



ADVOCATES COALITION FOR DEVELOPMENT AND ENVIRONMENT (ACODE)

Socio-Economic Effects of Chinese Agricultural Investments on the Environment and Local Livelihoods in Uganda



Ramathan Ggoobi | Julian Barungi

ACODE Policy Research Paper Series No.78, 2016



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Published by ACODE
P. O. Box 29836,
Kampala
Email: library@acode-u.org,
acode@acode-u.org
Website: <http://www.acode-u.org>

Citation:

Ramathan Ggoobi and Julian Barungi (2016). *Socio-Economic Effects of Chinese Agricultural Investments on the Environment and Local Livelihoods in Uganda*. ACODE Policy Research Paper No. 78, 2016. Kampala.

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ISBN: 97 8997 034 0477

Cover Photo: Taken at a Chinese Agricultural Farm based in Uganda.

Acknowledgements

Research for this publication was carried out as part of a working partnership between the Advocates Coalition for Development and Environment (ACODE) and the International Institute for Environment and Development (IIED) to make a contribution to the China-Africa Forest Governance Project. The aim of this project is to strengthen understanding, partnership and joint action on forest governance between China and Africa, and a description can be found at <http://www.iied.org/china-africa-forest-governance-project>. The project is funded by UK aid from the UK Government; however, the views expressed in this report reflect the thinking of the authors and do not necessarily reflect the views of the UK Government, IIED or ACODE.

ACODE is indebted to the Chinese investors, government agencies, community members and local leaders who participated in the study. Special thanks go out to Mr. James Mayers and Ms. Xiaoxue Weng from IIED and Dr. Alex Tatwangire from Makerere University who reviewed earlier versions of this paper. We are particularly very grateful to Mr. Yuan Qing from Xinhua News Agency who assisted with scheduling appointments with the Chinese investors and translations during the interviews. We are heavily indebted to UK Aid through IIED, who provided the financial resources that went into undertaking the research and preparing this publication.

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List of Acronyms

ACODE	Advocates Coalition for Development and Environment
DLG	District Local Government
EIA	Environmental Impact Assessment
FAO	Food and Agricultural Organization of the United Nations
FDI	Foreign Direct Investment
FYM	Farm Yard Manure
GoU	Government of Uganda
HYV	High Yielding Variety
IIED	International Institute for Environment and Development
NEMA	National Environment Management Authority
NDP	National Development Plan
SDG	Sustainable Development Goal
SURULA	Sustainable Rural Livelihoods Approach
UIA	Uganda Investment Authority
USD	United States Dollars
WUE	Water Use Efficiency

Executive Summary

The nature and significance of China's engagements with African agriculture continues to be hotly debated in the media, academia and policy circles around the world. Although China has been engaged in Uganda's agriculture for more than 40 years, the recent jostle for agricultural land by private Chinese investors is mystifying and justifies the need to conduct a scientific study to provide clear evidence before the issue gets bundled into the messy anecdotal media inquiry.

The primary objective of this study was to profile Chinese investments in Uganda's agriculture sector and establish their socio-economic effects on the environment and local livelihoods. The analysis was done on the basis of the Sustainable Rural Livelihood Approach (SURULA) which uses five key criteria for the analysis of sustainable livelihoods i.e. gainful employment; poverty reduction; well-being and capabilities; livelihood adaptation, vulnerability and resilience; and natural resource base sustainability.

Data on the nature of Chinese agricultural investments; benefits accruing from the investments and their distribution; social and environmental safeguards and practices; as well as perceived effects of the investments on the environment and livelihoods were collected through a total of thirteen (13) different interviews administered to Chinese investors involved in Uganda's agriculture sector and other key informants including local community members and key policy makers. Direct observation by researchers and the writing of field notes were also used to collect additional data. Secondary data were also drawn from various sources such as scholarly works on the subject and relevant policy documents to complement the primary data.

After analysing the qualitative and quantitative data, it was found that Chinese investments in Uganda's agriculture sector have had both positive and negative socio-economic effects to the local communities and the environment. We found that the investments had predictively generated employment for the local people. They had transferred technologies such as High Yielding Varieties (HYVs) especially for rice and modern farming methods into Uganda's villages. The investments had also brought positive social externalities to local communities such as improved access to food especially rice, improved nutrition and social services such as water for production and for domestic use.

More importantly, however, we found that the Chinese investment projects could have some notable negative implications on people's livelihoods. These include; increased rivalry over farmland, depletion of irrigable farmland, as well as crowding out of smallholder farmers and processors. Of greater concern was the perceived environmental effects of Chinese investments on local

livelihoods as demonstrated by low water use efficiency and unregulated use of inorganic fertilizers and chemicals at the shores of fresh water bodies. However, it remained unclear whether these undesirable practices were unique to Chinese investors or shared widely by local and other foreign investors in Uganda. In any case, such negative effects could be minimised and/or the investment projects could be made more beneficial to the local communities if proper measures were to be taken.

Lastly, recommendations have been given in order to address the socio-economic and environmental effects of the Chinese investments on local livelihoods. The recommendations are made to the government, the investors and the civil society in general.

1.0 Introduction

China is increasingly seen as an active player in contributing to local development in African countries and other developing parts of the world. In the past 40 years, China has transformed from what Malkiel (2007) calls 'a Maoist dead end' into a booming economy. The remarkable story of China's miraculous growth rate that averaged more than 9 percent per year over the period 1980–2010 is well documented and popularised.

Chinese agriculture has been fundamentally important to its economic development. Before the reform started in 1979, China was an agrarian society, with more than 80 percent of its population living in rural areas¹. The majority of these people were poor and hungry. China's economic reform started in the agriculture sector and led to rapid agricultural growth and poverty reduction.

The World Bank states that China's agricultural growth was three-and-a-half times more effective in poverty alleviation when compared with growth in other sectors of its economy². China's own experience in agriculture is therefore impressive and probably relevant to countries such as Uganda whose agricultural growth rate and productivity are very low, yet agriculture employs about 72 percent of the labour force and is the source of livelihood to the vast majority of the poor³.

Some scholars contend that China has much to offer to countries like Uganda in terms of lessons learnt from its own success in agricultural growth and poverty alleviation⁴. It may also be argued that China's investment in Uganda's agriculture is imperative in targeting the SDG 1⁵. These investments are also particularly timely in light of the recent resurgence by the National Resistance Movement government to focus on transformation of the agricultural sector through the Operation Wealth Creation programme⁶.

¹ Sun, L. H. (2011), "Understanding China's Agricultural Investments in Africa," China in Africa Project; Occasional Paper No. 102.

² World Bank (2008), *World Development Report*. Washington, DC: World Bank.

³ Republic of Uganda (2015). Second National Development Plan (NDP II) 2015/16-2019/20. P.52.

⁴ See FAO, 2012; Sun, 2011; and Cotula *et al*, 2009.

⁵ SDG stands for Sustainable Development Goals that were adopted in September 2015, under the UN's 2030 Agenda for Sustainable Development. SDG 1: "End poverty in all its forms everywhere" is one of the 17 goals.

⁶ An ongoing programme launched in July 2013 by Uganda's President Yoweri Museveni to mobilise the masses to commercialise their agricultural activities in order to banish subsistence farming from Uganda, and embark on national socio-economic transformation of the country. Under the Operation Wealth Creation, military officers are directly involved in the agricultural sector and are tasked to coordinate the distribution of publicly procured agricultural inputs to farmers.

China's growing investments in the agriculture sector of African countries such as Uganda can be explained by China's Going Global Strategy. China's Going Global Strategy was articulated in China's 10th five-year plan in 2001, as a strategy to open up the Chinese market and compete in the global market.⁷ However, the Chinese official policy on investments overseas, particularly in Africa, is also seen as an aggressive and exploitative plunder of resources that pose adverse socio-ecological consequences to the host countries. Central to the criticisms against China's "going global" strategy is the claim that it has contributed to land grabbing and poor exploitation of local agricultural resources to meet its own demand for food.⁸

In Uganda, agriculture is considered to be the backbone of the economy and the most important sector in terms of employment, income, food and nutrition security, raw materials for industry and exports to regional and international markets⁹. Notwithstanding the importance of agriculture to Uganda's economy, the sector continues to face several challenges including low production and productivity; limited value addition and access to markets; frequent policy changes; institutional weaknesses and inadequate attention to natural resource sustainability which have affected Uganda's export sector¹⁰. In a bid to increase her production capacity, the Ugandan Government continues to pro-actively attract Foreign Direct Investment (FDI) in the agriculture sector, among other strategies.¹¹ Between 1993 and March 2016, the Uganda Investment Authority (UIA) licensed a total of twenty two (22) Chinese companies to invest in the agriculture sector. The nature of the increasing Chinese investments in Uganda's agriculture sector and related effects on local livelihoods and environment remain unclear.

