes are highly labour-intensive demanding long hours of standing, and are deemed highly essential for the “cosmetic quality of the final product”, (Dolan et al., 2002: 28). One of the flower companies informed that they do not employ women in the spraying and other risky departments since women are more vulnerable than men. However, it was a fascinating finding by the study that while both men and women complained about the low wages, harsh treatment by supervisors, and poor working environment that risks workers’ health, it was women in particular who underlined fatigue borne from the tough work being a tremendous challenge working in the floriculture industry. The long working hours in the floriculture industry impact not only on the lives of the employees, but also of the children with parents working in the industry. As H33 lamented, “There are so many challenges. You have to wake up very early in the night even when you have a small child. The child is left at a baby care and the conditions are terrible there. It is very cold and mattresses are laid on the floor, which is very cold.” Based on these experiences, the challenges associated with work in the floriculture industry are extended to other household members and especially young children, whose livelihoods are woven into those of their parents. These findings underline the significance of a livelihoods approach in scrutinising the impacts of the floriculture industry on local livelihoods.

Work in the floriculture industry is notably stratified according to gender, and Dolan et al. (2002) classified duties carried out in the floriculture industry according to gender as shown on the figure below:

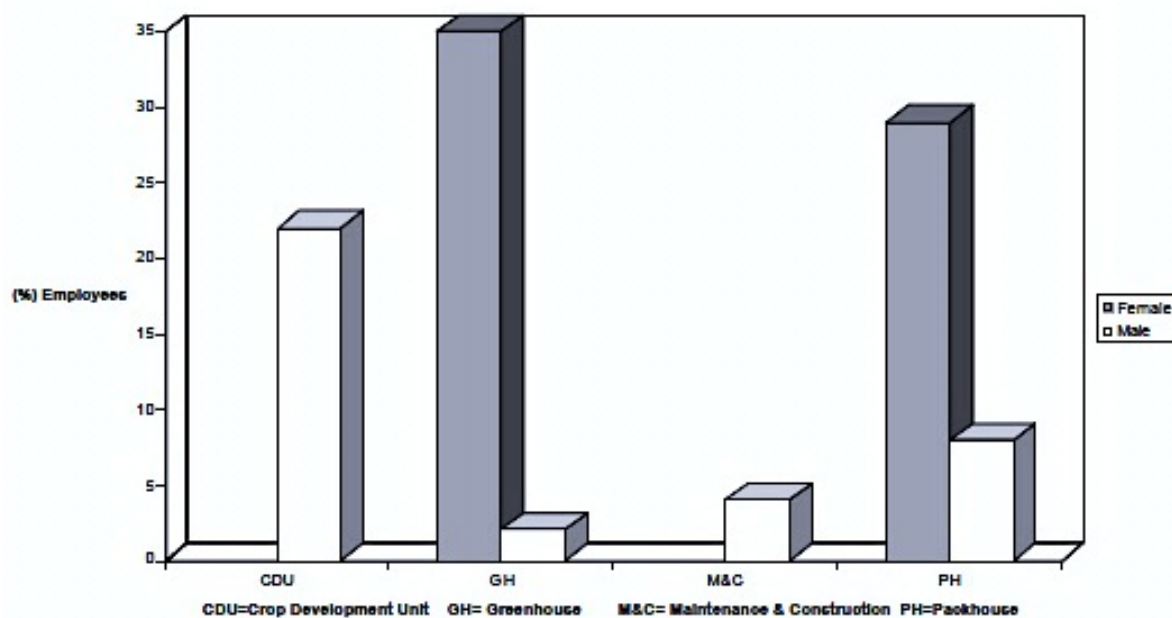


Figure 10: Gender by nature of work. Source: Dolan et al. (2002).

Competition for job opportunities that are clearly outstripped by demand for employment further renders women vulnerable. As gathered in the research study, women are sometimes forced to use their body as a means of exchange for consideration for a job position by the employing males. Once employed, the trend continues as male supervisors demand for sex in exchange for favours such as allocating easier duties to the women, or ensuring continued employment at the company. The unfair treatment of women was voiced not only by women, but also by men, showing that it is a well-known on-going challenge in the floriculture industry. These occurrences have been widely criticised with suggestions for increase in the number of female supervisors. However, among contrasting opinions on installation of women as supervisors is the view that male supervisors are more respected than female supervisors, which originates from the cultural view of men being the leaders (Dolan et al., 2002). Such a view is narrowly framed in that leaders are usually charged with the role of protecting society and ensuring fair treatment for all, an utter divergence of the occurrences in the floriculture industry.

A vital component that has received notable attention is health, arguably in recognition of the exacting conditions at the workplace, and in particular the exposure to chemicals prevalent in the industry. Floriculture companies have established clinics within their premises, where employees can go for treatment without incurring any costs. In case an employee requires attention that is beyond the capabilities of the clinic, (s)he is referred to a hospital for treatment, and the floriculture company incurs the costs of treatment. However, the clinics have also empowered floriculture companies in a critical way. By offering treatment inside within the place of work restricts crucial information within the confines of the company, absolving any form of criticism that could be directed towards the floriculture industry owing to poor treatment of workers or even abject working environment. This view was also confirmed by one of the government institutions interviewed, which felt that the power held by the floriculture companies enables the industry to get away with wrongdoings that could warrant tough repercussions against them.

6.3 Responsible Business Practices

In efforts to augment employment security among employees in the floriculture industry, the Kenya Agricultural Workers' Union (KPAWU), established in 1963 to insure fair treatment of agricultural workers, has stepped in to particularly ameliorate employment security. In order to benefit from KPAWU, employees have to be registered and contribute 2 per cent of their monthly income to the union. In an encouraging fashion, some of the flower companies in Naivasha have supported the activities of KPAWU by for instance paying for their employees to attend seminars, in addition to supporting their registration with KPAWU. However, some flower companies threaten to sack their employees should they be registered with KPAWU, a clear illustration of stifling employment security. In Naivasha area, KPAWU informed that complaints from workers in the floriculture industry had been on a downward trend over the years, an indication of improvement in employee treatment at the workplace.

Notable efforts to improve the conduct of the floriculture industry, and hence impel responsible business have been the advent of codes of conduct. The floriculture industry is significantly regulated by codes of conduct, which are viewed as a trend towards self-regulation in a playground that resonates the ever-growing impacts of globalisation (Blowfield, 2003). In a country like Kenya where labour legislation is relatively weak, compliance with codes of conduct in the floriculture industry provides an essential benchmark for employment conditions (Barrientos et al., 2001). The floriculture companies in Naivasha have engaged in various initiatives to promote employee welfare such as schools, clinics, and offer of clean drinking water. The beneficiaries from the initiatives are primarily employees in the floriculture industry, a narrow reach considering that some of the negative impacts emanating from the industry are even felt by society external to the industry, such as pollution of the lake waters. The limited reach further questions the innateness of the efforts by agribusiness companies to engage in activities that benefit multiple stakeholders as depicted in the stakeholder theory.

The codes of conduct are reflective of a highly top-down approach, with the intended beneficiaries (employees) being unaware of the provisions of the codes (Dolan et al., 2002). As gathered from the research study, employees held the perception that companies initiated various programmes out of a genuine need to promote employee welfare. However, a look into the requirements of the codes of conduct and the government regulations revealed that the programmes are exceedingly tailored to meet the set provisions, a fact that the employees are oblivious to⁸ and echoes Heemskerk's (2012) findings on responsible business in Kenya. A number of employees demonstrated a vague comprehension of the codes of conduct, attributing the implementation of the programmes to the fact that the companies were 'members of the Fairtrade programme'. Besides having limited insights into the certification standards that the employing companies have adopted, employees did not show any form of ownership of the initiatives. With ownership being key to the efficiency and sustainability of development programmes (Alkire et al., 2001), the lack of it is a clear illustration of how the certification standards treat beneficiaries as mere recipients, suggesting a largely supply-driven, top-down approach to development.

The top-down nature of the codes of conduct results in gaps between developmental initiatives and needs of the targeted populations, a concern reflected in the meal programmes implemented by some of the floriculture companies. The programmes have introduced new food varieties previously unknown to employees such as broccoli, but these varieties have rarely been upheld outside the gates of the workplace despite their seemingly nutritious value. The meal initiatives have drawn mixed opinions both from employees and people external to the floriculture industry. One of the respondents working in the spraying department, the most challenging role according to respondents, informed that the food provided was of good quality, citing his improved health compared to the periods when he did not consume the company's food as evidential of the food quality. A number of respondents, however, expressed their disgruntlement

⁸ See B.A Seidu's (2014) thesis for further elaboration on relationships between provisions of codes of conduct and CSR programmes.

with the perceived lower quality of food provided, and therefore opted to either go home for lunch, or carry food to work. The lower quality of food was attributed to the fact that it is prepared in large quantities to serve masses of people thereby comprising quality for quantity. In a different twist, one of the NGOs argued that the main motivation for introduction of meal programmes was to ensure that employees spent less time for lunch, and therefore were thus in time for the afternoon session. Besides meals, other companies have programmes meant to offer educational support among employees that wish to undertake studies next to their work in the floriculture industry. However, the likely benefits from these educational opportunities have been restricted by the fact that there is extremely limited time to attend school for someone working in the floriculture industry in Naivasha, which is both physically and time-demanding.

Another approach tailored towards improving employee welfare in one of the flower farms is the offer of land to employees. Five participants in this study had been granted small plots of land of around 7m², in addition to water for irrigating the small plots of land. The small plots are principally used for food production, focussing mainly on cultivation of vegetables. Besides addressing a household's food needs, the food produced is sometimes used for commercial purposes. One of the respondents with access to one of the small plots informed that, "...sometimes when it is raining I produce enough to sell."

In such a dry area as Naivasha, the profound impact of rainfall on agricultural production is indisputable. While the flower company provides water for farming, it is arguably the case that higher yields are obtained during the rainy season due to the fact that plants are watered even when the employees may not have had adequate time to manually water their plants. In the event that water is not provided, a farmer practising agriculture in the area would have to engage in intensive irrigation. Such an agricultural venture is however rendered nigh impossible due to high costs, underpinning the view that even in the absence of the floriculture industry small-scale agriculture would not be taking place in the area.

While the floriculture industry has instigated responsible business practices aimed at uplifting the livelihoods of employees, the development programmes thus far implemented have been met with numerous reproofs due to inefficiency. This shortcoming is compounded by the overall long-term reverse impact that the uncoordinated amelioration of employee welfare has on the dominant female workforce in the floriculture industry. According to Hivos, improved work conditions at a workplace dominated by women attracts men and over time it becomes a men-dominated territory. Such an incidence unfairly restricts women from reaping deserved benefits, and conversely serves as a means of their undoing. As such, welfare improvement programmes in the floriculture industry have not only struggled to realize the intended benefits, but they have also come short in evaluating long-term impacts that are experienced differently by different groups in the industry and society. The extension of challenges to household members particularly the children shows that poor livelihoods among employees in the floriculture industry are a cause for concern not only for the current generations, but also future generations. For instance, due to food insecurity, children are not able to perform in school and this limits future

opportunities that are created by good performance in school, intimating a vicious circle of poverty as postulated by FAO (2008).

6.4 Knowledge Transfer

The presence of an established floriculture industry was anticipated to have contributed to improved agricultural practices, and hence food availability, through spillovers of agricultural knowledge. However, these expectations were confounded as interviews with farmers in Maiella, one of the agricultural areas adjacent the area dominated by the floriculture industry in Naivasha, revealed that farmers had not gained any agricultural knowledge from the industry. The farmers mainly cited farming experience and exchanges with their neighbours as the primary ways through which additional agricultural knowledge was attained.

In a fascinating fashion, knowledge spillover was found to have taken place among employees practising agriculture whilst still working in the floriculture industry. The agricultural skills had been accumulated from the place of work by learning from doing. To put in practice the knowledge gained, some employees had taken up loans to practise agriculture, while others viewed engaging in agriculture as a viable option were they to stop working in the floriculture industry. As one of the respondents candidly affirmed, "... I did not have any agricultural knowledge when I started working at the flower farm. But, right now, I have gained so much knowledge that I view farming as one of the options should I stop working at the flower farm."

