

## MANAGING POLICIES TO SAFEGUARD FOOD AVAILABILITY IN KENYA: A CASE STUDY OF THAILAND'S AGRICULTURAL PRIVATE SECTOR OUTLOOK

การจัดการเงินโยบายเพื่อการมีอาหารอย่างเพียงพอในประเทศเคนยา:  
กรณีศึกษาจากความคิดเห็นของการเกษตรภาคเอกชนในประเทศไทย

Edith A. Oketch<sup>1</sup> and Pithoon Thanabordeekij<sup>2</sup>

<sup>1,2</sup>International College, Panyapiwat Institute of Management

### Abstract

Kenya, known as Africa's powerhouse in terms of economic growth and investment is crippled by food insecurity, with over 10 million people suffering from chronic food, attributed to failed food and agriculture policies, through their effectiveness or implementation process to guarantee food availability. **The problem** is Kenya did not achieve the millennium development goals ended 2015, and with the commencement of the sustainable development goals in 2016 towards Zero hunger in the world, the country needs new ways of managing the issue of food security to yield a better outcome. The **objective** of this study is to determine ways of managing policies on food availability in Kenya, using a case study of Thailand's agricultural private sector. The study explores the following **question**: What are the approaches of managing policies in Kenya to ensure food availability through the counsel of corporate Thailand in the agricultural sector? This qualitative case study is based on Food Security and Nutrition Strategies and Policies framework. The population was drawn from 11 key persons of authority in corporates related to food security and agricultural in the country, chosen through triangulation - combining purposive sampling and snow balling. Data was collected through semi-structured interview process and documented data. Analysis tool used was pre-coding. The findings recommending the use of technology to maximize production and control environmental conditions and linking demographic dynamics to technological advancement in food production and utilization, among others.

**Keywords:** Food Security, Agriculture, Policies, Kenya

## บทคัดย่อ

ประเทศเคนยา ที่รู้จักกันว่าเป็นแหล่งพลังที่ช่วยในการเจริญเติบโตทางเศรษฐกิจและการลงทุน แต่มีความไม่มั่นคงทางด้านอาหาร เพราะเหตุที่ประชากรมากกว่า 10 ล้านคนได้รับความทุกข์ยากจากการขาดแคลนอาหาร เป็นเวลายาวนาน อันเป็นผลมาจากความล้มเหลวทางด้านการจัดการอาหารและนโยบายการเกษตรที่ขาดประสิทธิภาพ จนทำให้เคนยาไม่สามารถบรรลุเป้าหมายในการพัฒนาได้ และการพัฒนายังย่ำแย่ได้เริ่มต้นใหม่ในปี 2016 เพื่อลดความอดอยากให้เป็นศูนย์ โดยเคนยาต้องหาวิธีการใหม่ที่ได้ผลที่ดีกว่าในการจัดการกับความมั่นคงทางด้านอาหาร การศึกษาในครั้งนี้จึงเป็นการแสวงหาแนวทางเพื่อให้เกิดความมั่นใจว่ามีอาหารอยู่อย่างพอเพียง บนพื้นฐานการใช้กรณีศึกษาของการเกษตรภาคเอกชนของประเทศไทย และใช้คำถามเป็นหลักดังนี้ คือ วิธีการจัดการเพื่อให้มีอาหารอยู่อย่างเพียงพอด้วยการปรึกษากับบริษัทในภาคการเกษตรแห่งประเทศไทยบนพื้นฐานของความมั่นคงทางอาหาร และกรอบนโยบายทางด้านสารอาหาร และใช้การคัดเลือกบุคคลสำคัญที่มีอำนาจในบริษัทเอกชน จำนวน 11 คน วิธีการคัดเลือกกลุ่มตัวอย่างใช้แบบเจาะจง และแบบลูกโซ่ การเก็บรวบรวมข้อมูลใช้วิธีการสัมภาษณ์แบบกึ่งโครงสร้าง รวมทั้งข้อมูลจากเอกสาร เครื่องมือที่ใช้ในการวิเคราะห์ได้มีการตั้งค่าไว้ล่วงหน้า ผลการศึกษาได้แนวทางในการใช้เทคโนโลยีเพื่อให้ได้ผลผลิตภาพสูงสุด รวมทั้งควบคุมสภาพสิ่งแวดล้อม และการเชื่อมโยงกับประชากร นำไปสู่ความก้าวหน้าทางเทคโนโลยีในการผลิตและการใช้อาหารในการบริโภค