This study set out to profile Chinese investments in Uganda's agriculture sector and establish the socio-economic effects of such investments on the environment and local livelihoods.

1.1 Statement of the Problem

The importance of the agriculture sector to Uganda's economy cannot be overemphasized. The sector employs nearly 80 percent of the country's labour force, it is the source of livelihood to the vast majority of the poor, the source of food and nutrition security, raw materials for industry and nearly half of Uganda's export value.

⁷ Global Environmental Institute (2013). Environmental and Social Challenges of China's Going Global.

⁸ See Brautigam, 2009 & Hairong, 2010.

⁹ Supra note 3. P.2

¹⁰ Republic of Uganda (2013). National Agriculture Policy. Section 2.5.

¹¹ New Vision (2013). *China Looks to Uganda to Meet Food Demand*. See http://www.newvision.co.ug/new_vision/news/1332381/china-looks-uganda-meet-food-demand. Accessed on December 1, 2016.

Unfortunately, agricultural growth and productivity have remained slow, with limited public and private investment, despite the inexhaustible opportunities in the sector such as abundant irrigable land and fresh water, a big regional and international market, and favourable government policy. In the recent years, there has been increased jostling for Uganda's agricultural land by private Chinese investors, a move that is supported by government in light of its recent focus on transformation of the agriculture sector through the Operation Wealth Creation programme. What was not known is the socio-economic effects of the Chinese agricultural investments on the environment and local livelihoods.

1.2 Objectives of the Study

The primary objective of this study was to profile Chinese investments in Uganda's agriculture sector and establish their socio-economic effects on the environment and local livelihoods. Secondary objectives include the following:

- a) To find out the nature of Chinese agricultural investments in Uganda;
- b) To ascertain the nature and distribution of benefits from Chinese investments in Uganda's agriculture sector;
- c) To evaluate the socio-environmental safeguards in the Chinese investments in Uganda's agriculture sector;
- d) To establish the perceived effects of Chinese investments on forests, trees, environment and livelihoods; and
- e) To appraise the Chinese investments relative to other non-Chinese investments in the agriculture sector.

1.3 Scope of the Study

This study is derived from an earlier diagnostic study that revealed a strong relationship between Chinese agricultural investments, the environment and local livelihoods in Uganda.¹²

1.4 Organisation of the Paper

The report is organised in five chapters. The introduction provides an overview of the study. Chapter 2 examines Chinese agricultural investments in Africa and in Uganda. It traces the origin of Chinese investments in Uganda's agriculture sector and also focuses on the regulatory frameworks within which the investments take place. Chapter 3 mainly deals with the research methodology and chapter 4 presents and discusses the findings. Chapter 5 contains the conclusions and policy recommendations based on the findings.

¹² Tumushabe, G, Bainomugisha, A & Barungi, J (*Un published*). Chinese Investments and their Effects on Forest Land Use in Uganda: A Situation Analysis and Diagnostic Study.

2.0 Background

2.1 Chinese Investment in African Agriculture

The nature and significance of China's engagements with African agriculture continues to be hotly debated in the media, the academia and policy circles around the world. There are three primary divergent narratives describing China's engagement in Africa. These are: China as colonizer, China as an economic competitor and China as a development partner.¹³ The first two framings prevail in the media, emphasising China's engagement as a threat to Africa's development, especially in land and resource-related engagements such as agriculture. These two narratives purportedly present China's recent wave of aid and diplomatic efforts in Africa as part of a protracted effort to oust both Western and African control over land and politics on the continent.

The second narrative sees China as engaged in a self-interested, exploitative, grab for resources to feed its fast-paced growth¹⁴. The Guardian Newspaper Journalist David Smith, for example, wrote in 2009 that "A million Chinese farmers have joined the rush to Africa, according to one estimate, underlining concerns that an unchecked 'land grab' not seen since the 19th century is under way."¹⁵

However, some scholars find "no evidence of a coordinated Chinese government effort to obtain land in Africa, for food security or for other agricultural investment".¹⁶ What they find is a small number of Chinese agribusiness companies pursuing land acquisitions in Africa as part of China's general 'going global' surge of trade and outward foreign investment.

They also find that "the amounts of land at stake in these negotiations were far smaller than reported, and the projects themselves were either commercial, import-substitution production (mainly rice and sugar), or biofuels (palm oil, jatropha)." Other scholars also found that it was erroneous for some writers (e.g. GRAIN, 2008) to claim that the Chinese government had established massive fund—a USD 5 billion fund—to allow Chinese companies 'to invest in African agriculture'.¹⁷

¹³ Alden, C (2007). *China in Africa*. Zed Books, London, UK. ISBN 9781842778647.

¹⁴ Ibid.

¹⁵ Smith, D (2009). *The Food Rush: Rising Demand in China and West Sparks African Land Grab*. Published on 3rd July, 2009. See <http://www.theguardian.com/environment/2009/jul/03/africa-land-grab>

¹⁶ Bräutigam D. & Zhang H. (2013), "Green Dreams: Myth and Reality in China's Agricultural Investment in Africa" *Third World Quarterly*, Vol. 34, No. 9, 2013, pp 1676–1696.

¹⁷ Buckley L. (2013) "Narratives of China-Africa Cooperation for Agricultural Development: New Paradigms?" *China and Brazil in African Agriculture (CBAA)*, Working Paper 053.

While China has made impressive progress in increasing its total food production; this has been achieved at the cost of heavy depletion of its water and soil resources, intense fertilizer use with associated high pollution and energy use, and social exclusion of large fractions of society.¹⁸ It remains unclear whether the agriculture development models being transferred in China's South-South exchanges will replicate these problems in Africa.

Our own findings on the environmental effects of China's investment in Uganda's agriculture are mixed. On the one hand, the findings reveal some inadvertent lack of strict adherence to national environmental and land-use guidelines, as well as international standards on ecological and sustainable land use by the Chinese companies. On another hand, however, when we engaged with Chinese investors and the government officials about these observed gaps, it was found out that some of the accusations are implausible. Lack of strict adherence to national environmental and land use guidelines is not unique to Chinese investors. Many Ugandan and other foreign investors are also perpetrators of environmental and land-use crimes in Uganda.¹⁹

2.2 Overview of Chinese Investment in Uganda's Agriculture Sector

China has been engaged in Uganda's agriculture for more than 40 years. The first major investment by a Chinese company in Uganda was set up in 1973 when the Kibimba Rice Scheme (now called Tilda Uganda Ltd)—the first ever rice farming project in Uganda—located in Eastern Uganda (Bugiri district) was established²⁰. It started as a 700 hectare field of irrigated rice specifically for the local market. Now it covers an area of 1,040 hectares plus 450 hectares of the dam.²¹ It was handed over to the Uganda Government in January 1982, with a rice hulling mill with the capacity of 24 tons per day.

In 1987, China invested in the 800 hectare Doho Rice Scheme. It was handed over to Uganda Government in 1990.²² These rice schemes made Uganda one of the top rice producers in East African region and beyond. China also invested in aquaculture technology demonstration, technology transfer and training in Uganda.

¹⁸ Ibid.

¹⁹ Discussions from the Forest Governance Round Table Dialogue Organised by ACODE in May, 2016.

²⁰ Supra note 1.

²¹ Turner, D. A (2011), "The Greater Flamingo *Phoenicopterus roseus* and other birds at the Kibimba rice scheme, eastern Uganda," Short communications for *Scopus* 31: 41-42, November 2011. Available at: <file:///C:/Users/Economic%20Forum/Downloads/108287-296025-1-PB.pdf>

²² See website of the Embassy of the People's Republic of China in Uganda. <http://ug.china-embassy.org/eng/zwgx/t168251.htm>. Accessed on 1st December, 2016.