The impact of the floriculture industry on the farming population in Maiella was affirmed by some farmers, who viewed the expansion of the market for their produce as the only added value that could be attributed to the industry. As F01 put it, "When they (floriculture companies) employ people, there is money circulating in the local economy which is good for business (increasing demand for our produce). I think this is the only way that the flower farms have contributed to agricultural practices around here."

Importantly, the study uncovered an apparent disconnect between the farming population and the floriculture industry. There was little that was known about the floriculture industry among the farmers in Maiella, and this was categorically demonstrated by F04, who had lived in Maiella since 1964. The farmer informed that, "I have not gone to the flower farms; I do not know so much about them." The detachment arguably elucidated the minimal exchanges that had taken place between the floriculture industry and the farming population.

The scanty impacts of the floriculture industry on the external society such as the farming population in Maiella can be traced from the operation of the industry as an agribusiness enclave, a functional feature that staves off any linkages with the rest of the local economy. The restricted access to floriculture companies exemplifies a form of localized development that not only inhibits physical access, but also the transfer of knowledge and ideas and thus potential positive externalities. The apparent disconnect, particularly with the farmers in adjacent localities, challenges the attribute of local

communities as key stakeholders in the floriculture agribusiness, a notable critique on the assertions of the stakeholder theory. The manner in which potential impacts have been hamstrung through the nature of business conduct in the floriculture industry illustrates that development greatly depends on corridors, and that the particular corridors can be inhibited culminating in ‘impeded development’. There is thus a feeling that the presence of such a lucrative industry can contribute much more to the surrounding localities, especially given the advanced agricultural and technical knowledge. This feeling was expressed by the area chief who posited that although the industry is financially capable, its contribution has been nothing more beyond offering employment opportunities, and has thus underachieved given its potential to impel notable developments in Naivasha area.

6.5 Community Development: An Underachievement

Food insecurity is a pressing challenge among households, and in response to the situation in Naivasha area the subsidised meal programmes under the auspices of the floriculture companies have been extended to some primary schools in the area. Following an interview with one of the teachers at the primary school, the programme was introduced at a time when there was a hunger crisis in the Naivasha region. Still on going, the meal programme sees food sold at Ksh. 10, a subsidised price meant to facilitate access to food by primary school children most of whom hail from humble households of employees in the floriculture industry. According to the teacher, the meals provided ensure a balanced diet, and the programme is anticipated to run for a long time even though there are no future assurances. Critical to the programme, however, the teacher informed the meals were offered in very low amounts that could hardly satisfy the children. In addition, the seemingly low price of Ksh. 10 per day was beyond reach for some parents, with scores of cases where children simply had nothing for lunch. The box below further expands on the situation at the school even with the meal programme still functional. Food insecurity has a major negative impact on school performance, especially since primary school children are still in their early stages of growth and development (Belachew et al., 2011).

The foods prepared comprised vegetables grown by the floriculture company, some of which were unfamiliar to the children, echoing similarities to the approach of the meal programmes meant for employees at the floriculture companies. Another critical view emanated from one of the respondents whose children attended the beneficiary school. Focussing on the quantity and quality of the food, H14 informed that, “I do not like it that my kids eat the food sold at school because they don’t get satisfied and it is mainly cabbage all the time. I would like them to have food that they can enjoy eating.” As such, the quantity and quality of food are significant factors that meal programmes ought to take into account, as well as food preferences, rather than focussing primarily on the price. Such a constricted focus on the economic aspects derails the efficiency of the programme, and portrays a limited comprehension of food security.

Another enormous challenge facing local communities in Naivasha is limited access to clean drinking water, a critical aspect of food security. The Naivasha Sub-County presents a unique case on this aspect, given that ground water in the area is laden with fluoride that makes it unsuitable for human consumption. Among the said negative impacts of consuming the water include discoloured teeth and back problems for people. Respondents in the research blamed the government for ignoring a serious basic problem that has been existent for years. An assertion by H33 greatly captured this view, “The water in Naivasha has been said to be bad for people’s backs. The government has not done anything to help in purifying the water despite this problem having been known for many years.”

Households are coerced to find alternative ways of accessing clean water as exemplified by H12 who said, “I buy bottled water from the shop; I refused to drink water from the tap because Naivasha water makes people’s teeth decay as it contains too much fluoride.”

A source of redemption came in the form of floriculture companies, who provided clean water for drinking to their employees, and sometimes to the general public. In all but one of the flower companies, the respondents confirmed that the companies provided clean water for drinking, which they could, but did not in almost all cases, carry home. One of the companies providing clean water to the public informed of the significance of the initiative in such an area:

“We provide clean water to the community around here. There is a tap outside of the flower farm that is accessible to everyone. This has been operational since 2005. It was set up following discussions with the community leaders who identified access to clean drinking water as a major problem for the area. The offer of water reduces risks and burden among the community members, since they do not have to encounter hippos; the employees get out of work late and those times can lead to human encounters with the hippopotamuses.”

The stability of the floriculture companies is paramount to ensure such services are continually offered. In cases of instability, as evidenced by the near-collapse of one of the largest companies in the area, there are far-reaching consequences. With regards to water provision, one of the respondents working in the company’s water department informed that, “...water is no longer treated since one and a half years ago. The machine for pumping drinking water broke down,” a fact confirmed by all the respondents working at the company.

6.6 Conclusion

A key impact of the floriculture industry has been the offer of employment, but the quality of employment raises many questions given the exacting working conditions and the low wages that characterise the industry. The developmental initiatives that have been initiated to ameliorate livelihoods have had localized impacts that have been tremendously restricted to the population working in the industry. A top-

down, supply-driven approach characterises most of the initiatives, often hindering intended impacts. As a women-dominated field, the industry barely demonstrates a concerted consideration for gender on numerous fronts, a shortcoming that greatly disadvantages women both in the short- and long-terms. Still, the companies control major affairs without notable backlashes owing to the significant ‘bundles of power’ that place the industry in a domineering position. The employees therefore have been forced to remain subservient to the exacting working conditions at the workplace, culminating in livelihood challenges that are not only borne by the employees, but also other household members that are dependent on those working in the industry. Children in particular are exposed to major challenges especially food insecurity, which arguably thwarts their future livelihoods especially through the negative impacts on school performance. Based on these findings, it is inevitable that employment does not equate to improved quality of life, while supply-driven, top-down development initiatives continue to illustrate and corroborate the need for bottom-up and participative approaches.

7. Household Food Security: A Trivialized Scourge

Following research findings presented in the previous two chapters, this chapter furthers the quest for investigating ways in which foreign agribusiness investments in Naivasha have impacted on local food security by assessing the status of food security among households of employees in the floriculture industry. Thus far, the hypothesis that the floriculture industry impacts negatively on local food security owing to competition for fundamental natural resources for agricultural production has been challenged particularly by the poor soils in the Naivasha area. The study finds that the soils in the area are of extremely poor quality, and in the absence of the floriculture industry, small-scale food production would not be feasible. Of the two resources, water is the lifeblood of the floriculture industry, but even then irrigation agriculture to produce food crops for domestic consumption would not have been feasible due to the extremely lofty expenditures that such mode of agriculture would demand. In addition, the fact that the floriculture industry has been enormously responsible for the increase in population in Naivasha area suggests food demands would be lower in the absence of the population dependent on the industry. The impacts arising from the advent of the floriculture industry, however, have notably been felt by pastoral communities since previous pastureland is currently under the floriculture industry. The research findings have thus built a basis for insightful explanations that are further sought in this chapter by looking into the processes through which food is availed to, obtained and utilized by households, and resultant impacts on local livelihoods.

The assessment of household food security constitutes an intricate task as revealed in the theoretical background of this study. In order to ensure a holistic approach that uncovers and informs on the multiple processes that influence food security among households, both endogenous and exogenous factors were delved into. The findings in this chapter are elucidated in light with the key dimensions of food security, and linkages are established to inform on the impacts of the foreign agribusiness investments on local food security.

7.1 Household Characteristics

Household characteristics constitute important endogenous factors that influence a household's food security. One of such features is the household size, which can strongly influence the ability to address food demands within a resource-constrained household. Based on the research study, the households of employees in the floriculture industry are relatively small, with a mean of 1.76 children and a total of 3.15 household members. The small households are especially intriguing considering that half of Kenya's population lives in households with at least seven members, of which around 60 per cent is ranked as being poor (World Bank, 2008). The task of addressing household needs including food rests primarily on the parents, underlining the significance of marital status in the study.

Out of 34 cases in the research, 67.6 per cent were married, 26.5 per cent were single, while 5.9 per cent had been divorced. In some of the households that indicated being married, only one of the

spouses lived in Naivasha while the spouse and other members of the household resided at the place of origin. In those scenarios, only the food security status of the household in Naivasha was investigated. However, important linkages between the household in Naivasha and those at the place of origin were explored to uncover possible contributions to the food security of the household in Naivasha. As such, food production and access from the respondent's place of origin were investigated given that some of the employees engaged in agriculture besides working in the floriculture industry, while others had their spouses undertake agricultural activities in the countryside while they engaged in waged labour in Naivasha. In both cases, it was anticipated that such households would benefit from food availability from the countryside, unlike among households that depended solely on the markets to meet their food needs.

Wages from employment in the floriculture industry are the undisputed principal means of generating household income. However, the respondents heavily criticized the wages as being too low to support a decent life, confirming earlier findings by Dolan et al. (2002). While some households depend only on wages to address household needs and thus food security, others diversify income sources and hence their ability to address the needs. Ergo, the study looked into monthly household income that accounts for income generated by the entire household. In almost all of the cases, parents earned income and provided for the household. Household monthly income levels ranged between Ksh. 5,500 and Ksh. 40,000, with a single case earning a significantly high monthly income of Ksh. 130,000. The average monthly income was Ksh. 24,211⁹ and upon excluding the outlier, Ksh. 130,000, the average household monthly income was 17,988¹⁰.

Out of 35 respondents, 21 earned between KSh. 5,000¹¹ and Ksh. 15,000¹² per month. The low wages offered in the floriculture industry are a major stumbling block for households as the purchasing power required to obtain food and other needs from the market is markedly constricted such that even at the end of the month when wages are obtained, households can find themselves with little to nothing left to spend. As H01 informed, "I earn Ksh. 10, 111 per month¹³. However this amount is deducted so much that like this month, I only had Ksh. 2000 left. The deductions include NSSF, NHIF, pension, a loan I took before and membership of a shop that mainly serves people working at the company. I am not the only one who remains only with very little in the end, as there are others whose deductions are so much that they almost have nothing left." In this view, the end of the month does not necessarily signify a time when households access financial capital to address their needs, but rather to cater for expenses that were incurred in the course of the month. The scenario intimates a poverty trap for households, who work not to create capital that can facilitate betterment of livelihoods but to pay up for past expenses.

The challenge of low wages among workers in the floriculture industry has not gone without notice among individuals external to the floriculture, especially business operators in the area whose

⁹ Approximately 204 euros.

¹⁰ Approximately 151 euros.

¹¹ Approximately 42 euros.

¹² Approximately 126 euros.

¹³ The respondent showed the pay slip from the company for the previous month.

clients are principally the workforce in the industry. One of the business operators, B02, vividly captured the exigent challenge among employees in the industry as she informed that, "...things are too expensive for their (employees in the floriculture industry) salaries. This is mainly the case because our customers are the low-paid people in the flower farms. The well paid people usually go shopping in the big supermarkets in town." The respondent further added, "The struggles of the flower farm workers make me feel that we are the same, and we are not the same," insinuating that although everyone has a right to live and livelihood challenges are a part of life, there are some groups that suffer much more than others, and in this case the workforce in the floriculture industry endures extremely tough livelihood challenges.

7.2 Household Food Access

All respondents in the research indicated that household food is obtained from the village markets in the towns that have mushroomed primarily due to the settlement of the workforce in the floriculture industry. The primacy of markets in food access suggests a highly monetary local economy, and thus a significant role of financial capital in accessing food. The village markets were within easy reach for all respondents, almost all of who access the markets on foot and in around 5 minutes. A favourable distance to food markets is critical especially for households that engage in physically demanding work from early morning until evening. With regards to household food access, distance is therefore not a limiting factor as indicated in previous research conducted in other parts of rural Kenya by Kassie et al. (2012).