**คำสำคัญ:** ความปลอดภัยด้านอาหาร เกษตรกรรม นโยบาย ประเทศเคนยา

## Introduction

Food is a basic necessity of life. Yet about 795 million of the current 7.3 billion world population, suffer from chronic undernourishment (FAO, 2015: 8). Experts have debated the capacity of the world's agricultural systems to produce enough food for an ever-increasing population with FAO maintaining that there is enough food produced to feed everyone, 1½ times over (FAO, 2003: 2-3).

The focus of this paper, therefore, is the Republic of Kenya, the 4th largest economy in Sub-Saharan Africa (SSA), and Africa's powerhouse, yet 33% of the population are food insecure (Wakibi, Gichuhi & Kabira, 2014: 13), taking a general look at the food security concept since insecurity is strewn all over the country as indicated in figure 1.

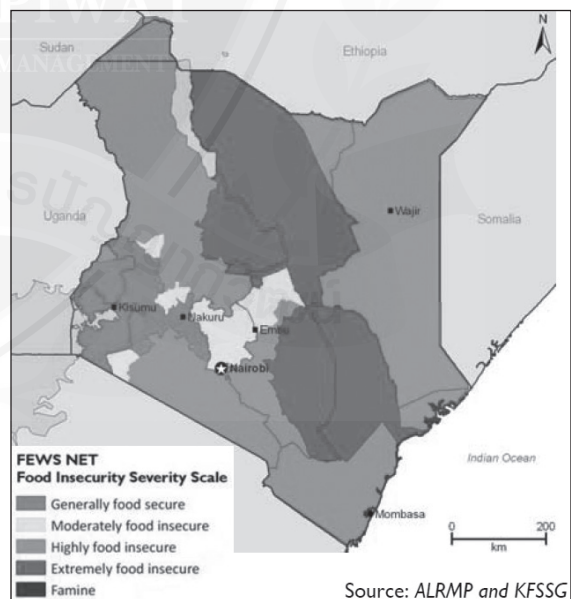


Figure 1

Source: KFSSG, 2011: 3

Food security, therefore, is defined as “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”, with food availability, an aspect of food security (FAO, 2008: 1).

The study of food availability, one of the 4 pillars of food security, is based on the supply of food through production, distribution, and exchange.

Unavailability of food is determined by a variety of interdisciplinary factors such as climatic conditions and environmental protection; population growth; rapid urbanization; and land use (Walker et al., 2010: 454-470, Barclay & Epstein, 2013: 215-233), which then affect policy implementation and effect.

Article 43(1)(c) of the constitution of Kenya states that “every person has the right to be free from hunger and to have adequate food of an adequate quality” (GOK, 2014: 362). This is a right the government has failed to protect millions of citizens from, therefore the failed policies form the basis of this study.

## Research Objective

The general objective of this study was to determine ways of managing policies on food availability in Kenya, using a case study of Thailand’s agricultural private sector, with the *goal* of offering enlightening counsel for Corporate Kenya towards driving these policies and achieve food security.

## Literature Review

Some of the main causes of food insecurity in Kenya affecting food availability include:

1. *The climatic conditions:* affected by extreme drought and famine as well as flooding (Clover, 2003: 5-15), shorter drought cycles of 2-3 years from a period of 5-7 years in the past (Kiome, 2009), higher than average land surface temperatures in pastoral areas, depleting rangeland resources, changing and unpredictable climate from effects of climate change and decreasing land productivity (Gregory, Ingram & Brklacich, 2005: 2139-2148).

2. *Rapid population growth:* with annual growth rate of 2.46% and this means the availability of land for people to work is dwindling and non-farm employment options are declining, increasing pressure for land and on the environment (USAID, 2014), danger of civil strife (IFPRI, 2011:66).