Trade relations between Uganda and China have been growing as a result of Uganda importing from and exporting to China in various sectors. For example, in 2013, Uganda's imports from China amounted to USD 622 million and in the same year, Uganda's exports to China amounted to USD 37.9 million.²³ In 2015, Uganda contributed exports worth USD 57.7 million out of the total trade (exports and imports) between Uganda and China which reached USD 932.8 million.²⁴ The Chinese Government is encouraging and supporting Chinese investment in Uganda, and is providing preferential loans and buyer credits to the Chinese.²⁵ By 2013, China's Ministry of Commerce had approved a total of 57 Chinese investment companies to invest in Uganda, of which only one was in the farming sector.²⁶ In the period 1992 – 2012, some two hundred sixty five (265) Chinese enterprises started in Uganda.²⁷ The single company in agriculture was Hanhe Farm, located in the Nakaseke Administrative District, in Central Uganda.²⁸

The low level of Chinese investment in Uganda's agriculture sector may perhaps be attributed to the country's investment law. Uganda's Investment Code Act, enacted in 1991, which governs investments in Uganda, discourages FDI in the agriculture sector. The Investment Code Act forbids foreign investors from engaging in agricultural production except for provision of materials or other assistance to the local farmers.²⁹ In addition, the interviews with Chinese investors revealed a sense of investment risk associated with labyrinthine land regulations. However, the trend seems to be changing. Our own interviews show that the number of Chinese investments in the agriculture sector has been rising lately.

On top of the private investments, China has continued to advance agricultural aid to Uganda. In March 2016, for example, China invested USD 1.8 million in Uganda's Agriculture sector, as funding for the second Phase of the South-South Cooperation project, focusing on aquaculture, livestock, horticulture, the cereal agricultural subsectors³⁰.

²³ Uganda Bureau of Statistics Statistical Abstracts 2004-2013.

²⁴ Data from the Ministry of Trade, Industry and Cooperatives.

²⁵ Obwona, Guloba, Nabiddo and Kilimani (2007), *China-Africa Economic Relations: The Case of Uganda*.

²⁶ Supra note 16.

²⁷ New Vision (2012). *Uganda: China to Grant Nation Exports Tariff Free*. Article published by Raymond Baguma on 24th February, 2012.

²⁸ Maiyo Josh (2014), "The Political Ecology of Chinese Agriculture Investment in Uganda: The Case of Hanhe Farm." *Johns Hopkins SAIS China-Africa Research Initiative (CARI)*, Policy Brief No. 01/2014.

²⁹ Republic of Uganda (2000). *The Investment Code Act*.

³⁰ Nakiyimba, Gloria (2016) "China Invests In Ugandan Agriculture" *Tuck Magazine* March 28, 2016.

Available at: <http://tuckmagazine.com/2016/03/28/china-invests-ugandan-agriculture/>

2.3 Why do Chinese Companies Come to Uganda?

As already stated, China has had relations with Uganda for over 40 years. Initially, China's relations were based on international solidarity and were dominated by Chinese aid projects to Uganda. While development cooperation still plays a major role in China-Uganda relations, after the economic reforms of the 1990s, Chinese companies have increasingly started pursuing commercial activities in Uganda. A recent study found that over 64 percent of the Chinese investments in Uganda are fully private operators with only 21 percent state-owned enterprises and 14 percent having mixed ownership.³¹

Since employment is a sensitive issue for Uganda, as the case also is with many other African countries, the Chinese investments are often looked at by Ugandan authorities as source of employment opportunities to the youth. Nevertheless, Chinese companies have often been accused of importing large numbers of Chinese workers, taking away jobs that local workers could also do.³² Almost half of the Chinese companies in Uganda are composed of less than 75 percent Ugandans.³³ There is a perception that Chinese workers are more efficient than Ugandans, helping the companies achieve their goals of operating on low profit margins and high volumes of sales.³⁴

A study of Chinese investments in Africa found that the five most frequently mentioned motives to come to Africa were: (1) access to local market; (2) intense domestic competition; (3) transfer abroad range of excessive domestic production capability; (4) entry into new foreign markets via exports from host; and (5) taking advantage of African regional or international trade agreements.³⁵ Other motivations cited by scholars include: projects such as those funded by the World Bank, African Development Bank and Ugandan government, as well as the perception that Uganda had a stable, safe and secure investment climate.³⁶ China's investment in Africa's agriculture sector comprises of key actors and stakeholders such as state-owned enterprises; private enterprises; policy makers; academics; and specialized banks.³⁷

However, evidence from Uganda shows that less than two in ten private Chinese investors got any help from their government back home and only about 43 percent of the investors received assistance from the Ugandan government.³⁸

³¹ Warmerdam, W., and van Dijk, M. P. (2013), "Chinese State-owned Enterprise Investments in Uganda: Findings from a Recent Survey of Chinese Firms in Kampala." *Journal of Chinese Political Science* 18(3): 281-301.

³² Davies, P. (2007), "China and the End of Poverty in Africa: Towards Mutual Benefit?" Sundbyberg: Diakonia.

³³ Supra note 31.

³⁴ Ibid

³⁵ Gu, J (2009). China's Private Enterprises in Africa and the Implications for African Development. *The European Journal of Development Research*. September 2009, volume 21 Issue 4, pp 570-587.

³⁶ Supra note 31.

³⁷ Supra note 1.

³⁸ Supra note 31.

Furthermore, although a number of Chinese companies agree that they had been encouraged to come to Uganda by the Chinese government, there were no practical measures or incentives beyond verbal encouragement to facilitate their entry into Uganda³⁹.

2.4 Environmental Practices of Chinese Companies in China and Abroad

A basic understanding of China's environmental practice and law is necessary, while conducting studies of this nature. This is because "Beijing's domestic policies eventually tend to be reflected in its approach elsewhere, including Africa".⁴⁰ More interestingly, researchers found that "Chinese companies reproduced in Africa [environmental] practices and attitudes they had routinely adopted at home".⁴¹ China's environmental record both at home and in Africa has been the subject of criticism; - much of it deserved.⁴² Critical commentary from the environmental community and journalists occasionally results in rejoinders from Chinese officials, who tend to minimise the problem.⁴³ In all fairness, if a Chinese investment has no notable negative environmental impact, it rarely receives attention, and good practices are usually ignored by environmental groups and the media.⁴⁴ Previous studies and research show that "little publicity is given to the good practices among Chinese firms while the negative practices received wider media attention."⁴⁵

Indeed some studies indicate that of recent, there has been a shift in China's focus on environmental challenges and the need to confront them. In 2015, China began to implement its updated 1989 Environmental Protection Law and added to it significant provisions such as: (1) increasing the seriousness of the consequences for violating China's environmental laws, (2) expanding the scope of projects subjected to environmental impact assessments, and (3) allowing non-governmental organizations to take legal action against polluters in the public interest.⁴⁶

³⁹ Ibid.

⁴⁰ Shinn, D. H. (2016), "The Environmental Impact of China's Investment in Africa," *Cornell International Law Journal* Vol. 49.

⁴¹ Compagnon D. & Alejandro A. (2013), "China's External Environmental Policy: Understanding China's Environmental Impact in Africa and How it is Addressed," 15 *Environmental Practice* 220, 220– 21 (2013).

⁴² Yimin Y. (2013), "Improving China's Aid and Investment to Africa with a More Open Attitude," in 'Chinese Research Perspectives on the Environment' 381, 384 (Yang Dongping ed., 2013).

⁴³ Supra note 40.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Falk, R. L. & J. Wee (2014), *China: China's New Environmental Protection Law— Implications for Overseas Investors, Joint Ventures and Trading Partners*, MONDAQ (2014), Accessible at: www.mondaq.com/x/345932/Environmental+Law/Chinas+New+Environmental+Protection+Law&login=true.