Nearness to markets intimates an economy that is intricately embedded to the floriculture industry, with the demands of the industry's workforce being the primary basis for businesses in the area, and their incomes the backbone of the economy. This view was deeply and widely held among business operators in the area, as B06 categorically asserted, "The presence of flower farms has had huge impacts because the flower farm workers constitute our customer base. Without the flower farm workers, then it would not be possible to conduct business around here." Such is the dependence of the local economy on employees and the floriculture industry itself. It is fascinating that while employees lament the low wages that expose them to financial hardships, they are at the same time a force to be reckoned with in the local economy principally due to their financial capital.

Business people vindicated the significance of the floriculture industry and its stability to business operations in the area by noting the adverse impacts that instability in the industry can cause. In the months preceding the research study, the largest flower farm in the area had gone without paying wages to the workforce, who comprise the majority in Karagita town. After three months without payment, the employees were financially constrained and the impacts reverberated through the entire business sector in the area. Some of business operators dealing in food had given foodstuffs to the employees on credit in the hope that the debts would be cleared once they were paid. While some of the employees in the flower farm gave up on the wages and relocated without clearing debts accrued among business persons, some

businesses had to close down as there was no demand for their products owing to the diminished purchasing power among their would-be customer base.

Financial constraints were singled out as the chief obstacle towards accessing food among households. This shows that even though the presence of food markets with assured food supplies and within easy reach for households is vital for food access, these factors are not adequate to insure food affordability by households especially in such a highly monetary economy. A correlational analysis was carried out to find out the relationship between the amount households spent on food, and the ideal amounts that would ensure adequate access to food as claimed by the respective households. A graphical illustration of the two situations is shown below:

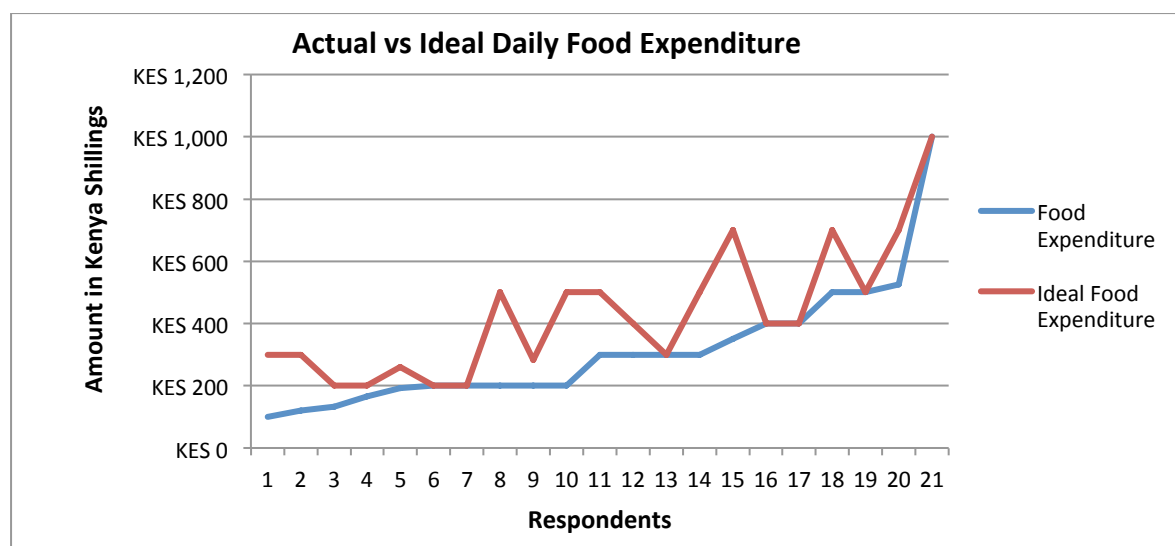


Figure 11: A comparison of actual and ideal expenditures on food. Source: Personal Data.

The graph above shows that majority of the households spend less on food than they would in an ideal scenario. This implies that for majority of the respondents, household food needs are not adequately addressed on a daily basis. In a slightly steady trend, the ideal daily expenditure on food closely follows current expenditure. Households that are already spending relatively high amounts on food indicate they would require to spend a higher amount to adequately meet their food needs, and in most cases the indicated amounts are higher than those of the households that currently record lower expenditures on food. This interesting occurrence is reflected in the differences between the current and ideal expenditures, in that households spending lower amounts on food do not seem to require higher amounts of money than currently higher spenders in order to adequately address their food needs. Through in-depth interviews it became clear that the manner in which households would spend extra income on food varied. Several households would focus on increasing food quantities to ensure adequate food consumption, while others would focus on changing the varieties of food currently consumed to ameliorate nutrition. In other cases, households would buy foodstuffs that are not affordable on a daily basis, while for others spending more on food would mean obtaining a balanced diet on a daily basis. The different approaches to addressing

food needs strongly show that income is only a means to food access, and beyond that multiple routes can be taken towards food utilization.

The claims that financial constraints restrict adequate food access was closely reflected by the multiple ideal expenditures that were higher than current expenditures on food. To further investigate the impact of financial constraints on household food security, data for monthly household income and monthly food expenditure¹⁴ was plotted to assess the relationship between the two variables as shown on the graph below:

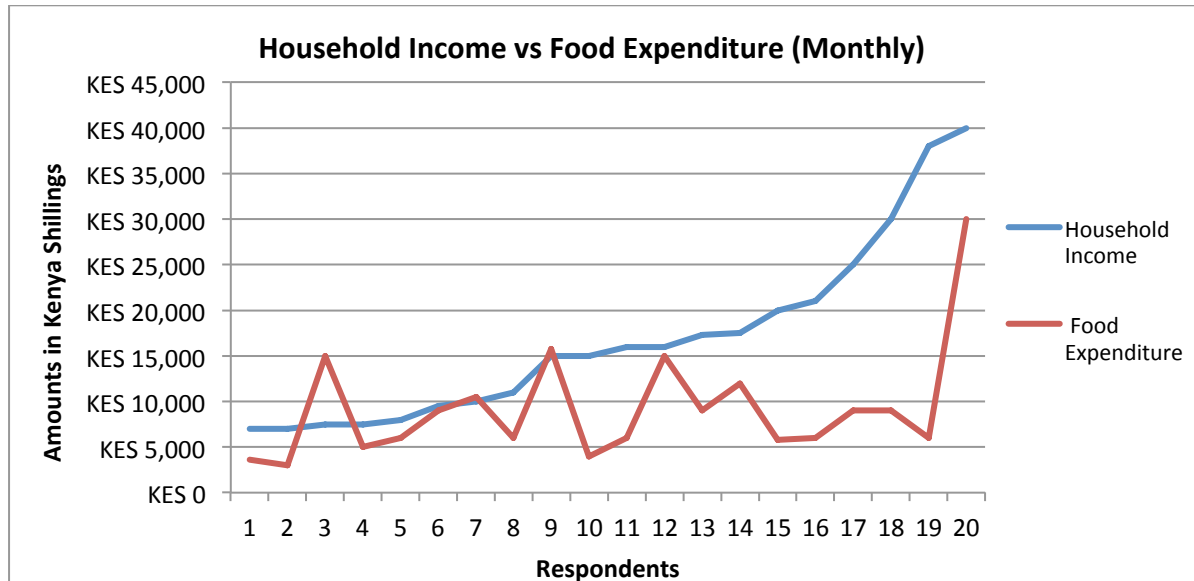


Figure 12: Monthly household income and monthly household food expenditures. Source: Personal Data.

The graph above shows that higher monthly household income is not associated with higher monthly food expenditure. As income rises steadily, expenditure on food varies irrespective of income, with some lower income households outspending higher income households. The differences in food expenditure between different income groups question the extent to which financial constraints account for inadequate food access. However, the graph clearly shows that households with less than KSh. 15,000 per month, the majority in the sample, spend an extremely high proportion of their income on food. Among groups earning above that amount food expenditure does not automatically rise, questioning whether higher wages would definitely result in higher food expenditures among currently lower-income households.

It is surprising that in some low-income households, monthly food expenditure exceeded monthly household income. A possible explanation emanates from one of the interviews where the respondent informed that some employees operate in a cycle of financial poverty such that at the end of the month they have nothing left despite having been paid. This claim was further confirmed by one of the business

¹⁴ Monthly food expenditure is calculated as the daily food expenditure multiplied by 30, the number of days in an average month.

persons who indicated that some employees live in debts and when they receive their wages at the end of the month, all the income is used in clearing debts, a cycle that continues into the following month. These findings reflect the earlier posited ‘poverty trap’ among some employees in the floriculture industry.

A case for food as an exacting basic need can be illustrated through a comprehensive analysis of a household’s monthly income and expenditure on food, and the percentage of income that is directed to food needs. Out of 18 respondents that indicated both their monthly household income and the expenditure on food, the range of the percentage of monthly income spent on food was between 9 per cent and 95 per cent, while the average for the entire respondent group was 49 per cent. A table with the full percentage information can be found on appendix 7. Based on the data, it is shown that food expenditures account for an enormously significant proportion of household income. However, among relatively higher income households, monthly expenditure on food accounts for relatively less of the monthly household income. This observation intimates that as household income rises, the proportion of the income directed towards food needs does not increase at a similar rate. Hence, food expenditures motivated by a rise in income taper off at a given point, and the amounts spent on food by households thus do not offer a clear reflection of differences in household income.

Besides financial constraints, another factor that restricted food access among households was poor health. The chemicals used in flower farms were deemed harmful to people's health not only by the workforce in the industry, but also by other groups such as business operators, as B02 categorically claimed, “The chemicals in the flower farms are slowly killing people. It is only that people have to continue living that they have to work since there are not many options out there.”

In the event one became ill and unable to work in areas where exposure to chemicals was higher, one was moved to a different department where there was less exposure to chemicals. As H33 informed, “I get affected by the chemicals used in the flower farm; I have respiratory problems and skin problems. For this reason they had to send me to a different department. If you fall ill due to the chemicals used at the farm, they cannot sack you because then they might find themselves in trouble as the environment under which flowers are produced would come under serious scrutiny, meaning potential losses by the company.”

7.3 Food Availability

The status of household food security is greatly influenced by food availability in the village markets. The foodstuffs in the local markets serving the employee population are primarily supplied from areas outside of the enclaves of the floriculture industry. The main food-producing areas are Maiella, Moi-Ndabi and Dabibi. As both households and business operators dealing in food informed, food is available in the market throughout the year, implying the underlying challenge among households therefore is not unavailability of food in the market, but rather the ability to afford food in times of low supply. Food supply shifts depending on weather dynamics in food producing areas where agriculture is principally

rain-fed, and the rebound effects are reflected by higher food prices. As H12 informed, “During the dry seasons food prices rise because it is more expensive to produce agricultural products.”

A number of respondents identified the changes in food supply and prices during the year, with H22 informing that, “The amount sold for a specific price varies depending on the weather. For instance, during the rainy season the supplies increase (March to August), and during the drier months the supplies go down pushing down the quantities of vegetables sold for a given price (Sep-Dec).”

While informing on possible annual trends of the food market, a captivating finding entails the manner in which price changes are perceived. The business operators arguably having understood the financial challenge among households in the area reduce quantities of food units sold at a given price, instead of only augmenting food prices while maintaining usual food quantities. For instance, if 500 grams of vegetables cost Ksh. 30, in a period of low supplies units lower than 500 grams would become available in the market and go for Ksh. 30, instead of maintaining only the 500 grams at prices exceeding Ksh. 30. As H01 put it, “The prices usually do not change when supplies are low, but rather the quantities sold for a certain amount of money are less.” Interestingly, consumers have focused on the quantities sold rather than the actual price changes, implying observation of strict budgets by households.

The perceived and seemingly predictable annual trend was however challenged by some respondents who noted that weather patterns had changed noticeably in the recent past years. As H18 informed, “...there is no specific month (when there are low food supplies in the market) because the weather nowadays keeps on changing, which means the months (when food supplies are) keep on changing too.”

A case in point was the period of the research in January and February when the area was receiving rainfall, while usually the two months were previously deemed the driest months of the year. In this view, the occurrence of food unavailability is extremely difficult to anticipate, meaning that households also find it difficult to adapt their coping strategies against weather changes. With increased impacts of climate change and fluctuation of weather patterns, households will face an even more severe task of trying to cope with changing food availability in the market.