3. *Rapid urbanization:* as a result of rural to urban migration as people seek employment and a better life, with Nairobi’s population set to nearly double to almost six million by 2025. This causes inadequate food supply for the residents, with a large proportion of urban dwellers unable to meet food needs on a sustained (Oxfam, 2009: 16).

4. *Land use and allocation:* faces challenges in the urban fringes since agricultural land use conversions have not been done sustainably (Museleku, 2013: 27), unsustainable land fragmentation and landlessness, as large chunks of idle land owned by the State or individuals still exist (Gitu, 2006: 11).

### Kenya’s failed Policy Framework

A policy is the government’s declaration of interest to discharge an activity in response to a particular enigma affecting the public

(NORRAG, 2008: 48). This research intends to deliberate food and agricultural policies whose failures may have resulted in unavailability of food through the implementation of existing national and sectoral policies and strategies to effectively address issues of food insecurity in Kenya (The Republic of Kenya, 2011: 6).

The failed policies according to Sadauskaite, 2014: 20-35, FSNP, 2007: 21-65, FSNP, 2011: 10-42, MAFAP, 2013: 31-43, Alila, 2006: 20-22, Joshi, 2012: 44-69, Nyangweso et al., 2005: 919-926 and Thuo, 2011: 223-238, are summarized in table 1 below.

**Table 1** Failed food and agricultural policies on food availability in Kenya

KENYAN FOOD & AGRICULTURE POLICIES	POLICY FAILURES
Agricultural input policy	Ineffective and unsustainable food relief programs. Poor drainage systems have ruined fields and affected farm yields. Lack of proper strategic reserve management to reduce effect of seasonal cropping and food prices. Poor information flow to farmers on appropriateness and levels of use of improved inputs. High cost of inputs make them inaccessible to farmers.
Agricultural productivity policy	Low productivity levels due to unaffordable readily available modern farming technologies. Poor institutions, marketing and storage facilities which have also reduced incentives to produce. The reliance on rain-fed agriculture and competition for land affecting productivity. Lack of crop diversification and access to land. Poor infrastructure for effective transport, storage, refinement, preservation, distribution and marketing.
Research and extension policy	Poor linkage between research, extension and farmers. Poor resource base for farmers and poor adaptability of some of the technologies to local circumstances. Reliance on traditional technology. Kenya Seed Company has an unfair monopoly over KARI output, therefore reducing the distribution of high yielding varieties
Land use policy	Difficulty to access and utilize land with only less than 20% of the country's land surface of high and medium potential. Lack of accurate and up to date database information on land. The core of this policy is to attract and utilize foreign aid which is unsustainable.
Early Warning and Emergency Management Policy	Inappropriateness of some foods donated. Inefficiency of food aid supported programs including lack of timeliness, high costs of delivery and administration. Causes disincentives for investment in domestic production as a result of reductions in domestic prices. Unsustainability to communities that benefit from these programs
Institutional and Legal Framework and Financing Policy	Lack of finance for agriculture. Inaccessibility to credit especially for small scale farmers and women. Actual investment in the sector has been small.

**Source:** FSNP, 2007, FSNP, 2011, MAFAP, 2013, Alila & Atieno, 2006, Joshi, 2012, Nyangweso et al., 2005 and Thuo, 2011

### *Thailand's Agricultural sector*

Thailand has been widely cited due to its strong economic growth and development that has been based on agricultural production which is the country's backbone (WB, 2016). It can produce surplus agricultural food products for export and the largest sole net food exporter in Asia (BOI, 2013), with the annual value of food exports in 2014 reaching Bht1.01 trillion.

Since Kenya's economy as well as food security concern similarly depend on the development of the agricultural sector, a study of Thailand's pattern of agricultural development may prove valuable to Kenya in dealing with food insecurity.

It is noteworthy that no country can claim that it has eliminated chronic hunger and food insecurity. Therefore, no country that can present itself as an example of complete success in this regard. Successes that can be learnt by other countries may be about specific experiences of countries in improving certain, but not necessarily all, aspects of their food security, and they can be accompanied by shortcomings in other aspects, sometimes being involved even in trade-offs with competing objectives (FAO, 1996).