In a study by the Pew Research Center's Global Attitudes Project⁴⁷, people in forty-four countries responded to a survey regarding five of the greatest dangers in the world. In order of importance, these were found to be: religious and ethnic hatred, inequality, AIDS and other diseases, nuclear weapons, and pollution and the environment. However, for the people in China, pollution and the environment were ranked as the highest danger.⁴⁸ A separate Pew survey found that the Chinese public is increasingly concerned about the country's air and water quality⁴⁹. This is significant because concerns in China about domestic challenges, such as those related to the environment, often manifest themselves later as policy priorities pursued by China outside its borders.⁵⁰

China's environmental legislation is considered strong on paper, but its implementation tends to be weak.⁵¹ While some scholars argue that environmental awareness and compliance within the mainstream business culture affects how Chinese investors conduct their environmental safeguard measures abroad, and especially in Africa⁵², it is unclear whether these recent changes and increased scrutiny of environmental performance in China will translate to a change in behaviors immediately among Chinese investors abroad. Indeed, it takes time for environmental awareness and behaviors to shift. Meanwhile, in a post-1990 world, Chinese investors and companies are still accused of undermining good governance, environmental and sustainable policies in Africa.⁵³ Thus, Chinese investments in environmentally sensitive sectors such as agriculture and forestry raise the debate on sustainable economic development for Africa.

2.5 Guidelines for Chinese Investments Abroad

There is growing evidence that the Chinese government is encouraging its companies to follow better environmental practices as they invest in Africa and other countries.⁵⁴ Chinese companies are increasingly using environmental impact assessments, and sometimes even drawing on the expertise of Western companies that specialise in these studies.⁵⁵

⁴⁷ See *Greatest Dangers in the World*, PEW RES. CTR. (Oct. 16, 2014), Accessible at: <http://www.pewglobal.org/2014/10/16/greatest-dangers-in-the-world/>.

⁴⁸ Supra note 40.

⁴⁹ See *Environmental Concerns on the Rise in China*, PEW RES. CTR. (Sep. 19, 2013), Accessible at: <http://www.pewglobal.org/2013/09/19/environmental-concerns-on-the-rise-in-china/>.

⁵⁰ Supra note 41.

⁵¹ Shinn D. H. (2015), *The Environmental Impact of China's Investment in Africa*, International Policy Digest (April 8, 2015).

⁵² Supra note 41.

⁵³ Cissé D., Grimm S., Nölke A. (2014), "State-Directed Multi-National Enterprises and Transnational Governance: Chinese Investments in Africa, Corporate Responsibility and Sustainability Norms" Stellenbosch University Centre for Chinese Studies, Discussion Paper. Accessible at: <http://scholar.sun.ac.za/handle/10019.1/95493>.

⁵⁴ Davis, B. (2014), Chinese Mining Group Sets Guidelines for Overseas Interaction, *New York Times* October 24, 2014). See http://www.nytimes.com/2014/10/25/business/international/chinese-mining-group-sets-guidelines-for-overseas-interaction.html?_r=0.

⁵⁵ Ibid.

In 2013, China's Ministry of Commerce and Ministry of Environmental Protection issued voluntary guidelines that encouraged companies investing overseas to follow local environmental laws, assess the environmental risks of their projects, minimise the impact on local heritage, manage waste, comply with international standards, and draft plans for handling emergencies.⁵⁶ The guidelines also call onto Chinese investors to "respect the cultural heritage of the local communities" and they encourage them into regular release of environmental information.⁵⁷ They also call for planning for waste management and contingency planning for emergency situation, as well as environmental surveys of the local area of an investment.⁵⁸

Literature also report increasing attention on the environment by Chinese companies investing overseas.⁵⁹ The Export-Import Bank of China, the main financing institution for Chinese companies investing abroad, is one of the leaders in urging better environmental policies. In 2004, it developed its own environmental policy and impact assessments whereby it encouraged Chinese companies venturing overseas to comply with host country policies regarding sustainable development and environmental protection.⁶⁰ This followed an earlier book in which the authors concluded that environmental protection policies were badly lacking with respect to China's FDI and foreign aid.⁶¹ However, some analysts have decried the possibility that these guidelines have no teeth, since "if companies choose to ignore the guidelines, there is no penalty".⁶²

A recent research also shows that these policy signals from the Chinese government bodies may not reach the Chinese business decision-makers on the ground in Africa.⁶³ Based on interviews with 58 Chinese businesses, the research found that the interviewees cared the least about Chinese government policies but rather, it was the local legislation and norms that guided their practices the most.

⁵⁶ Supra note 53.

⁵⁷ Article 3 & 18.

⁵⁸ Supra note 53.

⁵⁹ Supra note 40.

⁶⁰ Supra note 53.

⁶¹ Chazhong Ge, Xia Youfu, Zhi Yingbiao, Long Feng, et al (2010), *Environmental Policies on China's Investment Overseas*, China Environmental Sciences Press.

⁶² Tao Hu (2013), A Look at China's New Environmental Guidelines on Overseas Investments, World Resources Institute. Accessible at: <http://www.wri.org/blog/2013/07/look-chinasnew-environmental-guidelines-overseas-investments>.

⁶³ Weng, X. and Buckley, L. (eds) (2016) *Chinese businesses in Africa. Perspectives on corporate social responsibility and the role of Chinese government policies*. IIED Discussion Paper. IIED, London.

2.6 Ugandan Environmental Practice and Law

It is also important to review Uganda's environmental laws and practices in order to put the Chinese investments' effects on forest cover and the environment generally in the right context. Historically, Uganda has suffered from slow policy implementation, inadequate environmental legislation at lower levels, poor legal enforcement, and insufficient financial and human capacity to carry out the agreements. It has also been difficult to integrate environmental initiatives into Uganda's national development plans and poverty reduction strategies.

The study by the Pew Research Center's Global Attitudes Project included nine African countries: Uganda, Tunisia, Nigeria, Egypt, Senegal, Tanzania, Kenya, Ghana, and South Africa. All the African countries ranked pollution and the environment as the least important of the five concerns.⁶⁴ Even where the country actually has a relatively strong commitment to the environment and reasonably good legislation, there are serious shortfalls in funding and human capacity to implement programs to protect the environment.

Like in most African states, Uganda has weak bureaucracy. While the environmental laws are somewhat impressive, implementation is often weak. The environmental laws and standards are much lower than accepted international norms. Government has failed to articulate coherent solutions to the country's environmental problems.

Given the weak enforcement of environmental protection measures, individual Chinese companies operating in Uganda have discretion as to whether they assume responsibility for sound environmental practices. Like elsewhere in most African countries, Ugandan government does not consider environmental protection a high priority or does not have the resources to improve the situation significantly. As is the case for most FDI in Africa, Chinese investment in Uganda is concentrated in sectors of the economy that are especially vulnerable to environmental concerns. Agriculture is one of such sectors.

Since the early 1990s, the Government of Uganda has been developing a robust national environment management regime. The National Environment Management Policy was developed in 1994 as well as several sectoral policies, including the 1995 Water Policy, the 1996 National Wetlands Management Policy, the 1996 Wildlife Policy, the 2000 Fisheries Policy, the 2001 Forestry Policy and several district environment management policies from 2000 onwards.⁶⁵

⁶⁴ Supra note 40.

⁶⁵ Akello, C. E. (2007), "Environmental Regulation in Uganda: Successes and Challenges," *Law, Environment and Development Journal* Vol. 3/1, p.20. Available at: <http://www.lead-journal.org/content/07020.pdf>

The National Environment Management Authority (NEMA) has found challenges to environmental planning both at national and district level, among which include land degradation due to poor farming methods and inadequate funding for the environment sector which is still heavily dependent on the ever decreasing support from development partners/donors.⁶⁶ Environmental monitoring and impact assessment processes are provided for under the framework law, and are useful tools in regulating activities which have or are likely to have deleterious effects on the environment. But the challenge of lack of effective monitoring and compliance remains.⁶⁷

⁶⁶ Ibid.

⁶⁷ Ibid.

3.0 Methodology

The methodology employed for this study was adapted according to the key stages of research.

3.1 Sampling

The first stage, which focused on identifying the Chinese companies involved in Uganda's agriculture, relied on both snowball and convenience sampling. These methods were chosen to enable the researchers to select investors whose farms were easy to reach and also to use investors to recruit other interviewees from among their acquaintances. The method was also chosen since this kind of study relies more on the availability of the respondents and their readiness to participate, and also to enable for in-depth research.