7.4 Food Production: A Farmers’ Perspective

Food availability in the village markets is chiefly facilitated by food production, which in turn is greatly influenced by the weather particularly due to the utter dependence on rain-fed agriculture. This view was confirmed by information gathered from interviews with farmers engaging in food production in Maiella, one of the key food-producing areas. When asked about factors influencing the level of agricultural production, F01 replied, “It depends on the weather. When there is rainfall, production goes up.”

Another farmer, F02, informed that, “Lack of, or low rainfall leads to low production. When rainfall is high, production rises.” Levels of agricultural production thus reflect the weather conditions at a

given period in time, a view confirmed by F03 who attributed his higher production to the increase in rainfall.

The weather also dictates when agriculture can be practised, as informed by F04, “I cannot plant throughout the year because I have to depend on rainfall,” a further highlight of the extent of rain-fed agriculture.

Farmers have found it challenging to practise agriculture in the backdrop of changing weather patterns, with F05 stating that, “Sometimes the rains are late leading to crop failure. The rains are coming only for a short period, and then they stop...the weather has become highly unpredictable.”

The centrality of the weather, and thus climate change in food security presents a mammoth challenge both from the production and the consumption sides. For rain-fed agriculture, it becomes even more challenging with the heightened unpredictability, and this transpires through to the consumers who are dependent on the farmers for food production. Given that food has always been available in the market, the significance of financial capital in order to be able to cope with the ever-changing terrain of food supplies only increases, and therefore the importance of the wages offered in the floriculture industry.

Another challenge facing food-producing areas, as gathered from the case of Maiella, is the growing scarcity of arable land in a previously land-abundant locality. Land scarcity has constricted agricultural practices, with F01 informing that, “It is not profitable to rear goats because I have only a small piece of land. Goats need a bigger piece of land for them to be able to graze.”

Another farmer, F04, focussing on dairy farming aired similar sentiments, as he had to keep only a small number of animals saying that, “...2 dairy cows. The area is small so I cannot rear many animals. I sell milk in the morning and consume milk gotten in the evening.” Given the rise in population, land scarcity could be exacerbated in the future, affecting food production and in turn food availability in the receiving areas such as in the localities populated by the workforce in the floriculture industry. The agricultural sector in areas that serve the workforce in the floriculture industry is likely to undergo enormous challenges driven by both endogenous and exogenous factors. Should alternative measures be insufficient to counter the imbalance from the agricultural production side, such a scenario will potentially expose the low wages offered in the floriculture industry as food prices skyrocket.

Transportation constitutes another critical factor with regards to food availability in the market. In this study, it was envisaged that the floriculture industry would impact positively on local food security via improvement in the infrastructure serving the Naivasha area. Interviews with both farmers and business operators revealed the importance of transport, and its impacts on local food security. Both groups informed that transport costs had risen significantly over the years, making it a gruelling task to deliver commodities to the market. From the food producing areas, transportation is greatly hampered during the rainy season due to dearth of paved roads leading to the markets. As one of the farmers, F05, apprised, “Those that transport farm products face challenges when it rains, because the road becomes

impassable (...) If the roads are bad, the buyers (brokers) incur losses and they do not come to buy products from us farmers and if they do, they buy at lower prices.” The impacts of poor means of transportation are thus not only felt by the market and consumers, but also by the farmers who cannot fetch a favourable price from their agricultural products.

Infrastructural improvements aimed at ameliorating the status of road transport have been minimal and devoid of urgency, with F04 informing that, “It (road transport) has improved over time. It was really bad before. Only big vehicles could make it here. The government has taken charge in the improvements of roads, but they are still too slow.” As such, the linkage between markets and producing areas are an obstacle whose inefficiencies are acutely exacerbated by weather conditions, impacting negatively both on the farmers and consumers. Floriculture companies have not engaged in infrastructural improvements as hypothesised, and even one of the flower farms acknowledged that it was the government that had taken charge of road network improvements in the area. From personal observation, the tarmacked road only covers areas occupied by the floriculture industry, with weather roads linking the area with the agricultural localities. This fact possibly indicates the value attached to the floriculture industry due to its contribution to the economy, and the neglect of important linkages that indirectly facilitate the functioning of the industry.

7.5 Diversification and Coping Strategies

Faced with limited resources and unrelenting livelihood needs, households have devised ways of addressing challenges to enhance their livelihoods. One of such strategies closely linked to food security and income-generation is agricultural production. From the research study, the extent of food production among the research participants was notable. Half of the respondents engaged in food production, albeit on small-scale basis. The acreage ranged between 7m² to 7 acres, with 52.6 per cent of the respondents possessing 1 acre or less, while only in one case did a respondent have 7 acres. For some of the respondents practising agriculture, a major challenge lies in the distant location of the land, which even influenced the type of crops cultivated. As H28 informed, “...I chose these crops (maize and beans) because I have to do farming from a far distance and they do not demand too much attention”, meaning he could afford to only tend to the crops occasionally.

For others, the occasional visit to the farm was not possible and therefore they had to employ external labour. This made agricultural practice an expensive but still a worthy venture. As H22 explained about her farming activity, “I use it as an extra means of income since my salary is very little. I have employed someone to take care of farming since I do not have enough time to go and do farming there.”

Another activity households engage in to supplement their restricted means of addressing livelihood needs is rearing chicken. Chickens provide an important asset that both fetches income and acts as a source of food for households, a climacteric role especially among such low-income groups. The feasibility of the activity strongly rests on the fact that it can be carried out on a small space, and required

minimal time of personal attention. Time and space scarcity are essential factors among flower farm employees, whose work shifts start early in the morning around 7.00am until around 4.00pm, and residences mainly comprise small rental houses.

An important factor in addressing household food needs in such a monetary economy is social relationships. Respondents indicated obtaining foodstuffs on credit at times, to be paid for at a later date, possibly at the mid- and end of the month. According to business operators, employees in the floriculture industry obtain an advance of their wages midway through the month, and the rest of the wages at the end of the month. During these two instances, households possess a notably higher purchasing power to pay for goods in the market. Another relationship-based financial coping strategy entails borrowing money from friends, underlining the power of relationships among low-income groups in monetary-based economies.

Financial management is key in enhancing financial access among households. Employees in the floriculture industry have formed Saccos within the companies, which offer essential financial services such as loans. The Saccos are member-exclusive, meaning they only comprise employees in a given company. The fact that financial access is fundamental to food access made loans an important factor in the analysis of household food security. In one case, a respondent indicated having taken an emergency loan to purchase food for the household. The popular use of loans, however, was to engage in projects that required huge sums of money such as purchasing land, building houses and for some, practising agriculture. These projects exhibit forward thinking and establishment of long-term livelihood strategies that are more stable than employment in the floriculture industry. Also, it shows there are opportunities that employees can utilize as a spring board to further progress their livelihoods.

In addition to loans, the clustering of flower farm employees both in and outside the companies' premises presents business opportunities for some of the workers. Through their demand for various goods and services, the employees constitute an important customer base. For instance, H01 informed that one could engage in different businesses that serve the interests of the workers in the floriculture industry. In this instance the respondent offered hair services to women, a skill she had acquired prior starting work in the floriculture industry. In fact, during the research, a fellow employee booked an appointment for a hair service scheduled for the following day. In another case, an employee repaired shoes, with the latter underlining that shoes were expensive and therefore it was an essential service to such low-income groups that he could repair their shoes. These activities indicated that besides depending on wages as a source of income, there were other opportunities at the workplace that could bolster household income.

While a diversification of means of income empowered some households to address their food needs, in other cases respondents had to devise strategies such as skipping meals to cope with their inability to afford adequate food on a daily basis. In one of the research cases, the respondent skipped meals not due to dearth of financial resources to access food, but rather in order to save income to cater for other priority needs. The respondent indicated that with a higher income the focus would be on

ameliorating the quality of the food consumed, contrary to the expectation that the focus would be on ensuring meals are not skipped. This finding showed that food needs while being vital, there are other competing needs in a household, and echoed de Waal's (1989) view of 'time preference' where households skipped meals to insure future access to food.

In other households, additional expenditure in the event a higher income was obtained would not translate to a rise in the amount already spent on food, a view categorically affirmed by H19 who asserted, "I would not spend more money on food at all." For many households that already meet their food needs adequately, a higher income would not be directed towards food. This view is in line with the research finding that even with huge differences in income, the difference in the amounts spent on food by households is not similarly reflective of the income differences. Arguably, the amount spent on food does not increase one for one with increasing income.

A knack for market dynamics by households, another strategy to address food needs, was found to influence when food was bought and consequently underlined the significance of other competing needs for households. As H04 informed, "I buy non-perishable foodstuff when the supply is high and store it for future consumption. When I have some disposable income I do shopping that can last for some time because I know there will come a time when I will not be able to do shopping due to other demands."

As such, in addition to food needs, households are confronted with other priority expenditures that compete for a household's limited resources, subsequently influencing the status of a household's food security. Through an analysis of a multiple response set, the highest expenditures of a household were found to be food, school fees and house rent which ranked 33.8 per cent, 18.3 per cent and 14.1 per cent respectively.

7.6 Water Access

Access to water is an endogenous factor to food security. Despite its primacy, however, water access in food security research as well as in the definition of food security by FAO has received limited attention. In this study, emphasis was paid to water access, and in particular due to the mammoth challenge that water access is to local communities in Naivasha. The floriculture industry addresses the predicament by providing clean drinking water to employees at the workplace. However, outside the workplace, water access remains a critical challenge as a considerable majority of the households working in the floriculture industry depend on tap water, as shown on the bar chart below involving all 34 respondents:

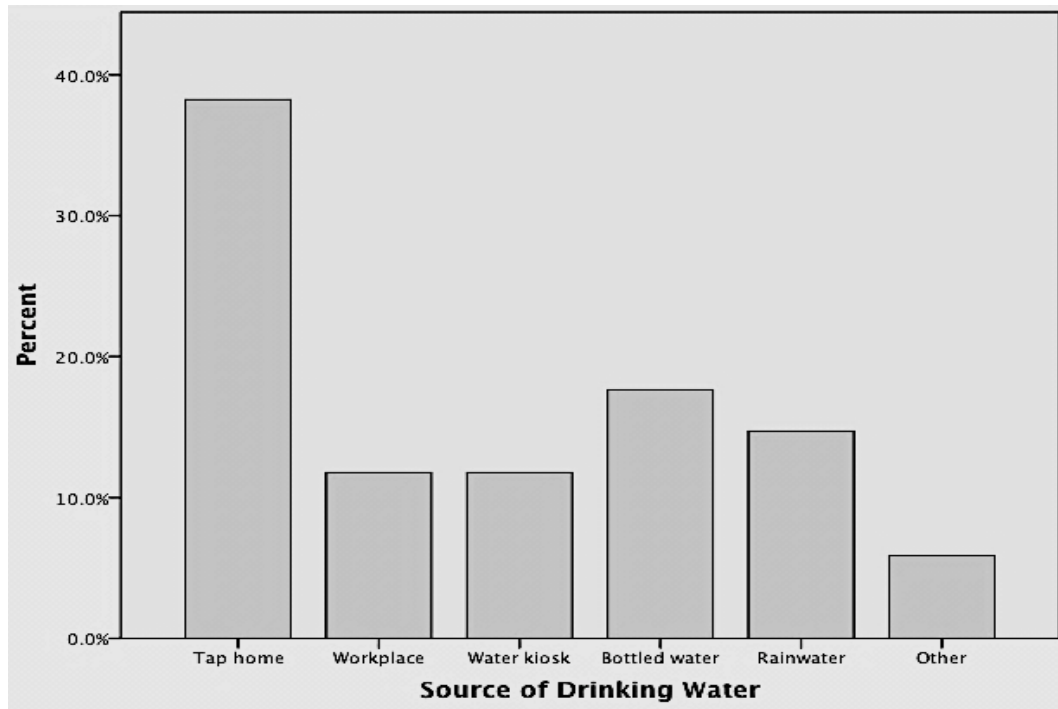


Figure 13: The sources of drinking water for households. Source: Personal Data.

Tap water flows only a few days in a week, and sometimes only once in a week¹⁵. Water storage thus becomes an essential feature for households in the area, and arguably an arduous task for bigger households with relatively higher water demands. Another common water source is boreholes, whereby small kiosks deal in water, either treated or untreated. Treated water costs Ksh. 5 per gallon of 20 litres, while a similar amount of untreated water costs Ksh. 3. The multitude of kiosks dealing in borehole water, and shops dealing in bottled water in the three towns where research was conducted is visibly indicative of the water challenge in Naivasha area. In a few cases, the respondents admitted being bereft of the quality of the tap water they consumed, and believed it was safe for drinking since they did not experience any negative effects after consumption. In other cases, it was considered too pricey to purchase bottled water for drinking, an expense deemed too high for some households.