A bottom-up approach to agricultural policy is adapted in realization that governments do not always have adequate resources to solve all public problems and the corporate sector needs to play a more active role in the sector (Dye, 2011: 15).

Although there is a growing body of literature

examining food security, no studies exist that examine the relationships between failed food security and agricultural policies in Kenya, and how the corporates in Thailand can endorse ways of drive the policies in Kenya. In light of these, the following hypotheses guide this study:

*H1: Because Thailand has made considerable success in in the agricultural sector, it can serve as example for Kenya.*

*H2: Thailand's corporate policy experiences in food, nutrition and agriculture can be applicable to Kenya*

*H3: Successes made in food security on food availability in Thailand are limited to only certain areas of Kenya.*

### **Research Methodology**

The design employed was a qualitative case study, investigating a contemporary phenomenon in depth and within its real life context (Yin, 2009: 93). The population was drawn from English speaking Thai key informants in Thailand's private sector, related to food security in the agricultural sector. A sample study between 3-15 participants is adequate when the subject of interviews seeks to elicit information based on the knowledge and experience of the participants (Creswell, 2013: 78-79). 11 key informants were therefore chosen, through triangulation method based on purposive and snow ball in order to strengthen, enrich, validate the other, or provide a critical perspective to the other (Yin, 2014: 94).



Data collection integrated

(a) *Documentary research techniques* used to collect secondary data from reports published by different government and non-governmental organizations, journal articles, documentaries, and media sources.

(b) *Semi structured interviews* guided by the use of open ended questionnaire to allow elites to respond broadly to the issues, in ways that give them freedom to use their intellectual rigor and imagination to respond in detail and from different perspectives (Rossman & Rallis, 2012).

Data analysis was conducted by manual closed coding which locates the most meaningful fragments of the data, and to generate theories about the data, by manipulating it (Gough & Scott, 2000: 341), derived from the conceptual framework focusing on food availability (Hendriks & Olivier, 2014: 562).

## Research Findings

Under the concept of food availability, the research examined supply of food through production, distribution, exchange and consumption, determined by climate, population growth, urbanization and land use which are the causes of food unavailability, resulting in the failed policies. With a clear objective to determine ways Thailand has managed these factors, to guide corporate Kenya on how best to drive the related policies, the research found the following:

### 1) *Climatic conditions*

The corporate sector in Thailand uses the following mechanism to address climatic

conditions that affect food availability.

1. *Use of technology to maximize production and control environmental conditions:* Due to the high temperatures, use of greenhouse technology is widely used in enhancing productivity in farms. Closed system of housing with evaporating cooling system for poultry and swine to control the environment, using solar panels to produce energy.

2. *Investment in research in optimizing agricultural production:* by developing high yield seeds or species of the crop or animals that would acclimatize to the change of climate, resistance to insects and environmental research that aids in the natural reserve protection and preservation through the use of chemicals in the agricultural area.

### 2) *Population growth*

The following mechanisms have been applied to ensure food availability.

1. *Diversification of sources of food:* to avoid over dependency on one or few nutrient sources which can put the people at risk of food insecurity. Diversification of feed used for animals is key so that the livestock are not fed on what can be used for feeding the human population in case of shortage or crisis.

2. *Physical infrastructure development:* Corporates have invested in infrastructure which is key in terms of proper and massive storage facilities or silos, cold rooms and preservation technology, which is adequate for the whole sector in the country. This helps to contain large harvest, prevent food spoilage and ensure constant or continuous food supply into the market for both crop and animal products for

an all year round food availability even during low harvests

### **3) Rapid urbanization**

The following mechanisms have been applied to ensure food availability.

1. *Linking new agricultural technologies to the dynamic urban climate and generational change:* Rapid urbanization which causes the work force to move into the industrial or service sector. This has brought about investment in automation to improve efficiency and increase productivity with little manpower required to feed animals, planting or harvesting. The workforce is utilized in the agroindustry sector.

2. *Creating pro-poor strategies to address food needs in urban areas:* such as urban agriculture has also been spearheaded by part of the private sector that try to reach the families in the urban areas, through farming on rooftops, public areas such as government buildings, schools, temples, and other semi-public offices, urban street trees and slum projects.