The second stage consisted identifying other key informants. These included: workers in the companies, residents in the communities hosting the investments, local leaders, landowners, and relevant government officials. In total, 21 interviews were conducted. We targeted a margin of error on 4.56 percent and 90 percent confidence level (meaning that if 50 percent of the Chinese firms in the sample reported that they engaged in rice growing, for example, it means that if the study was conducted among all Chinese firms in Uganda's agriculture, the percentage that would report that they engaged in rice growing will range between 45.4 percent and 54.6 percent.). With unknown population of Chinese investors in Uganda's agriculture, it was difficult to determine the accurate sample size needed. However, since the study was largely qualitative in nature, we established that we needed approximately 20 percent of the officially known (licensed) Chinese farms plus other key informants to make the responses quite representative.

3.2 Data Collection, Management and Analysis

This study depended primarily on fieldwork conducted in rural and peri-urban parts of Uganda. We supplement this fieldwork through interviews, secondary research by other scholars, and a careful review of information on the internet. This study joins a new wave of scholarly literature that critiques the media-based conclusions about Chinese investments in agriculture in Africa without giving enough attention to the opinions of investors, the local communities, and the representatives of host governments.

3.2.1 Data Collection

Data collection involved two approaches. The first, aimed at a review of published literature and secondary sources of data, particularly research papers and media reports related to China's investment in agriculture generally in Africa and specifically in Uganda.

The second key component of field work relied, exclusively on conducting formal interviews with the owners of the companies at their firms, aimed at capturing facts related to the Chinese investments, as well as having the benefit of observation to establish the incidence, presence, or frequency of evidence. In total five (5) Chinese companies (a total of 13 investors) were interviewed.

In addition to the above, key informant interviews were conducted with workers in the companies; residents in the communities hosting the Chinese investments; local leaders; landowners; and representatives of various government agencies, including the Uganda Investment Authority; Ministry of Lands, Housing and Urban Development, National Environment Management Authority; Ministry of Agriculture, Animal Industry and Fisheries; and the National Forestry Authority. All interviews were conducted between April and June 2016.

3.2.2 Data Management and Analysis

All interviews were conducted in either Chinese or English languages and translations of transcripts were effected by our own data analysts. Although we wrote notes and recorded most interviews with permission, informants agreed to speak to us with either the understanding that their identities would remain anonymous or without explicit permission to be directly quoted. This was done to build trust and encourage honest sharing in what is a sensitive and contested field of inquiry. We have therefore omitted names when providing quotes. The data was coded by entering it in excel, organised, and cleaned.

The analysis was done on the basis of the Sustainable Rural Livelihood Approach (SURULA). The SURULA enables analysis of livelihoods⁶⁸ at different scales such as individual and household as well as interactions between different levels in terms of net livelihood effects. The framework uses five key criteria for the analysis of sustainable livelihoods i.e. gainful employment; poverty reduction; well-being and capabilities; livelihood adaptation, vulnerability and resilience; and natural resource base sustainability.⁶⁹ The researchers undertook contextual analysis of conditions and trends in agricultural performance before and after the advent of the Chinese firms in the sample areas of study. They also analysed the livelihood resources (natural, economic, financial, and human resources) as well as their trade-offs and consequences.

⁶⁸ Livelihoods comprise capabilities, assets (including material and social resources), and activities required for a means of living.

⁶⁹ Scoones, I (1998). Sustainable Rural Livelihoods. A Framework for Analysis. IDS Working Paper72. Pp 5 &6.

Finally, analysis of institutional/organisational influence on access to livelihood resources above as well as outcomes such as poverty reduction, employment created, and overall changes in wellbeing of people was undertaken with the intention of assessing the sustainability of the Chinese investments in Uganda's agriculture sector.

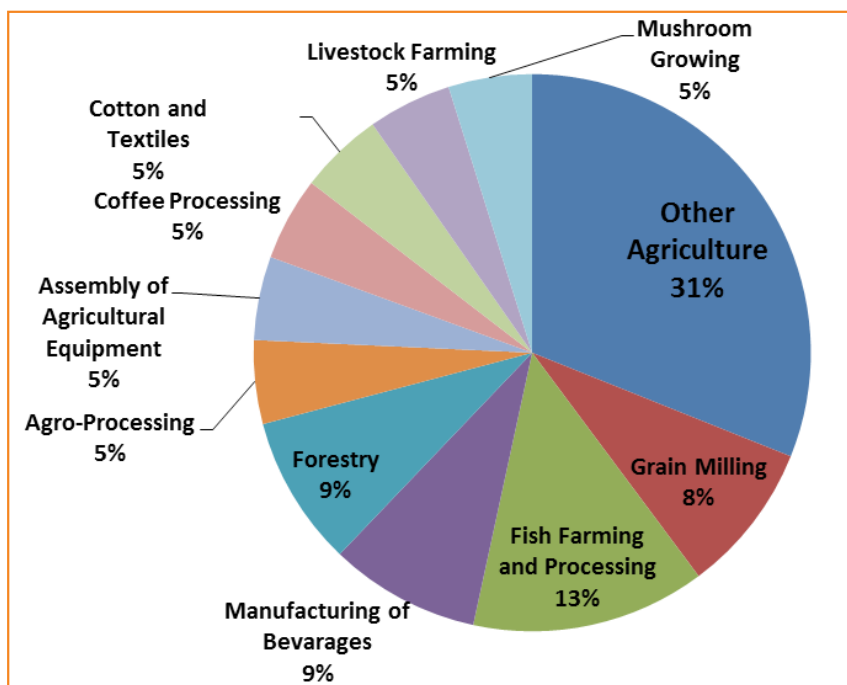
4.0 Findings of the Study

4.1 What is the Nature of Chinese Investors in Uganda?

A total of twenty two (22) Chinese-owned companies have been licensed since 1993 to March 2016, by the UIA, to invest in the agriculture sector. The most popular sub-sector among the Chinese investors is “other agriculture”—a category for mainly crop farming. Over 31 percent of the licensed Chinese business activities are in this sub-sector, carrying out activities such as rice growing, maize growing, and growing of other crops such as sweet potatoes, vegetables, and herbal medicines.

Another agricultural sub-sector that is popular among Chinese investors in Uganda is fish farming and processing. Over 13 percent of the licensed Chinese business activities are in this activity, followed by forestry or tree planting and timber processing (9 percent), manufacturing of beverages (9 percent), and grain milling (8 percent).

Figure 1: Licensed Chinese Agricultural investments in Uganda between 1993 and March 2016



Source: Uganda Investment Authority (2016)

As Figure 1 shows, other agricultural activities where Chinese owned companies have been issued licenses by UIA to invest include: mushroom growing, livestock farming, agro-processing, assembly of agricultural equipment, cotton and textiles, as well as coffee processing mainly for export. Data on how many of these licensed investments are still active as at the time of writing this paper are unavailable at the UIA.

4.1.1 Characteristics of Chinese Companies in Uganda's Agriculture Sector

Most of the Chinese companies, investing in Uganda's agriculture sector, are privately owned. About 20 percent of the companies had parent companies in China while 80 percent of the companies were only registered and/or operating in Uganda. About 80 percent of the companies are fully owned by the Chinese investors. Only 20 percent of the investments are joint ventures between Chinese and Ugandan investors, respectively owning 60 percent and 40 percent of the stake. This is typical of FDIs in Uganda. Uganda's investment laws and guidelines do not require foreign companies to partner with the local people, although joint ventures would permit greater technology transfer and robust backward linkages to Uganda's economy.

The Chinese companies that were active in primary agricultural production mainly dealt in rice growing, processing and marketing (87 percent). About 50 percent of the Chinese companies engaged in rice production sourced their seed from other Chinese companies based in Uganda. Many of the investors in rice production (92 percent) also carried out other activities such as fish farming, poultry farming, vegetable and sweet potato farming, albeit at a relatively smaller scale.

Contrary to the popular view in literature and the media that China's *Going Global Strategy* was intended to exploit local agricultural resources in Africa to meet China's rising demand for food⁷⁰, nearly 80 percent of the Chinese investors interviewed targeted Uganda's local market.

⁷⁰ See Demick (2014); MacFarquhardec (2010); Smith (2009); and GRAIN (2008).

Table 1: Characteristics of Chinese Companies in Uganda’s Agriculture Sector

Company ID	Ownership	% of Chinese ownership	Main activity	Target market
1	Private	100	Rice growing & processing	Local
2	Private	100	Tea processing	China
3	Private	100	Rice growing, poultry + horticulture	Local + Export
4	Private	100	Rice growing & processing	Local
5	Private	60	Rice growing + Sweet potato growing	Local

Source: Interview data

The Chinese company that is managing the China-Uganda Agricultural Industrial Park⁷¹, a project that was established through a South-South Cooperation Agreement between Uganda, China and FAO, is also privately owned. However, unlike other Chinese companies interviewed, this particular company had a larger parent company based in China.