Despite the offer of clean water by floriculture companies to their employees, the bar chart above shows that only a small proportion of households depend on the clean water provided by the employers. This low proportion of households depending on water from the workplace provides crucial insights into the mechanisms of accessing safe water for drinking. Employees in the floriculture industry reside in relatively short distances from the place of work. However, while the distance maybe relatively short for commuting to work, it becomes untenable when transportation of water is considered for employees who either walk, cycle or use the local ‘matatus’ means of transport to and from work. The intended benefits from offer of clean water for drinking are therefore reversed as employees consume untreated water from the tap at their homes. This finding paints a picture of the water initiatives as a case of a ‘chief’s toilet’, in

¹⁵ This was an observation from living in one of the housing also inhabited by employees from the floricultural companies.

that despite being established, the intended benefits are hardly reaped since the mechanisms for deriving benefits from the resource have not been adequately established.

In close relation to water, a significant challenge that faces the livelihoods of employees in the floriculture industry is the poor state of sanitation in the area. The small towns that have emerged as a result of an influx of employees in the floriculture industry have not been served with adequate infrastructure to serve the increasing population (Nyangena and te Welde, 2012). While toilets have been built, there is rarely water to keep them functional while the sewages are often dysfunctional. The poor state of sanitation poses a great risk especially for children, while the lack of water compounds the challenge, impacting negatively on health. Therefore, while improving working conditions in the floriculture industry benefits health, there are still challenges outside of the workplace that ought to be addressed in order to ensure that efforts in the floriculture industry are not reversed by poor living conditions at the homes of employees. These location-based differences underscore the need to harmonise developmental initiatives in order to actually realize the ‘ends’ of any developmental efforts, a view that also applies to the efforts of promoting access to clean water by households.

7.7 Food Utilization

Beyond availability and access to food, a crucial step towards attainment of food security is food utilization. The study delved into the state of, and the factors that influence household food utilization among households of employees working in the floriculture industry. Firstly, the main foods consumed in the area were investigated, and formed a critical basis for informing on food utilization in the study area. The three most consumed foods among employee households are ugali¹⁶ (34 per cent), followed by rice (28 per cent), and githeri¹⁷ (19 per cent). These foods are consumed with side dishes that mainly comprise vegetables, and sometimes meat and fish, with the latter two being deemed expensive and luxury foods, and therefore consumed less often.

The type of food consumed in a household depends on a range of factors. Time is a key factor among employees in the floriculture industry, who engage in physically demanding work from morning to evening. Food that can easily be prepared in a short time appeals greatly, and it is no wonder that all the three leading foods are characterised with the ease of preparation. As such, the nature of work in the industry constricts time and exhausts employees impacting on their consumption habits. At the same time, the physical nature of the work demands high energy levels, underlining the importance of food that is filling, with respondents citing ugali as the dish best suited to supply adequate energy for many hours at the place of work.

The work environment also influences the type of food consumed in households. Working in the floriculture industry involves exposure to chemicals, especially among those in the spraying department.

¹⁶ Ugali is a local dish made from maize flour.

¹⁷ Githeri is a local dish that is prepared from maize and beans.

Respondents claimed that in order to withstand the environment that was laden with chemicals, one's health had to be enhanced by consuming nutritious food. A few of the assertions made during interviews included:

H03: *"I have to make sure I eat well. For instance, I consume eggs and milk because the chemicals used at the flower farm are quite strong and if I have to enhance my health, then it is important that I eat well."*

H08: *"If one is working in the flower farm and is not watchful of what they consume, then it can greatly affect your health because there are a lot of chemicals used in the flower farms. For instance, I have to make sure I consume milk and fruits like oranges to ensure I am healthy."*

H16: *"Following the use of chemicals at the flower farm I have to make sure I consume quality food like milk and meat to ensure my health is good."*

These highlights indicate that respondents recognize the perils posed by chemicals used in flower farms, and likely negative ramifications that can be countered by consuming foods rich in proteins and vitamins. Importantly, the foods indicated as being nutritious were also categorised as being expensive, a perception that intimates healthy is costly. In such view, health and food security become a huge stumbling block for households with constricted financial capital, a challenge that is even more pronounced among those working in exacting conditions such as in the floriculture industry.

The presence of children in a household was deemed a key factor in motivating the need to vary the type of food consumed, as children easily lose appetite from consumption of monotonous food. For parents with school-going children, it is imperative that the food prepared be favourable to carry and be consumed at school. Following the proposition that the dietary change presents a paramount way of enhancing food security (Headey and Ecker, 2013), it can be argued that households with children stand a higher chance of being food secure due to the varied nutrition that emanates from dietary changes.

Decision-making greatly determines the food consumed in a household. As informed by both men and women, it is the woman in the house that decides what food is prepared on a given day. In a few cases, men can request for particular food but it is still prepared by the woman in the house. The kitchen thus receives a gendered perspective that labels it as a woman's territory, but at the same time implies a role that adds responsibility on a woman especially when working in the floriculture industry. Based on personal observation, women would come from work and engage in domestic chores and primarily kitchen duties, a factor that greatly limited opportunities to interview women as many interviews were carried out in the evening after work.

Food utilization is greatly influenced by food availability and access. From the research study, changes in food utilization varied among different households. While the situation among some

households had improved owing to the increase in the purchasing power that emanated from the wages obtained from working in the floriculture industry, for others it had deteriorated. As H34 put it, “I get an income from work, and it is not like before when I did not have an income. Today I can afford to buy food and change the variety of the food that I eat.” This assertion shows that financial capital is key to food utilization, as it empowers one to access different varieties of food from the market.

In other cases, a transition to a purely market-based economy has hindered food utilization due to dearth of adequate income. As H33 informed, “It (food situation) changed for the worse because when I lived at home, I could get food since not everything had to be bought; some of the food was just available from the farm. Right now, everything has to be bought and it becomes very difficult.” With everything coming from the market, access becomes a major determining of utilization factor as opposed to availability.

The consumption of a balanced diet by households, defined as a diet that contains carbohydrates, proteins and vitamins (Ministry of Health, 2006), offered critical information on food utilization by households. Following interviews with 32 households, only 5 households consumed a balanced diet always. The majority of the households, 11 and 12, consumed a balanced diet either often or sometimes, respectively. Only one household did not consume a balanced diet, while 3 households were able to consume a balanced diet only on a rare basis.

The inability to consume a balanced diet on a daily basis was chiefly blamed on financial constraints. In one of such cases, H23 informed, “It is expensive to ensure a balanced diet on a daily basis, since the amount of the salary does not enable me to do so.” The perception that a balanced diet demands higher expenditure further confirms the view presented earlier that ‘healthy is costly’. While some respondents cited access to fruits as expensive and bordering on luxury, it is the key sources of proteins such as meat and milk that are more costly.

However, the fact that fruits cannot be consumed as a main meal reduces their value to a household despite their apparent nutrition benefits. This scenario greatly contrasts to many areas in the countryside where fruits are more readily available and at lower prices. As H26 informed, “Because of financial difficulties, we first buy basic food before going for e.g. fruits.” The respondent further added, “...food was a lot at home and it was of different kinds e.g. fruits, eggs, but here everything has to be bought.” Labour mobility as such creates opportunities for financial capital, but when the income is limited in the highly monetary economy that characterises the settings that are home to the workforce, the ability to meet various needs is significantly constrained.

The research uncovered a stark difference between the consumption of adequate food and a balanced diet. While some households afforded adequate food, a balanced diet was not always obtained meaning the main goal is to derive satisfaction from food consumed with minimal if any attention to nutrition. The value attached to nutrition was highly questioned with findings that households could afford adequate food but not a balanced diet, yet informed that any additional income would not be spent on

food, or even in the realization of a balanced diet. Surprisingly, some households that consumed a balanced diet on a daily basis did so despite having a relatively lower monthly income. One household informed having had a schedule that guided household's consumption to ensure a balanced diet was consumed. The respondent, H27, informed that, "We have a timetable for what food we eat on a certain day. The timetable is based on the need to have a balanced diet." The monthly income of the household was a relatively average amount of Ksh. 15,000-20,000, challenging the view that consumption of a balanced diet required a significantly higher household income. These findings intimate that an increase in income is not a panacea to nutrition, and thus food security.

A number of households directly admitted not having given consideration to the consumption of a balanced diet. H19 categorically indicated that, "I usually don't take this into consideration, and what changes is the variety of food consumed. Balanced diet is not really taken into account." The emphasis on the need to change the variety of food indicates efforts to avoid monotony in the type of food consumed. In this particular household, adequate food was afforded but not a balanced diet, while additional income would have been directed to savings, further underlining that a higher income is not a panacea for nutrition.

In another case, the concept of a balanced diet came as an afterthought after the question was posed, to which the respondent, H25, replied, "Nothing determines what is consumed. There are no plans based on diet; we just eat what is available."

The change in variety of food consumed in a household was sometimes equated to consumption of a balanced diet. As H27 asserted, "In my family we try to get a balanced diet so we keep changing the variety of the food we eat."

In a few cases, the thought of observing a balanced diet was a demand too high to consider, as all the efforts were bent on securing food to eat. The household at the time focused on survival, and as H33 informed, "There is no money and in any case, right now it is all about surviving. We leave it to God hopefully in future we'll be able to eat well." This finding showed that the degree to which households of employees in the floriculture industry are food secure varies significantly, and as such underpins the need to avoid any treatment of such households as a homogeneous group. The utilization of a livelihoods approach that acknowledges the subsisting heterogeneity is thus paramount.

The floriculture industry is hugely blamed for polluting Lake Naivasha through irresponsible disposal of chemicals into the lake. This pollution has discouraged fish consumption among some households who feel that consuming fish would expose them to such chemicals. This assertion critically emanated from an informed source working in the laboratory of one of the flower companies, and underlines a linkage between environmental pollution and food security, which further underscores the need to ensure safety of the lake waters by the floriculture industry. Various initiatives focusing on curtailing chemical and waste disposal into the lake have been put in place, with various bodies in charge of monitoring and enforcement of pertinent regulations.

Fishing in Lake Naivasha is regulated by the sub-county government, which issues permits to parties engaging in the activity. As part of ensuring the safety of lake waters, which is central to the fishing industry in addition to other ecosystem needs, the water discharged to the lake is required to undergo purification processes. The flower companies interviewed indicated having wetlands, *presented in chapter 5 of this thesis*, that ensure purification of water before being discharged into the lake. NEMA monitors and enforces adherence to water purification processes by floriculture companies, and sometimes conducts surprise checks to randomise the process and as such avoid cases of companies bending the rules. While some farms have been keen to observe to the said processes, NEMA informed others bend the rules and escape the set repercussions by engaging in corruptive arrangements.

7.8 Conclusion

This chapter shows that household food security is an expansive and intricate concept that is influenced by multiple factors, both endogenous and exogenous to the household. Among the households of employees in the floriculture industry, food security is greatly influenced by financial capital that primarily emanates from the providing labour to the industry. While households have developed diverse coping strategies, the challenge of food insecurity is still relentless. The chief obstacle to food security is presented as financial constraints, but the analysis indicate the need for caution and critical look into the assumption that an increase in financial capital would be a panacea to food security. Of importance to note is that households experience food insecurity differently, a recognition of the heterogeneous group that characterise employees in the floriculture industry. This feature suggests the need for such recognition in any efforts geared towards bolstering food security, and in fact challenges the current approach to only focus on providing clean water at the workplace while households can only consume untreated tap water at home. In the following chapter, the complex interlinkages and the impacts of the floriculture industry on local livelihoods and food security are discussed in depth in light of the theoretical foundations presented in the theoretical background chapter.