### **4) Land use and allocation**

The following mechanisms have been applied to ensure food availability.

1. *Community-Private sector partnership strategy is used to increase access to, and utilization of arable land.* Through contract farming, and with the help of the government and local leaders, consolidate farmers to join small uneconomical parcels of land and teach them if they work together they will benefit more from efficiency of mechanization, only possible with large parcels of land.

2. *Research and zoning to increase yield*

*and agricultural land maximization:* where food crops are grown where they can thrive and then exploit the productivity through high quality inputs through research. Engaging in vertical farming in glass houses or rooftops, which has ensures maximum efficiency in small pieces of land.

## **Discussion of Findings**

The causes of food insecurity have tremendously affected the availability of food through (1) production (mechanization, land use, soil management and climate), (2) distribution (storage, processing, transport, packaging, and marketing of food), (3) exchange (efficient trading systems and market institutions) and (4) consumption (food safety, nutritional value and food choice).

From the findings, it is clear that Thailand's private sector plays a dominant role in driving the policies on food availability and these strategies applied, offer practical lessons to Kenya. This lesson-drawing emphasizes on cognition and the redefinition of interests on the basis of new knowledge which affects the fundamental beliefs and ideas behind policy approaches. However, they need to be tailored even further, so as to target the different needs of each individual or household in Kenya, based on their strategic needs.

The following endorsements are drawn from the study findings, intended to address the key failed food and agriculture policies, towards corporate management of food availability in the country:

(Summarized in Table 2).

**Table 2** Thailand-Kenya Cross-national, Lesson-drawing Policy drive experience

KENYAN FOOD & AGRICULTURE POLICIES	THAILAND POLICY DRIVE LESSON-DRAWING
Agricultural input policy	1. Build cheap and effective means of harnessing the rain water that causes flooding
	2. Aid farmers in accessing farm inputs such as seeds, technology, and inputs by way of contract farming
	3. Offer new security and performance-based incentives for farmers to switch technologies
	4. Introduce modern farming methods and information on improved seed varieties, pesticides, green houses, fertilizers, irrigation, crop diversification, machinery and artificial insemination that increase yield
Agricultural productivity policy	1. Invest in proper irrigation systems and water harvesting equipment to promote Rain Water Harvesting methods for irrigation, construction of dams and water pans to store more water and drilling boreholes
	2. Building storage facilities, green house technologies and creation of strategic food
	3. Educating communities on proper preservation and storage methods
	4. Promote technology and innovation in the sector to increase agricultural productivity
Research and extension policy	1. Invest in research and government monopoly in this area should be discouraged. Competition is healthy
	2. Learn best international farming practices is to address gaps in agricultural production
	3. Specialized research on appropriate farming activities, including technology and modern farming with regards to the agro ecological diversity of Kenya
	4. Developing the livestock sector as it remains largely unexploited and this has been worsened by drought and lack of ready market
Land use policy	1. Help transition to large scale mechanized farming in order to significantly improve on productivity
	2. Help control the change of agricultural land use due to low farmers' income by encouraging farmers to plant both the food crops and cash crops for diversified income
	3. developing urban agriculture through vertical farming
Early Warning and Emergency Management Policy	1. Work with the government through CRS programs, to engage in food aid and family support programs
	2. Support to the government through funding or engagement in school milk and school lunch programs
	3. Participate and encourage zoning of food to reduce the food miles covered
	4. Promotion of the weather based insurance scheme for crop and livestock production to farmers
Institutional and Legal Framework and Financing Policy	1. Build on value addition in agricultural products to unravel the agribusiness potential
	2. Collaborate with the government to work out good mapping
	3. Build on the retail market or supermarket revolution



## Conclusion

Despite the importance of the agricultural sector to the Kenyan economy, the country is crippled by the effects of climate change on the rise with devastating effects; rising population pressures which continue to tip the balance against food production; urbanization continues at an accelerated pace; increasing risk of land degradation and agricultural land conversions. The viewpoints of Thailand's corporate sector are not new to the Kenyan policy drive environment in managing these concerns. However, the approach and attitude towards self-sufficiency and eradication of hunger with the interest of the citizens being a priority, has driven Thailand to become nationally food secure and a net food producer. The achievement of food security for all, and especially for the most deprived, requires Policy Coherence for Development at all levels. Coherent action should be implemented by the private sector, civil society international organizations as well as governments.