Asked, in an interview, whether there were any restrictions on involvement by foreigners in Uganda’s agriculture, a senior official at the Uganda Investment Authority said, “*There are no restrictions apart from the size of investment. It should be worth USD 100,000 (about UGX 335 million) or more, and provide for value addition that will create employment for Ugandans.*”

4.1.2 The Nature of Land Acquisition Deals in the selected Chinese investment projects

Government of Uganda provides guidelines for allocation of investment land through the UIA. The only agriculture-related activity considered among the “Priority Sectors” for land allocation and waiver of lease premium charges is agro-processing.⁷²

⁷¹ Located in Luweero District (Central Uganda), it is the first and the only agricultural industrial park with Chinese background in Uganda and the investors claim it will act as a platform to link Chinese investors to Uganda and to link agricultural producers to markets. The industrial park will be available for use by Chinese investors (mainly from Sichuan province in southwest China) through renting the land, sub-leasing the land or renting warehouses constructed in the industrial park. Reports indicate that Sichuan province is one of China’s provinces with much experience in commercial agriculture.

⁷² Agro-processing is defined as constituting activities whose major raw materials are primary agricultural products grown on farms in Uganda. These include: manufacture of food, beverages and tobacco; herbal products from agricultural products; manufacture of rubber products from gum trees or similar sources; production of fertilizers and pesticides to boost agricultural production; and production of higher value products from raw trees.

However, an investor whose investment activities do not fall in the prioritised sectors may be considered for waiver of lease premium charges if one has invested or plans to invest more than USD 25 million in the project requiring the land, intends to create more than 500 jobs in the said project and if one is likely to incur over USD 400,000 on preparation of the land such as backfilling.⁷³ At the moment foreigners can only buy land on lease arrangement (up to 49 or 99 years) from private land owners.

Interview findings revealed that a majority of the Chinese investors preferred to lease the land from a private land owner, instead of jostling for public land allocated to foreign investors by government. Four out of the five Chinese companies interviewed had acquired land through the private lease arrangement for a period ranging between 5 years and 99 years. Two out of the five Chinese companies interviewed had leased their land at UGX 100,000 (less than USD 30) per acre per year.

Table 2: Land Acquisition Arrangement by Chinese Investors

Company ID	Arrangement	Land Ownership	Lease Period (years)	Land Size (Acres)
1	Lease	Private	5	1000
2	N/A	N/A	N/A	N/A
3	Lease	Private	99	947
4	Lease	Private	20	400
5	Lease	Private	5	200

Source: Interview data

Earlier interviews in Uganda had suggested that it is virtually impossible for foreigners to acquire land without the help of brokers.⁷⁴ However, interview findings indicate that some investors actually acquired land directly from the private land owners without any middleman. Interview responses (see Box 1) from one of the Chinese investors engaged in rice growing provide some interesting evidence.

⁷³ UIA (2015), "Guidelines for Allocation of Investment Land by Uganda Investment Authority (UIA)" As Approved by the UIA Board, June 2015.

⁷⁴ Supra note 28.

Box 1: Some Chinese Investors Transacting Directly with Private Land Owners

When one Chinese investor in agriculture arrived in Uganda in August 2014, he tried to reach the Minister of Lands for advice on how to acquire land but he was discouraged by “too much bureaucracy involved.” The investor decided to search for suitable land by himself. “I identified the land through my own efforts. I used Google Maps to locate suitable land [for rice growing], travelled to the area and met with the land owner. Within a few hours the deal was done,” the investor said, adding, “It is easier for us [foreign investors] to search for land on our own than going through Government to acquire land in Uganda.” “...we realised that Government land is more expensive than similar land on the market. In addition, you have to give the government officials commission and trip allowances as they travel to show you the different pieces of land.” “Even if I may need assistance from government, it is meaningless to mention since government does not work. It is better I do the things myself.”

Source: Interview Responses

The evidence reflected in Box 1 suggests that foreign investors now feel they do not need government to access land for agriculture in Uganda. They are leveraging technology (*Google maps*) to bypass government bureaucracy and corruption which enables them to reduce transaction costs. However, this may have future implications on land governance in Uganda. In the case of consensual market exchange, such as the one reflected in Box 1, government may indeed not be needed. However, it is not uncommon in Uganda for businessmen aiming to buy large tracts of land from local land owners to use dummy buyers to prevent sellers from knowing their ultimate intent⁷⁵. Hypothetically, this amounts to a sophisticated form of “land grab” that may easily be facilitated by the scenario in Box 1. Interviews with all the five Chinese companies revealed that the Chinese investors preferred transparent land deals and quite often exercised safeguards such as crosschecking with the District Land Boards to ascertain whether the land legally belonged to the land owner.

Nevertheless, evidence in Box 2 provides a clue that actually such cases of forced appropriation of land – by the Ugandan elites with land titles and the local leaders – may already have occurred in Uganda. Our findings show that up to about 80 percent of the companies in our study sample acquired land either directly from a local leader (Member of Parliament, District Council leader, or Local Council One Chairperson) or from a businessman with close ties with a local leader.

⁷⁵ See Mwesigwa, Alon (2015) “Ugandan farmers take on palm oil giants over land grab claims.” *The Guardian*, March 3, 2015. Accessible at: <http://www.theguardian.com/global-development/2015/mar/03/ugandan-farmers-take-on-palm-oil-giants-over-land-grab-claims>

Our interviews with several Chinese agriculture investors revealed their strong sensitivity to land compensation issues as a potential business risk factor. Therefore most of them emphasised that they left all the compensation issues to the Ugandan land title holder and preferred “*not to be entangled in the complexity*” and would only complete the full payment for the land once they have confirmed that all land compensation issues were dealt with. This issue—leaving land compensation to the Ugandan land title holder to deal with—begs the question about who ultimately is legally held responsible for ensuring fair and transparent dealing with the evicted squatters. Uganda’s Land Act (2008) provides for compensation of squatters by the registered land owners.⁷⁶ However, not all land in Uganda is legally registered / titled. All persons, including foreign investors, intending to purchase land whether titled or not are required to exercise due diligence to establish whether there are encumbrances on the land.⁷⁷

Box 2: One Community Member’s Voice on Deals between Ugandan Elites and Chinese Investors

A Chinese company, which engages in rice growing, acquired 200 acres of land in 2014 from a Kampala-based businessman. The land had squatters who were engaging in small scale agriculture. “*We have lived in this village for 7 years,*” said a 34 year old man residing in a makeshift hut next to the Chinese owned rice farm. “*We engage in farming – growing watermelons, tomatoes, sweet potatoes and cassava that we sell in Kampala (Nakasero market).*” Using the earnings from farming, the gentleman bought a plot of land in Lukaya town (located about 105kms South West of Kampala City on Masaka road). He was also able to send his children to school. This was before the Chinese investors came. “*Everything changed when [one Kampala-based businessman] and our Local Council Chairperson of the village brought these Chinese investors. Our Local Council Chairperson and the Kampala-based businessman evicted us and sold the land to the Chinese investors. The Chinese investors may be good because they employ many people but they are also bad because we were evicted to give way for their investment. The Kampala businessman even destroyed our crops before they matured. He compensated some people to vacate the land, while some of us were not compensated. He just forced us to leave.*” he narrated.

Source: Interview Responses

⁷⁶ Republic of Uganda (1998). The Land Act.

⁷⁷ Republic of Uganda (2013). The Uganda Land Policy.

4.1.3 Employment Dynamics in Chinese Investments

Our findings indicate that although the Chinese investors in Uganda’s agriculture sector seldom exhibit much interest in government, the Government of Uganda (GoU), on the other hand, demonstrates enthusiasm in the new dawn. GoU’s biggest interest is employment. It has actively courted Chinese investors in the agriculture sector as a means of commercialising the sector that provides livelihood to over 80 percent of the population. Given the rapid growth of the Ugandan population—more than three-quarters of the population are below the age of 30 years—there is rising pressure to create jobs for the youthful yet unskilled cohort of people. The GoU seems to follow the guidance by the World Bank that creating jobs in agriculture would harvest the “youth dividend”.⁷⁸

Secondly, Uganda has a large rural population (82 percent, according to the 2014 Population and Housing Census) and it is projected that the rural population will continue to grow—a consequence of today’s spatial distribution and strong birth rates which are likely to continue until after 2050.⁷⁹ Thus, the advent of Chinese investors into Uganda’s rural economy need also be analysed in terms of the number of jobs created and the employment composition (Ugandan vs. Chinese workers) by these companies.