8. The Floriculture Agribusiness, Local Livelihoods and Food Security Nexus

The research study sets out to investigate how European floriculture agribusiness investments impact on local livelihoods and food security in Naivasha, Kenya. The study aims to inform on the currently hot debate on foreign agribusiness investments and their impacts in host countries, and contribute to scientific knowledge on a dimension that has been scantily covered within the foreign agribusiness investments topic. Due to the sheer dependence of agribusiness activities on land and water, it was anticipated that competition for these resources hamper local food security, painting a grim picture of an industry that has thrived over the years and contributed significantly to Kenya's economy. In this chapter, the key findings from the research study are discussed in depth based on key theoretical foundations to illuminate on the research questions, and provide essential insights that develop from the study.

Food production has a prominent role in enhancing food security, and its significance has been accentuated by extensive land acquisitions by foreign agribusiness investments particularly in Africa. It is therefore hypothetical that local food production diminishes due to competition for land and water resources by wealthy, powerful and technologically advanced agro-investors. While such postulations have been confirmed in numerous cases in Africa, the case study of Naivasha generates intriguing findings that underline the significance of situ-specific research. In a manner that confounds suggestions of displacement of smallholder farmers from fertile land, the floriculture industry in Naivasha was established on land that was previously used predominantly as pastureland by the Maasai community. Despite being the main users of land, the Maasai community did not officially own the land, and parties that held official rights to the land sold and in some cases leased to the European agribusiness investors. The diminished land for pasture impacted the livelihoods of the Maasai community, forcing many to adopt sedentary livelihoods and practise mixed farming. The displacement of the Maasai community due to dearth of official land ownership reflects the regulation of access by 'bundles of power' that are vested in a particular mode of land ownership. Given that the national government ensures that such 'bundles of power' remain valid, it is thus not depicted as a 'constraining institution' as postulated by North (1999), but rather as an 'enabling institution' that ensures the 'rules of the game' are observed and effected in the conduct of business. For the Maasai community, a lack of 'bundles of power' restricts access to land, and as postulated to be the nature of households when faced with difficulties in the livelihoods approach (Johnston, 1993), the Maasai were 'active' and 'proactive' in adapting their livelihoods to the new situation by adapting to sedentary ways of living.

Critical to the mainstream view that foreign agribusiness investments target fertile lands under food production, the land in Naivasha is not fertile and was not under cultivation prior to the advent of the floriculture industry. The floriculture farms are clustered around Lake Naivasha, implying that the lake waters have been the primary force attracting agribusiness investments in Naivasha. Water therefore plays a paramount role, and as such warrants great attention in evaluating the impacts of the industry in the area.

Following the design and implementation of the PES scheme to address concerns over lake waters, it is shown that competition for water resources is rife in Naivasha. It is out of this competition that a number of essential lessons have been drawn. Firstly, competition has the potential to promote sustainable use of resources, in order to ensure benefits are derived not only in the short but also in the long term. Secondly, the nature of water to transcend boundaries, unlike land (Woodhouse, 2012), has been central in determining which groups are deemed key stakeholders in the floriculture agribusiness, and which groups are the interferers. The upstream communities, the primary target groups of the PES scheme are deemed essential stakeholders, forcing the agribusiness investors to support the scheme. On the other hand, access to water by the Maasai pastoralists has been severely restricted by the closedown of key corridors leading to Lake Naivasha. As such, while the upstream communities possess ‘bundles of power’ over water, the pastoralists lack such ‘bundles of power’ to access water, and their lack of contribution to the conduct of agribusiness renders them interferers in an environment where ‘bundles of power’ dictate who benefits and who suffers. There has been therefore an overemphasis on land as the primary link between livelihoods and food security, with food production being viewed predominantly from a land access dimension, and water consequently losing attention despite its primacy in defining and dictating impacts from foreign agribusiness investments.

Water as a fundamental resource in foreign agribusiness investments has implications for the stakeholder theory. While the theory views businesses as intrinsically generating benefits for different stakeholders, it is arguably the case that such benefits are strategically structured. In the case of Naivasha, the strategic structure of benefits sees upstream communities benefit from a PES scheme, while pastoral communities face challenges in accessing water due to occupancy of land by foreign investors and the eventual closedown of key corridors to water points. The stakeholder theory does not go as far as to consider and emphasize on the heterogeneity feature of local communities underlined in the livelihoods approach, and ultimately the manner in which those differences influence how benefits are accrued by households. The situation illustrated by the upstream and pastoral communities suggests that groups that derive benefits from businesses contribute to the success of those businesses, suggesting a two-way relationship between stakeholders and the business. Further, the fact that upstream communities receive only US\$17 annually through the PES scheme, while employees in the floriculture industry lament over low wages, it is evident that stakeholders can be classified in accordance to their relevance to businesses, a classification that influences the manner and amount of benefits accrued by the different stakeholders.

A major contribution of the floriculture industry in Naivasha is the creation of employment opportunities, a ‘pull force’ for labour from different parts of Kenya with a promise of financial income that is extremely vital given Kenya’s high unemployment rate of 40 per cent (KPMG, 2012). This scenario is indicative of translocal development that has been driven by the floriculture industry in Kenya, with the industry instigating processes of change in other localities in the country by creating opportunities to raise income. However, low wages left majority of the employees unable to address their livelihood needs, and

food needs in particular. Faced with the financial shortage, households have developed varied coping strategies, again underlining the view of the livelihoods approach that households are active and proactive in addressing livelihood needs. Social relationships are one of the key strategies of accessing goods in the absence of financial capital. In line with the theory of access, social relationships confer ‘bundles of power’ that facilitate food access, and in the process challenge measurements of food security that solely focus on financial capital. However, households still face difficulties in accessing food and other livelihood needs despite utilizing social relationships. As such, financial capital cannot be utterly replaced by the social capital of relationships. Given households still have to pay for the goods accessed on credit, the need for financial capital is thus paramount. In a monetary economy such as Naivasha, social relationships are seen to just shift financial burdens into the future, arguably to the mid- or end-month when employees’ wages are paid. The business operator benefits from the fact that the social relationships created and utilized insure future customer base, with the creditors willing to stick to a businessperson that can grant access even in the absence of financial capital.

Low wages in the floriculture industry hamper food security in Naivasha area. At the end of the month, employees are left with almost nothing as the monthly income is used to pay up debts, suggesting a cycle of economic poverty for some households. While social relationships provide essential means for addressing household needs, the power of choice is limited as households can only gain access to goods and services up to the reach of the particular social relationships. This limitation contrasts notably from financial capital especially in highly monetary economies, as financial capital grants access even to resources that are not under the control of parties with whom one has an amicable social relationship. Thus, even though social relationships facilitate access to resources, the need for financial capital is indisputable, a view that underlines the importance of higher wages in the floriculture industry.

In addition to low wages, the nature of work in the floriculture industry influences food security in varied ways. The physical demands and exposure to chemicals require that employees consume certain foods in order to remain healthy, a requirement that is underscored by the offer of nutritious food by some companies to employees in the spraying department. The foods cited as being healthy; meat, milk and eggs, are all relatively expensive in the local markets, implying that good nutrition is costly. The high costs arguably limit the consumption of these foodstuffs, impacting negatively on health. However, the classification of these foods as being more nutritious suggests a ‘local’ perspective of good nutrition, given vitamins and carbohydrates that would be required for a balanced diet obtain less attention.

Households are faced with competing needs besides food, and the choice to go hungry was one of the strategies of minimising household costs in order to finance other expenditures. This form of sacrifice resonates with de Waal’s (1989) findings in Darfur, Sudan, that households skipped meals in order to save seeds to insure future food security. Food consumption therefore constitutes just one of the many household needs, and with such competing needs, higher financial income is not a panacea to food security as other household needs may be prioritised ahead of food access. As such, while low financial

income is detrimental to food access, there are other critical factors that influence a household's food access, and this shows the significance of utilising a livelihoods approach to comprehend the multiple factors that influence household food security among such low-income households.

The influence of the weather on food availability in Naivasha area is noteworthy. During the rainy seasons, food production rises and food prices go down, while the vice versa is experienced during the drier months. The transport network connecting Naivasha to the food-producing areas are weather roads that become impassable during the rainy seasons. As transportation becomes cumbersome, a contrasting development takes place as the final food prices rise to cover for the higher transportation costs. In this view, the easier access to food already being experienced during the rainy seasons therefore could be ameliorated with improved infrastructure. As the impacts of climate change threaten to exacerbate already dire situations, it becomes critical to improve infrastructure and secure market linkages with food-producing areas. A look at the transport network around Naivasha, however, indicates selective service provision by the government, and significant prioritisation of the floriculture industry relative to other facets of the economy such as smallholder agriculture. The significant bias shows that it is unlikely that the government can enforce regulations that favour the workforce against the will of the floriculture industry, rendering the government an inadequate 'enabling institution' in promoting employees' working conditions. The entry of the codes of conduct could thus be viewed as a confirmation of the government's limited 'bundles of power' in regulating the floriculture industry.

A central aspect of the floriculture industry in Naivasha is the dominance by women. Based on this study and previous research, women are maltreated at the place of work by male supervisors. The extent to which the industry has worked to protect and improve working conditions for women is highly questionable. It is surprising that the developmental programmes, labelled as corporate social responsibility, have not been keen on accounting for the fact that women constitute the majority of the workforce. It is then no wonder that Hivos postulates that in the event working conditions are ameliorated in the floriculture industry, men will displace women as the dominant workforce. In this view, women are used as tools for initiating responsible activities by businesses to bring about benefits that they will not reap, but men. The fact that there is no evidence of future planning by the floriculture industry to ensure the benefits that emanate from today's efforts are accrued by women indicates there has been gap between studies and practice. This gap is evident given that numerous literatures have focussed on women disempowerment and maltreatment in the floriculture industry, yet in practice little has changed. As such, there is need to bridge this gap and ensure that studies contribute significantly in practice.

Despite the maltreatment and disempowerment at the place of work, women wield significant power in the household and particularly with regards to food security. Food preparation and decision on the food consumed in a household are all tasks that are exceedingly undertaken by women, underlining the centrality of women in influencing food utilization in a household. In efforts to ameliorate household food security, therefore, it is imperative that women are greatly involved. By understanding people's

livelihoods through livelihoods approach, the meal programmes initiated by the floriculture industry could arguably be more efficient in the event that women were exceedingly involved in the design and implementation of the programmes.

Based on the research study, there was strong evidence that the industry has had indirect impacts on the economy around Naivasha. The local economy in the research area ranging from food kiosks, shops, transport, and clothing businesses, is exceedingly built on the floriculture industry with employees in the industry being the main customer base. As businesses depend on financial incomes originating from the floriculture industry, the businesspersons are in turn empowered to address their household needs revealing a meticulous indirect linkage in the local economy. While the stakeholder theory intimates direct linkages between businesses and the stakeholders, the theory fails to capture important indirect linkages with for instance, businesspersons in this case.

A view that has been greatly peddled to corroborate support for foreign agribusiness investments is their potential to contribute to agricultural advancement in their host countries through knowledge and technology transfer (World Bank, 2010). Such a contribution can be viewed in the lens of the stakeholder theory where businesses are postulated to intrinsically contribute positively to their stakeholders that include local communities. However, this positivistic view has been rebuffed on multiple fronts with the arguments that such contributions are ambiguous (White et al., 2012). In Naivasha there was scant evidence of knowledge and technological transfer among farming populations in the adjacent localities, such as Maiella, with only the employees in the floriculture industry gaining knowledge through 'learning from doing'. A stark disconnect between the industry and the local agriculture sector greatly elucidates the dearth of agricultural knowledge and technological spillovers, with smallholder farmers exhibiting extremely negligible knowledge about the floriculture industry and its contributions in the area besides offering employment that in turn expands the market for agricultural produce. The lack of knowledge transfer in Naivasha exposes faults of the much-maligned trickle-down development, and critically challenges the notions that the mere presence of foreign agribusiness investments boosts local agriculture sectors in the host countries.

A major developmental impact instigated by the floriculture industry is the provision of clean water for drinking at the workplace, a critical initiative especially given the scarcity of clean water in Naivasha area. However, majority of the employees do not have access to clean drinking water at home, usually depending on untreated tap water. The narrow reach of the initiative means that the benefits intended by the offer of clean water could be reversed or even thwarted outright, with the initiative having been approached as an 'end' rather as a 'means' to ensuring access to clean water. On one hand, this scenario strongly underlines a shortcoming of the stakeholder theory, which only focuses on the benefits and values that emanate from businesses, but comes short of looking into the manner in which different stakeholders are able to derive the said benefits. On the other hand, the significance of a livelihoods approach is underpinned by its ability to comprehend people's livelihoods and the manner in which they

can actually derive benefits from such programmes, as well as the obstacles that could inhibit the efficiency of developmental initiatives.