In light of the three hypothesis in this study, the research proved that Thailand serves as an example to Kenya due to its considerable success in the agricultural sector, and these corporate policy experiences in food, nutrition and agriculture can be applicable to Kenya since some of the policy implementation drives have already been implemented in Kenya with varying difference in scope of implementation, approach, and cultural influence that may

have played part. However, the limitation of certain strategies to particular regions in Kenya could not be proved due to the limitation of this project. Nevertheless, the possibility that this hypothesis is still correct is not ruled out.

## Recommendations

### *1) This study recommends:*

a) A holistic approach to food availability through production, distribution, exchange and consumption which are linked and failure in any one factor will yields grave consequences for Kenya.

b) The government's participation in creating more and better private sector foreign investment opportunities for the Thai investor such as CP in the food and agricultural sectors, as part of the strategy to work towards achieving the UN SDG zero hunger initiative by 2030.

### *2) Future research recommendations include:*

a) Investigating these four causes of food security singularly and more in-depth with reference to specific regions in the country.

b) Failures and challenges of food security in Thailand may also need to be researched more as they provide equally valuable lessons.

c) An in-depth study of the sufficiency economy and its role in ensuring food security in Thailand is an area of interest and if/how it can be applicable in Kenya.

d) A comparison case study of Thai policy to see if the Kenyan policy can be used.

## References

- Alila, P. O. & Atieno, R. (2006). *Agricultural Policy in Kenya: Issues and Processes*. Retrieved February 4, 2016, from [http://r4d.dfid.gov.uk/PDF/Outputs/Futureagriculture/Ag\\_policy\\_Kenya.pdf](http://r4d.dfid.gov.uk/PDF/Outputs/Futureagriculture/Ag_policy_Kenya.pdf)
- Barclay, K. & Epstein, C. (2013). Securing Fish for the Nation: Food Security and Governmentality in Japan, *Asian Studies Review*, 37(2), 215-233.
- BOI. (2013). *Thailand: Food Exports Soaring: Industry Focus*. Retrieved February 9, 2016, from [http://www.boi.go.th/tir/issue/201303\\_23\\_3/42.htm](http://www.boi.go.th/tir/issue/201303_23_3/42.htm)
- Clover, J. (2003). Food security in sub-Saharan Africa. *African Security Review*, 12, 5-15.
- Creswell, J. W. (2013). *Qualitative Inquiry and Research: Choosing among Five Approaches* (3<sup>rd</sup> ed.). Los Angeles: SAGE.
- Dye, T. R. (2011). *Understanding Public Policy* (13<sup>th</sup> ed.). Boston: Longman.
- FAO. (1996). *Success stories in food security. World Food Summit*. Technical background documents 1-5. Volume 1.
- FAO. (2003). *Unlocking the water potential of agriculture*. Retrieved February 11, 2016, from [ftp://ftp.fao.org/agl/aglw/docs/unlocking\\_e.pdf](ftp://ftp.fao.org/agl/aglw/docs/unlocking_e.pdf)
- FAO. (2008). *An Introduction to the Basic Concepts of Food Security*. Retrieved February 7, 2016, from <http://www.fao.org/docrep/013/al936e/al936e00.pdf>
- FAO. (2015). *The State of Food Insecurity in the World*. Retrieved February 6, 2016, from <http://www.fao.org/3/a-i4646e.pdf>
- FSNP. (2007). *The new Food Security and Nutrition Policy*. Retrieved February 10, 2016, from [ftp://ftp.fao.org/upload/eims\\_object/.../NationalFoodSecurityandNutritionPolicy.doc](ftp://ftp.fao.org/upload/eims_object/.../NationalFoodSecurityandNutritionPolicy.doc)
- FSNP. (2011). *The new Food Security and Nutrition Policy*. Retrieved February 10, 2016, from [https://extranet.who.int/nutrition/gina/sites/default/files/KEN%202011%20National%20Food%20and%20Nutrition%20Security%20Policy\[1\].pdf](https://extranet.who.int/nutrition/gina/sites/default/files/KEN%202011%20National%20Food%20and%20Nutrition%20Security%20Policy[1].pdf)
- Gitu, K. W. (2006). *Agricultural Development and Food Security in Sub Saharan Africa*. Rome: FAO.
- GOK. (2014). *The Food Security Bill, 2014*. Retrieved February 7, 2016, from <http://kenyalaw.org/kl/fileadmin/pdfdownloads/bills/2014/TheFoodSecurityBill2014.pdf>
- Gough, S. & Scott, W. (2000). Exploring the Purpose of Qualitative Data Coding in Educational Inquiry: Insights from Recent Research. *Educational Studies*, 26(3), 339-354.
- Gregory, P. J., Ingram, J. S. I. & Brklacich, M. (2005). Climate Change and Food Security. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 360, 2139-2148.
- Hendriks, S. L. & Olivier, N. J. J. (2014). Review of the South African Agricultural Legislative Framework: Food security implications. *Development Southern Africa*, 32(5), 555-576.
- IFPRI. (2011). *Global Food Policy Report 2011*. Retrieved February 13, 2016, from <http://ebrary.ifpri.org/cdm/ref/cp15738coll2/id/126897ollection/>