Table 3: Employment Characteristics of Chinese Companies

Company ID	Planned Employment	No. Currently Employed	No. of Ugandan Employees	No. of Chinese
1	1,000	300	296	4
2	N/A	N/A	N/A	N/A
3	200	20	17	3
4	200	50	43	3
5	150	40	38	2

Source: Interview Responses

Chinese companies have often been accused of importing large numbers of Chinese workers, taking away jobs that local workers could also do.⁸⁰ Our interview findings strongly dispute this accusation. About 97 percent of the workforce in the companies interviewed was Ugandan (Table 3). However, much of the labour force working in these companies were unskilled or low skilled labourers, doing odd jobs including chasing birds from rice gardens, cooking, weeding and manual digging using hand hoes.

⁷⁸ World Bank (2013), “Agriculture as a Sector of Opportunity for Young People in Africa.” *Policy Research Working Paper 6473*.

⁷⁹ World bank (2014), “Africa’s Employment Challenge and the Role of Agriculture: Is China a Player? A Review of Chinese Initiatives in Rural Africa” *DPRU Policy Brief No. PB 14/38*.

⁸⁰ Supra note 32.

These Ugandan labourers work without contracts, and under poor working conditions—without protective gear such as the knee length gumboots, hats, and gloves to minimise the effects of exposure risks. Rice growing is associated with some occupational injuries and illnesses. The workers narrated during interviews, how they encounter dangers such as snake bites and exposure to dangerous pesticides without any protective gear quite often getting fungal infections on their feet and hands.

The companies employ Ugandan managers to ease communication with the labourers. They paid their workers a daily wage in the range of UGX 6,000 (USD 1.8) and UGX 10,000 (USD 3). Most of the labourers were happy with the pay. “They pay us well,” one female labourer working as a cook in one company and earning UGX.7,000 (USD 2) per day said with a visibly happy face! Ugandan managers earned between UGX 500,000 (USD 150) and UGX 1,000,000 (USD 300) per month. The wages were typically paid fortnightly, an arrangement that the Ugandan employees were very comfortable with.

4.1.4 What are the Underlying Social and Environmental Safeguards in Chinese Investments in Uganda’s Agriculture Sector?

One of the main concerns and foremost accusations against Chinese companies has been violation of environmental regulations.⁸¹ During visits to the farms of the various companies, we observed a number of practices that would support the pessimistic view of Chinese investors and their ‘wanting’ environmental record. Box 3 summarises our observations as far as socio-ecological and environmental management in and around the Chinese farms in Uganda is concerned.

81 See Buckley (2013); Yimin (2013); and Maiyo (2014)

Box 3: Interview Excerpts on Environmental Safeguards by Chinese Investors

Company ID	Interview Excerpts
1	<p>At the beginning, the company did not know that it needed clearance from the National Environment Management Authority (NEMA). The company was licensed by the respective District Local Government (DLG) without carrying out an Environmental Impact Assessment (EIA). After one year of operation, NEMA suspended its activities for 3 months, accusing the company of polluting a fresh water lake with fertilizers and chemicals. The EIA was subsequently conducted with no major recommendations made, and the investment was approved. The company continued to use the fertilizers and chemicals although NEMA prohibits the use of the same at the shores of water bodies. The company also uses and sells wastes from rice processing as animal feeds and fuel.</p>
2	<p>The company deals in organic tea; thus there is no fertilizer or chemical use. No site visit was conducted as the project is still in its early stage, thus could not observe environmental impacts.</p>
3	<p>The EIA was conducted on the land and the report was shared with NEMA in December, 2015. NEMA did not provide feedback on the EIA report until April 18, 2016, following a local newspaper report that the project had been stopped because of lack of NEMA permit. The NEMA website claims it takes 30 days to get feedback from the time of submitting the report. In its feedback, NEMA required the company to maintain a protection belt of 100m from the nearby seasonal river; put in place non-smoking signs and danger signs to protect the labourers. The company reported having followed these recommendations. Guidelines show that NEMA and the DLG officials conduct annual audits to cross check if the recommendations from the EIA are implemented. This, however, is seldom done in general context, though we could not ascertain whether this was done for this particular project.</p>

Company ID	Interview Excerpts
4	The respective DLG informed the Chinese investor that since the land he was using is a wetland, it could only be used for planting crops and not for establishing a factory. No EIA was conducted on the land. The investor is not aware of such assessments. The farm is located on the shores of a fresh water lake. The investor dug a channel to draw water from the lake into his farm. He uses the wastes from the rice processing as animal feeds for his domestic animals including pigs and chicken and disposes rice wastes in the water channel “for the fish to eat.”
5	The investors obtained a certificate from NEMA without any hurdles. Recommendations from NEMA included: no use of pesticides on the farm. The company complied; it is controlling pests organically by rearing birds (ducks and chickens) which feed on the pests. Manure from the cows on the farm is used as fertilizers. It is doubtful that these organic resources are enough to control pests for the 200 acre farm. The company also dug a channel to draw water from the neighboring fresh water lake to and from the farm.

Source: Interview findings

4.2 What are the Perceived Effects of the Chinese Agricultural Investments on the Environment?

Apart from the information contained in Box 3, during visits to the farms to conduct interviews with the Chinese investors, we observed a number of other important issues related to environmental management. These include the following:

4.2.1 Lake Water Use and its Effects

All the companies that are engaged in rice production grow irrigation rice. Water is drawn from the nearby water source, particularly fresh water lakes and rivers – hence their choice of setting up their farms at the lake shores or river banks. All the Chinese investments engaged in rice production were set up in wetlands neighboring fresh water lakes and rivers. Drainage trenches were dug on several sections of the farms to draw water from the lake/river into the gardens during dry seasons or to take the water from the rice gardens back into the lake/river during rainy seasons.

However, we also observed that the Water Use Efficiency (WUE)—defined as measures that reduce water use without affecting the benefits water provides⁸²—seems to be very low. An empirical study may be needed to ascertain the actual WUE by the rice growing Chinese companies around the shores of Lake Victoria and other water bodies in the country. It appeared to us that the investors' perception was that Uganda has abundant fresh water that it is renewable and inexhaustible. This could encourage them to use this resource in an inefficient manner.

Our observations support earlier research findings that communities and local government officials had accused the Chinese farms of practicing environmentally dangerous activities, such as digging of drainage trenches into the lakes and diversion of rivers, activities which would easily reduce the water volumes and have adverse effects on the livelihoods of the local communities.⁸³

4.2.2 Environmental Effects of Fertilizer Use

Some investors plying their activities near water bodies use fertilizers to maximise crop yields. They use both inorganic fertilizers and Farm Yard Manure (FYM) as well as crop residues. The inorganic fertilizers used are mainly nitrogen, phosphate, and potassium, which they purchase from local markets in Kampala (Container Village), with all their attendant quality issues. The main source of FYM is the livestock reared by investors at their farms. The FYM is applied to the field during the land preparation. Crop residues being used as fertilizer include mainly rice straw that is left in the field while harvesting the crops, as well as the rice husks obtained after processing the paddy rice. We observed that the application of FYM by the four investors engaged in rice growing was very limited due to inadequate availability.

We also observed that they normally apply fertilizers together with irrigation, which accelerates the rate of nutrients leaching into the groundwater and nearby water bodies. This might in the long run lead to contamination of the lakes and groundwater resources as well as other plants on the lake shores. Researchers contend that overuse and inappropriate method of use of inorganic fertilizers results into the aforementioned effects.⁸⁴ Industries and flower farms are some of the culprits of lake water pollution in Uganda.⁸⁵

⁸² See <https://www.nrdc.org/sites/default/files/ca-water-supply-solutions-ag-efficiency-IB.pdf>

⁸³ Supra note 28.