Besides water, another initiative that has been marred with inefficiency is the company shop that enables employees in the company to access goods on credit albeit at a higher price. This initiative arguably perpetuates a cycle of economic poverty and dependence under the claim of facilitating access to goods by low-income households. Given that employees with constricted financial capital actually have to pay more expensively for goods, it confounds the underlying claim of intending to empower such low-income groups. With almost entire monthly incomes being used to pay up debts, it implies households live from hand to mouth with labour provision in the floriculture industry acting as the security for the debts. Such a livelihood renders employees exceedingly dependent on employment at the floriculture industry, thereby favouring employing companies through the assurance of labour provision. An imbalanced relationship thus develops between the business and the employees, indicating a process that facilitates power accumulation by the already powerful structures in the floriculture agribusiness sector.

The programmes initiated to benefit employees in the floriculture industry have been characterised by inefficiency, usually failing to generate the intended impacts. A top-down approach greatly characterises the design of the programmes, which has arguably led to the inefficiency and mismatch between the content of the programmes and the needs of the beneficiary populations. The supply-led approach of the programmes questions whether the ‘ends’ of the programmes are to realize implementation for purposes such as meeting institutional provisions of codes of conduct, or to improve the quality of life of the beneficiaries. Given the significant efforts directed towards adhering to the codes of conduct relative to the hardships that employees face while working in the floriculture industry, it is indeed the case that priority lies in meeting the requirements of institutions particularly certification bodies and the government. With the push for developmental initiatives, these institutions can be viewed as ‘enabling institutions’, a view that contradicts North’s (1999) perception of governments as ‘constraining institutions’. The floriculture companies, due to the inefficiency of the developmental programmes, can thus be viewed as the ‘constraining institutions’.

The discussion in this section depicts highly intricate relationships involving the floriculture industry, natural resources and local livelihoods, with food security as a primary focus. The dependence on the natural resources has created opportunities to ameliorate livelihoods on one hand, while on the other hand other livelihoods have been compromised. At the same time, competition for resources has underlined the need to adopt approaches that ensure sustainability of those resources, as evinced by the PES scheme. Despite the seemingly successful implementation of the PES scheme, other developmental initiatives instigated by the floriculture industry have been inefficient, and have indicated the need of employing approaches that involve the intended beneficiaries as opposed to current top-down, supply-led approaches. This research illuminates on a unique case that informs the debate and knowledge on foreign agribusiness investments and their impacts on local livelihoods, resources and food security.

9. Conclusions and Recommendations

The hypothetical view that foreign agribusiness investments impact on local livelihoods and food security through competition for land and water resources created the basis for the research study. By generating essential insights, the study demonstrates that situ-specific research is a hub for indispensable knowledge. While previous debate on foreign agribusiness investments has focussed almost entirely on land acquisitions, and in the process shrouding the role of water, the case of Naivasha brings water to the centre stage and uncovers fascinating inter-linkages between agribusiness investments and local livelihoods and food security. The investments have inhibited pastoral activities through displacement and closedown of fundamental corridors to water points, underpinning numerous literatures critical and sceptical about such investments. It has further been found out in the study that in cases where natural resources are jeopardized, foreign agribusiness investors are willing to invest to insure sustainability of resources, with the PES scheme being a case in point. It is through the PES scheme that notable positive impacts of the floriculture industry on local livelihoods have been observed. Among the pastoral communities, however, local livelihoods have had to adapt to the diminished pastureland by adopting sedentary livelihoods that reflect the constriction of a nomadic lifestyle. As such, by competing for local natural resources, the floriculture industry has impacted on local livelihoods in both negative and positive ways, but all have facilitated positive gains for the industry.

Employment provides the primary linkage between the floriculture industry and local livelihoods and food security. Being the principal ‘pull force’ that has led to population growth in Naivasha, the local economy is strongly embedded in the floriculture industry, and so are the livelihoods of the workforce in the industry. In a highly monetary economy, food is principally accessed from local markets, accentuating the role of financial capital in food access. However, low wages in the floriculture industry hinder food access and thus household food security. In addition to low wages, the nature of work and the working conditions in the floriculture industry impact on employees’ health, and ultimately livelihoods and food security. Poor health has been shown to create cycles of poverty (FAO, 2008), constricting opportunities to ameliorate livelihoods. In this view, the contribution of the floriculture industry through the creation of employment opportunities for local populations should not mask the poor quality of employment that greatly characterizes the industry. A look into the livelihoods of employees in the industry reveals the challenges that entail working in the industry, not least household food insecurity, and hence the need for a critical approach to the said benefits that such investments bring to the host country.

Local institutions, led by the national government, are expected to ensure businesses behave responsibly, which includes conducive working conditions for employees. In Kenya, the floriculture industry is highly valued for its contributions to the economy through significant foreign earnings, and creation of employment in an economy that has struggled with an extremely high unemployment rate. These contributions in addressing national needs have conferred incredible ‘bundles of power’ to the floriculture industry, limiting the ability and willingness of the government to undertake actions that

constrain the industry. The government, therefore, is no longer a serious ‘constraining institution’ for the conduct of foreign agribusiness. Employees in the industry are a case in point of how labour exploitation has culminated from the seizure of power by agribusiness investors, as evinced by cases of unpaid employees without immediate government intervention. In this view, government institutions have failed to create conducive environment for local populations, underlining the role of certification standards that aim to ameliorate local livelihoods through the conduct of responsible business. However, the developmental initiatives that have been implemented thus far fail to convince that they are a panacea to responsible business.

Developmental programmes by the floriculture industry have been characterised by a supply-led, top-down approach that is notably premised on trickle-down development that has for years been criticized for its inefficiency. The fact that such critiqued approaches are still employed questions the extent to which the design processes of the programmes are critically reviewed, and the efforts that are actually directed towards ensuring that the impacts of the programmes are achieved. However, given the focus on the mere implementation of the programmes in order to meet the required certification provisions or government regulations, then it is the case that the postulated impacts of the initiatives only receive scant attention. Beyond the developmental programmes, the floriculture companies operate as enclaves limiting possible positive spillovers to the local economy, challenging assumptions that such agribusiness investments boost local agriculture sectors in the host countries. These developmental shortcomings suggest that government institutions that propel ideas of potential contributions by foreign agribusiness investments to the local agriculture sectors and economies ought to invest in corridors that can facilitate the realization of such benefits. A starting point for instance could be the involvement of local beneficiaries in the design and implementations of corporate developmental initiatives.

From a food security perspective, the workforce in the floriculture industry in Naivasha could benefit from increased food supply during the dry seasons. As farmers in the food producing areas cited lack of water for farming as the major drawback, water projects to support farming throughout the year could shield employees in the industry against price shocks that usually affect food access. By scaling up the initiatives that have been shown to ameliorate agricultural practices among upstream communities could benefit not only water levels in Lake Naivasha, but also the employees and local communities adjacent the floriculture industry. In addition, infrastructure connecting the food producing areas ought to be improved in order to ensure maximum benefits are reaped from any potential agricultural development initiatives. This study generates the significance of such indirect linkages, arguing for a broader perspective on local development that is underpinned and guided by the extensive reach of the impacts of such initiatives.

The specificity of this case study challenges quick generalizations based on findings from other settings, and underlines the need for research to uncover further impacts of foreign agribusiness investments on local livelihoods and economies. It becomes clear that power dimensions are highly

influential in development practices, with both endogenous and exogenous forces shaping the practice of development. For groups lower in the power ladder, participation in development initiatives is scanty culminating in the inefficiency of development initiatives. Even then, focus on a single locality such as the workplace does not guarantee realization of development impacts, and therefore a livelihoods approach that informs on the diverse factors that influence people's livelihoods is paramount. These inter-linkages underpin the complexity that is a key feature of development practices, and the need for context-specific research to comprehend, challenge or buttress subsisting knowledge.

9.1 Future Research

Following the findings from this research study, a few suggestions for future research have emerged. The household was used as the unit for research in this study. However, as Pinstrup-Andersen (2009) informs, household food security does not always translate to food security for all members of a household. Therefore, future research should look into intra-household food distribution in the households of employees in the floriculture industry, in order to fully comprehend ways in which food security can be ameliorated at a more micro-level. Among the factors for consideration would be the manner in which the nature of work influences within-household food distribution, following the finding that some employees in the industry consume special food as a way of maintaining good health.

A challenge for this research study was interviewing a large sample of employees in the floriculture industry, and gathering longitudinal data. A large sample that offers information significantly representative of the population in the Naivasha area could create a sturdy platform for informing and guiding developmental initiatives targeting local populations. Longitudinal research on its part has the ability to inform on health matters in particular, following claims by some respondents that poor working conditions have major negative impacts on the lives of the employees. In such a research, ample attention should be paid to specific impacts on women's health. As such, there are opportunities for future research to further inform on the impacts of foreign floriculture agribusiness investments on local livelihoods and food security in Naivasha by building on this and other studies.

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Appendices

Appendix 1: Household questionnaire

Respondent		Start Time	
Relationship to HH		End Time	
Sex		Date	
Place of Residence			

Section A. Household Characteristics

1.	How long have you lived in Naivasha?	
2.	Where did you live before?	
3.	Marital status	1. Married 2. Single 3. Divorced 4. Other
4.	Which year were you born?	
5.	How many children do you have?	a) Primary School b) Secondary School
6.	Which is the highest level of education attained?	
7.	How many people live in the household in Naivasha?	
8.	What is the ownership arrangement for the house?	1. Personal ownership 2. Rented 3. Paid for by employer 4. Other
9.	If rented, how much do you pay per month?	
10.	Does this household possess the following:	1. Car 2. Bicycle 3. Cattle 4. Goats 5. Chicken 6. Pigs 7. Television 8. Other
11.	What source of energy do you use for preparing food and how much do you spend on it weekly?	1. Firewood 2. Charcoal 3. Kerosene 4. Gas 5. Other

Section B. Household Income

1.	How do you earn a living?	1. Employment – Wildfire, from 2009. 2. Casual labour 3. Personal business 4. Other
2.	If working at a flower farm, what is your work position?	
3.	How does your spouse earn a living?	1. Employment 2. Casual labour 3. Personal business 4. Other
4.	Does anyone else in the household contribute to household income?	
5.	Do you have off-days and holidays?	

	Are they paid?	
6.	How long are the work shifts?	
7.	What is the average monthly income for the household?	
8.	How much is spent on schooling your children?	Primary school Secondary school
9.	Does your household financially support others outside of the household in Naivasha?	
10.	Have you taken a loan in the past year?	1. Yes 2. No
11.	If Yes in (7), explain.	5. (a) Still paying back (b) Already paid back
12.	Where do you make your savings? Explain why this is a good choice to make savings.	
13.	Which are the 3 highest expenditures for your household?	

Section C. Food Availability

1.	What are the 3 main foods consumed in this household?	
2.	Do you produce food for your own consumption? Explain.	
3.	If yes in (2), what do you produce?	
4.	If yes in (2), how did you acquire land for agriculture?	1. Personal land through purchase 2. Inherited land 3. Hired from somebody 4. Given by employer 5. Given by friend 6. Other
5.	How big is the land and how much do you pay for it?	1. Size 2. Monthly fee
6.	Do you produce food for commercial purposes? If yes, explain your motivations for commercial farming.	1. Yes/No 2. Motivations
7.	Are the foods in (1) available in the market throughout in the year?	
8.	If in (7) not, which months are the foods unavailable? Explain.	1. Months 2. Explanation
9.	Are the prices of the foods in (1) stable or volatile during the year? Explain.	1. Stable 2. Volatile 3. Explanation
10.	How do you obtain drinking water?	1. Tap 2. Borehole 3. Bottled water from the shop 4. Other
11.	How often is water available?	1. Daily 2. Weekly 3. Monthly 4. Throughout the year
12.	If working in a flower farm, do you get food and water from the farm?	Explanation.