- Joshi, A. (2012). Food Security in the Great Lakes Region: Reconciling Trade Liberalization with Human Security Goals. In R. Rayfuse & N. Weisfelt (Eds.). *The Challenge of Food Security. International Policy and Regulatory Frameworks*. (pp. 44-69). Cheltenham: Edward Elgar Publishing.
- Kenya Food Security Steering Group (KFSSG). (2011). *The 2011 Long Rains Mid-Season Assessment Report*. Retrieved February 24, 2016, [http://reliefweb.int/sites/reliefweb.int/files/resources/Full\\_Report\\_1607.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/Full_Report_1607.pdf)
- Kiome, R. (2009). *Food Security in Kenya*. Nairobi: Ministry of Agriculture, Kenya.
- MAFAP. (2013). *The Monitoring African food and Agricultural Policies*. Retrieved February 10, 2016, from [https://http://www.fao.org/fileadmin/templates/mafap/documents/Tanzania/URT\\_Country\\_Report\\_Jul2013.pdf](https://http://www.fao.org/fileadmin/templates/mafap/documents/Tanzania/URT_Country_Report_Jul2013.pdf)
- Museleku, E. K. (2013). *An Investigation into Causes and Effects of Agricultural Land Use Conversions in the Urban Fringes: A Case Study of Nairobi-Kiambu Interface*. Retrieved February 9, 2016, from <http://cae.uonbi.ac.ke/sites/default/files/cae/cae/Erastus%20Kiita%20Museleku%20%20B92-64952-2010.pdf>
- NORRAG. (2008). *Education for Sustainable Development? Or The Sustainability of Education Investment? A Special Issue*. Retrieved February 9, 2016, from <http://www.norrag.org/en/publications/norrag-news/online-version/education-for-sustainable-development-or-the-sustainability-of-education-investment-a-special-issue/detail/education-skills-sustainability-and-growth-complex-relations.html>
- Nyangweso, P. M., Serem, A. K., Kipsat, M. J. & Maritim, H. K. (2005). *Implementing Kenya's Food and Agricultural Policy: The Ever Widening Gap between Intent and Action*. Retrieved February 15, 2016, from <http://www.acss.ws/upload/xml/research/634.pdf>
- Oxfam International. (2009). *Kenya threatened by new urban disaster*. Retrieved February 10, 2016, from <https://www.oxfam.org/en/pressroom/pressreleases/2009-09-10/kenya-threatened-new-urban-disaster>
- Pratruangkrai, P. (2014). *Food exports to keep surging next year*. Retrieved February 10, 2016, from <http://www.nationmultimedia.com/news/business/macroeconomics/30249979>
- Rossman, G. B. & Rallis, S. F. (2012). *Learning in the Field: An Introduction to Qualitative Research*. Los Angeles: SAGE.
- Sadauskaite, U. (2014). *The issue of food insecurity in Kenya*. Retrieved February 9, 2016, from [https://www.google.co.th/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwiW6sW1gl7QAhXEo48KHQFYBFYQFgggMAE&url=http%3A%2F%2Fvbn.aau.dk%2Fws%2Ffiles%2F206970431%2FFood\\_Security\\_in\\_Kenya.docx&usg=AFQjCNF5rzLSmZuqghe0779hqFE3Tvvd1Q&sig2=AWJQUltL11AUyw0KAInJmw](https://www.google.co.th/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwiW6sW1gl7QAhXEo48KHQFYBFYQFgggMAE&url=http%3A%2F%2Fvbn.aau.dk%2Fws%2Ffiles%2F206970431%2FFood_Security_in_Kenya.docx&usg=AFQjCNF5rzLSmZuqghe0779hqFE3Tvvd1Q&sig2=AWJQUltL11AUyw0KAInJmw)