Section D. Food Access

1.	How do you obtain food for household consumption?	1. Domestic production 2. Village Market 3. Supermarket 4. Other
2.	How far is the place where you get food on/by:	1. Foot 2. Car
3.	How do you travel to the place where you get household food?	1. Foot 2. Bicycle 3. Car 4. Other
4.	What is your average daily food expenditure?	
5.	Are you always able to afford adequate food for your household?	1. Yes 2. No Explanation
6.	If NO in (5), what are your coping strategies?	Explanation.
7.	If you had more income, how much would you spend on food daily?	
8.	In (13), what would change in your household consumption?	
9.	Have you always obtained water from (Sect. A: 10) or has it changed?	Explain.

Section E. Food Utilization

1.	What determines the choice of food consumed in this household?	Explanation.
2.	On a scale of 1 to 5, to what extent do you ensure consumption of a balanced diet in the household?	1. Never 2. Rarely 3. Sometimes 4. Often 5. Always
3.	What factors make it difficult to ALWAYS consume a balanced diet?	Explanation.
4.	If working in a flower farm, has your consumption pattern changed since starting work at the flower farm?	Explanation.
5.	Has working in a flower farm made you more aware of the type of food you consume?	Explanation.

Section F: Life-Skills

1.	What are the main challenges of working in a flower farm?	
2.	What are the main gains you have obtained from working in a flower farm?	

3.	How would you cope without a job in the flower farm?	
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Appendix 2: Questionnaire for agribusiness companies

Respondent		Start Time	
Name of Company		End Time	
Date			

Section A: Background

1.	Which year was the agribusiness enterprise established in Kenya?	
2.	Was the enterprise established in another country prior to its establishment Kenya?	
3.	What is the nationality(ies) of the owner(s) of the company?	
4.	Has the company changed ownership since being established in Kenya?	
5.	How many employees did the company have in:	1. Beginning 2. 2004 (10 years back) 3. 2009 3. 2014
6.	What factors influence the number of employees at the company?	
7.	Why did you choose to set up the flower farm in Naivasha region?	

Section B: Economic Aspects

1.	Which are the three leading market destinations, with percentages, for the company's flowers?	1. 2. 3.
2.	In which months is flower production at its:	1. Peak 2. Lowest
3.	What factors influence the levels of flower production?	
4.	Which processes in the flower value chain does your company undertake, and how many employees are at every level?	1. 2. 3.
5.	What determines the salaries for employees operating at different levels of the flower value chain?	
6.	What challenges does the flower enterprise face in Kenya?	
7.	Besides labour, are there other inputs that are sourced from Kenya?	
8.	How big is the land on which the flower farm is operating?	
9.	How was the land acquired, and in which year? How long is the rental/lease period?	
10.	How was the land being used before being put under flower	

	cultivation?	
11.	How has the state of infrastructure serving the flower farm in the South Lake region changed over time?	
12.	Did the company play any role in infrastructural changes in the area? Explain.	
13.	Besides flowers, do you engage in other agricultural activities? Explain.	
14.	What are the highest expenditures for the flower farm?	

Section C: Environmental Aspects

1.	Where do you get water for flower farming?	
2.	Do you have water-saving techniques? Explain.	
3.	Where is the used water discharged?	
4.	Are there any initiatives to ensure the safety of Lake Naivasha waters?	
5.	(a) Are there regulations on the amounts of water that can be drawn from the lake? (b) If yes, how is this regulated?	
6.	(a) Are there seasons when there is low water supply for flower farming? (b) If yes, what coping strategies does your flower farm employ?	
7.	Which other parties depend on the water source(s) that the company gets its water from?	
8.	Are there arrangements to manage water access by different parties depending on the water source(s)? Explain.	

Section D: Social Aspects

1.	Do your employees live within the company's premises or outside?	
2.	(a) Are there any meals provided to the employees? (b) If yes, what types of meals are offered and what determines the choice for offering those meals?	
3.	(a) Do you have any programmes meant to benefit the surrounding communities?	
	(b) If yes, explain why those particular programmes and the motivations behind the implementation of the programmes.	
4.	(a) Do you have healthcare services inside the farm?	
	(b) If yes, do the workers have to pay for healthcare services?	
5.	(a) Are there types of duties that require extra caution to ensure the health of the employees?	

	(b) Is any special treatment accorded to those undertaking the mentioned duties?	
	(c) Are the types of duties mentioned assigned to both men and women, or only one sex? Explain.	
6.	What measures does the company take to ensure the health of the employees?	
7.	Are there ways in which flower farming has impacted on local agriculture in the area? Explain.	
8.	Is there anything done to ensure the salaries offered to employees enable them to meet their basic needs and live a good life?	
9.	Are there measures in place to ensure job security of the employees?	
10.	Are there ways in which the enterprise evaluates its impacts on the surrounding communities?	

Appendix 3: Questionnaire for business operators

Respondent	Mary Wairimu Karanja	Start Time	15:00hrs
Relationship to Owner	Owner	End Time	15:28hrs
Date	21 March 2014		
Nature of Business	Vegetables and Cooked Food (Githeri and Beans)		

Section A: Background

1.	In which year were you born?	
2.	How long have you lived in this area?	
3.	Where did you live before?	
4.	What made you move to Naivasha area?	
5.	When did you start this business?	
6.	How did you start this business?	1. Personal savings 2. Loan (indicate where from) 3. Other:
7.	If loan, what is/was the interest rate?	N/A
8.	If loan, did you finish repaying?	N/A
9.	What motivated you to start the business?	

Section B: Operations

1.	What foodstuffs do you deal in?	1. 2.
2.	Which 3 foodstuffs are demanded the most in this area?	1. 2.
3.	Where do you obtain your commodities from?	
4.	Has the state of transport changed over the years? Explain.	
5.	Do you deal in any agricultural products?	1. Yes

		2. No	
6.	If yes in (5), where do you obtain them from?		
7.	What is the annual trend of the demand for foodstuffs in the area?	1. Constant 2. Volatile	<i>Explanation</i>
8.	What is the mode of ownership of the business space?	1. Personal property 2. Rented (how much?) 3. Other	
9.	If rented in (7), has the rental amount fared over the years?	1. Constant 2. Decreased 3. Increased	<i>Explanation</i>

Section C: Agriculture and Land

1.	If yes in (5 Sec. B), has agricultural production in foodstuffs in the area increased or decreased over the years? Explain.	Crop Production	Livestock Production
2.	Do you practice agriculture? If yes, how did you obtain land for agriculture?		
3.	On a scale of 1 to 5, how easy or difficult is it to obtain agricultural land?	1. Very easy 2. Easy 3. Moderate 4. Difficult 5. Very difficult	<i>Explanation</i>
4.	Are the foods consumed in the area been the same or have they changed over time? Explain.		
5.	Are the prices of agricultural foodstuffs constant or volatile during the year? Explain.		

Market Analysis

1.	What are the main challenges that face your business?	
2.	What challenges do customers face in getting stuff from the market?	
3.	How do customers cope when prices of major commodities rise?	
4.	What factors influence the choice of foodstuff that customers buy?	
5.	What opportunities do you see that could help your business grow?	
6.	Have you, or a member of your household ever worked in a flower farm?	
7.	How has the presence of flower farms in the area impacted on your business?	

Appendix 4: Questionnaire for smallholder farmers

Respondent:		Date	
Interviewer	Evans K. Kirigia	Start Time	
Location		End Time	

Background Information	
1.	Which year were you born?
2.	Since which year have you lived in Maiella?
3.	Where did you live before coming to Maiella?
4.	Why did you move to Maiella?
5.	What is the highest education level attained?
6.	Marital status?
7.	How many children do you have?

Farming Business on the Scope	
1.	When did you start farming in Maiella?
2.	Where did you obtain capital to start your farming business?
3.	Which crops do you grow?
4.	What determines which crops to plant in a certain period?
5.	Which animals do you keep?
6.	Which factors determine the choice of animals to rear?
7.	Besides farming, do you have any other income-generating occupation?
8.	Did you practise agriculture elsewhere before Maiella?
9.	If yes, what made you choose to farm in Maiella?
10.	How many acres are you cultivating presently?
11.	How many acres did you cultivate when you started farming in Maiella?
12.	What is the land ownership agreement?
13.	How was the land being used before putting it under agriculture?
14.	What is the source of labour for your farming activities?
15.	If there is external labour employed, what are the wages given?
16.	Where do you obtain capital to keep your farming business running?
17.	Please fill in the water availability calendar below:

Rainwater												
River (P=pump)												
Borehole												
Lake Naivasha												
Other												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Internal and External Impacts on Farming Business	
1.	Has the production of your farming business increased or decreased over time?

2.	Explain the factors which have caused the increment or decrement in production.	
3.	What are your main sources of agricultural knowledge?	
4.	What are the main markets for your agricultural products?	
5.	How do you transport your products to the market?	
6.	What challenges do you face in transporting your goods to the market?	
7.	How has the means of transport changed over time and what factors have caused the changes?	
8.	Has the demand for your agricultural products increased or decreased over time?	
9.	What are your future plans with regards to your farming business?	
10	What are the main challenges facing your farming business?	
11	What could make your farming business grow in the future?	
12	In what ways has the presence of flower farms in Naivasha sub-county impacted on your farming business?	

Thank you very much for you co-operation.

Appendix 5: FAO measurements of food security

The suite of food security indicators		
FOOD SECURITY INDICATORS	DIMENSION	
Average dietary energy supply adequacy Average value of food production Share of dietary energy supply derived from cereals, roots and tubers Average protein supply Average supply of protein of animal origin	AVAILABILITY	STATIC and DYNAMIC DETERMINANTS
Percentage of paved roads over total roads Road density Rail lines density	PHYSICAL ACCESS	
Domestic food price index	ECONOMIC ACCESS	
Access to improved water sources Access to improved sanitation facilities	UTILIZATION	
Cereal import dependency ratio Percentage of arable land equipped for irrigation Value of food imports over total merchandise exports	VULNERABILITY	
Political stability and absence of violence/terrorism Domestic food price volatility Per capita food production variability Per capita food supply variability	SHOCKS	
Prevalence of undernourishment Share of food expenditure of the poor Depth of the food deficit Prevalence of food inadequacy	ACCESS	OUTCOMES
Percentage of children under 5 years of age affected by wasting Percentage of children under 5 years of age who are stunted Percentage of children under 5 years of age who are underweight Percentage of adults who are underweight Prevalence of anaemia among pregnant women Prevalence of anaemia among children under 5 years of age Prevalence of vitamin A deficiency (forthcoming) Prevalence of iodine deficiency (forthcoming)	UTILIZATION	

Appendix 6: Highest monthly household expenditures.

Highest Household Expenditures				
		Responses		
		N	Percent	Percent of Cases
Combined Highest	Food	24	33.8%	100.0%
Expenditures ^a	House Rent	10	14.1%	41.7%
	School Fees	13	18.3%	54.2%
	Clothing	9	12.7%	37.5%
	Energy	8	11.3%	33.3%
	Other Highest	7	9.9%	29.2%
	Expenditures			
Total		71	100.0%	295.8%

a. Dichotomy group tabulated at value 1.

Appendix 7: Monthly household income and food expenditure dynamics

Household Income	Monthly Food Expenditure	Percentage of Income spent on Food
KSh. 7,000	KSh. 3,600	51%
KSh. 7,000	KSh. 3,000	43%
KSh. 7,500	KSh. 5,000	67%
KSh. 8,000	KSh. 6,000	75%
KSh. 9,500	KSh. 9,000	95%
KSh. 11,000	KSh. 6,000	55%
KSh. 15,000	KSh. 4,000	27%
KSh. 16,000	KSh. 6,000	38%
KSh. 16,000	KSh. 15,000	94%
KSh. 17,300	KSh. 9,000	52%
KSh. 17,500	KSh. 12,000	69%
KSh. 20,000	KSh. 5,800	29%
KSh. 21,000	KSh. 6,000	29%
KSh. 25,000	KSh. 9,000	36%
KSh. 30,000	KSh. 9,000	30%
KSh. 38,000	KSh. 6,000	16%
KSh. 40,000	KSh. 30,000	75%
KSh. 130,000	KSh. 12,000	9%
KSh. 24,211.11*	KSh. 8,688.88*	49%*
KSh. 16,612.50**	KSh. 7,149.99**	50%**
<p>NB: All monthly food expenditures have been rounded off to the nearest whole number.</p> <p>*The average of all the cases above.</p> <p>**The average of all the cases above excluding two outliers comprising: (i) Income KSh. 130.000, and (ii) Food expenditure KSh. 30.000.</p>		