- The Republic of Kenya. (2007). *National Food and Nutrition Security Policy*. Nairobi, Kenya: Agricultural Sector Coordination Unit (ASCU).
- The Republic of Kenya. (2011). *National Food and Nutrition Security Policy*. Retrieved February 15, 2016, from [https://extranet.who.int/nutrition/gina/sites/default/files/KEN%202011%20National%20Food%20and%20Nutrition%20Security%20Policy\[1\].pdf](https://extranet.who.int/nutrition/gina/sites/default/files/KEN%202011%20National%20Food%20and%20Nutrition%20Security%20Policy[1].pdf)
- Thuo, C. M. (2011). The Influence of Enterprise Diversification on Household Food Security among Small-scale Sugarcane Farmers: A Case Study of Muhoroni Division, Nyando District, Kenya. *The Journal of Agricultural Education and Extension*, 17(3), 223-238.
- USAID. (2014). *Food Assistance Fact Sheet: Kenya*. Retrieved February 10, 2016, from <https://www.usaid.gov/sites/default/files/documents/1860/Kenya%20Food%20Security%20Fact%20Sheet%2010%2028%2014.pdf>
- Wakibi, S., Gichuhi, W. & Kabira, W. M. (2014). *Food Security Score for Kenya*. Retrieved February 11, 2016 from <http://awdflibrary.org/bitstream/handle/123456789/239/food%20security%20score%20for%20kenya%20by%20samwel%20wakibi,%20wanjiru%20Gichuhi%20%26Mukabi%20Kabira.pdf?sequence=1>
- Walker, R. E., Butler, J., Kriska, A., Keane, C., Fryer, C. S. & Burke, J. G. (2010). How Does Food Security Impact Residents of a Food Desert and a Food Oasis?. *Journal of Hunger & Environmental Nutrition*, 5(4), 454-470.
- WB. (2016). *Thailand became an upper-middle income economy in 2011*. Retrieved February 19, 2016, from <http://www.worldbank.org/en/country/thailand/overview>
- Yin, R. K. (2009). *Case Study Research: Design and Methods* (4<sup>th</sup> ed.). Los Angeles: SAGE.
- Yin, R. K. (2014). *Case Study Research: Design and Methods*. Los Angeles: SAGE.



**Name and Surname:** Edith Oketch

**Highest Education:** Master of Business Administration  
(MBA – International Business), Panyapiwat Institute of Management

**University or Agency:** Panyapiwat Institute of Management

**Field of Expertise:** International Business

**Address:** 79/535 Pathumwan Resort, Phaya Thai Rd., Ratchathewi  
Bangkok 10400



**Name and Surname:** Pithoon Thanabordeekij

**Highest Education:** Doctor of Philosophy, University of Wisconsin  
Milwaukee

**University or Agency:** Panyapiwat Institute of Management

**Field of Expertise:** Industrial Organization

**Address:** No. 20/69 Moo 4, Soi Chimplee, 20 Talingchan, Bangkok  
10160

PANYAPIWAT  
INSTITUTE OF MANAGEMENT

สถาบันการจัดการปัญญาภิวัฒน์