⁸⁴ Zhang, W.L., (1995), "Investigation of nitrate pollution in groundwater due to nitrogen fertilization in agriculture in northern China." *J. Plant Nutr. Fertilizer Sci.* 1, 80–87.

⁸⁵ See <http://www.scidev.net/global/pollution/feature/modern-strains-put-lake-victoria-in-critical-condition.html>. Accessed on July 8, 2016.

4.2.3 Pests and Diseases Management and its Effects

Our interview findings indicate that some of the Chinese investors use inorganic pesticides. They use knapsack sprayers to spray the pesticides. It was beyond the scope of this study to establish whether the pesticides were being used appropriately. Otherwise, pesticide misuse could have detrimental environmental effects. Unregulated use of fertilizers and pesticides could severely impinge upon workers' and the surrounding communities' health. The investors were aware that pesticides and inorganic fertilizers could contaminate soil and water resources. They were also aware that NEMA prohibits inappropriate application of fertilizers and chemicals near the shores of water bodies. Nevertheless, they went ahead and used them since enforcement of these guidelines and rules is weak.

According to the National Environment Regulations for wetlands, river banks and lake shores management (2000), a wetland resource use permit is a prerequisite for activities undertaken in wetlands including cultivation, commercial exploitation of wetland resources, drainage, fish farming and other activities that are commercial in nature. Inquiries at NEMA however revealed that some of the farms operate in wetlands, at times for as long as three years, without the mandatory wetland resource use permit. It was not possible to obtain more information on the farms that had defaulted on the wetland resource use permit. The permit is often issued when an Environmental Impact Assessment (EIA) for the planned activities of the project such as rice growing, maize farming, maize milling, factories, and other auxiliary activities has been carried out. As the anecdotal evidence in Box 3 shows, some of companies had not done the EIA yet their farms were operating.

Information from NEMA shows that enforcement of environmental rules is weak due to lack of financial and human resources for effective monitoring and supervision as well as political interference from powerful politicians. Some of the Chinese farms were commissioned by the President of Uganda, while others were hosted by the Vice President or powerful Cabinet Ministers. This tended to scare away the public regulators. Although NEMA attributes the environmental governance failures to institutional weaknesses at the local government level, the same may easily be extended to NEMA itself.

4.3 Management and Disposal of Wood by Chinese Investors

Since most of companies interviewed were engaged in rice production and processing, procurement, management and disposal of wood is barely carried out. Majority of the Chinese companies interviewed cut down some trees during the process of clearing land for agricultural production. None of the Chinese companies interviewed was located in a forested area.

One investor whose company is engaged in large scale rice processing, claims that they use only rice husks (about one third) as fuel in the factory. They possess large quantities of the rice husks, so much so that they even have the luxury of selling about two thirds of the wastes to the neighbouring communities. Their clients use the shells as fuel in brick making. The locals consider the rice husks as a cheaper source of fuel than wood. They buy each ton of rice husks at UGX 100,000 (USD 30) while a ton of wood would cost them UGX 250,000 (USD 75).

Some of the Chinese companies that are engaged in rice production outsource the rice processing services, some transporting the paddy rice for over 200km, in the search of the “good quality processing facilities”. Apparently the best rice processing facility in Uganda is located in Jinja town (about 80kms in the East of Kampala City). The facility is owned by a Ugandan entrepreneur. These Chinese companies feel that their rice production capacity is still low, and that it is not economically viable to establish their own rice processing facilities.

4.4 Effects of the Chinese Agricultural Investments on Local Livelihoods in Uganda

Our findings suggest that the advent of Chinese investors in Uganda’s agriculture will, and in some cases has already brought mixed effects on local livelihoods. Some effects are positive, while others are negative. Below are some of these effects, starting with the positive ones:

4.4.1 Employment

This is one of the key contributions of the Chinese investment in the agriculture sector. Information from the UIA shows that a total of 2,908 jobs will be created by the 22 Chinese business activities so far licensed to invest in the agriculture sector. However, there are questions as to the sustainability of the created jobs. In several companies we interviewed, the number of jobs created was far smaller than the planned employment and were expected to decrease over time since some of the Chinese farms intend to mechanise their operations in the near future. There is also the issue of the quality of the created employment. In most of the farms we visited, a substantial number of the reported employees were doing odd jobs such as scaring birds from rice fields, cooking for the investors, etc. As earlier mentioned, an employee in one of the companies expressed a high level of satisfaction with the work and its benefits. While the level of satisfaction may depend on available livelihood alternatives, it was beyond the scope of this study to carry out a systematic analysis across many company employees.

4.4.2 Technology transfer

The Chinese investors are helping communities to adopt improved technologies of modern farming. They have introduced High Yielding Varieties (HYVs) in the villages. For example, one company has partnered with the National Agricultural Research Organization to jointly breed and publicise up to 12 hybrid rice varieties. Apparently these Chinese hybrid varieties yield up to 6 tons of rice per acre while the Ugandan rice varieties yield up to 2 - 3 tons per acre. One of the Chinese companies has set up demonstration plots within its industrial park, to train the Ugandan out-growers in the modern farming practices. Another Chinese company is working with organised farmers' associations by providing the local farmers with inputs (HYVs of seed, fertilizers, and chemicals) on credit. All the Chinese companies interviewed had imported some agricultural equipment such as tractors and agro-processing machines from China.

Uganda's National Development Plan states that Uganda strives to develop its agriculture sector through commercialization of agriculture to increase production and productivity along the value chains. Technology transfer is, therefore, an option to increasing Uganda's agricultural production and productivity.

4.4.3 Positive social externalities to local communities

The local communities hosting the farms of Chinese investors are benefiting from a number of free services that accrue to them by virtue of residing near the farms. For example, in some of the areas where the farms are located, water for production and domestic use is being provided free of charge by the farms. The farms have dug drainage channels from the hitherto inaccessible water bodies to draw water that is being used by the surrounding communities. The farms have also invested in production of poultry products, vegetables, fish, rice etc. which would improve the quality of life of many low-income Ugandans through the provision of better nutrition.

However, while the Chinese investments in agriculture have brought the abovementioned positive effects on the local population, there are a number of perceived negative effects on local livelihoods.

4.4.4 Increased rivalry over farmland

The arrival of Chinese investors in Uganda's agriculture has increased rivalry over farmland, at least in the sample areas. Although the sizes of the land the investors have acquired are not as large as what the media headlines suggest, acquisition of agricultural land leases by the Chinese investors has left cohorts of local communities—those who used to engage in smallholder farming—landless. The local farmers seem to have little or no protection at all since their

leaders are in most cases the land sellers or brokers for the Chinese investors. One study suggests that foreign investors in general target countries with weak land tenure security, but at the same time, offer relatively high levels of investor protection.⁸⁶ Uganda seems a perfect fit in this case although the complex land laws are continuously quoted by Chinese investors as one of the greatest perceived investment risks.⁸⁷ It was clear from the interview findings that the Chinese investors were not very familiar with Uganda's land laws and found them very confusing.

As mentioned before, Uganda's Land Act (1998) obliges the registered land owner to compensate any squatters on the land but interview findings showed that the practice was such that both land owners and Chinese investors received their fair share of compensating squatters on the land.

4.4.5 Depletion of irrigable farmland

All the Chinese companies interviewed were concentrated in the irrigable areas of lake shores and river banks. They tend to target cropland where the yield gap is relatively large, and where additional inputs (water, fertilizers, seeds, infrastructure and know-how) may create greater yields. Another observation is that the lands where the Chinese investors opened up farms are located near major roads and markets. While the Chinese investors reported that the land was previously idle land without any farming activities, the land could have been idle due to lack of technology and skills to effectively utilise land in flooded areas.

4.4.6 Crowding out smallholder farmers and processors

Agriculture provides livelihood to over 80 percent of Uganda's population. The advent of foreign investors in this sector, and in particular the Chinese investors, therefore, is likely to create more benefits for the investors who are large-scale farmers and/or processors unlike the smallholder farmers in the villages where the farms are set up. The Chinese investors, by virtue of their large scale operations and use of high yielding varieties, are enjoying economies of scale which enables them to sell their products at relatively lower prices than what the small scale local farmers/processors would charge. For example, a kilogram of fine unbranded rice that is sold at UGX 3,500 by a Ugandan processor went for UGX 2,500 at one of the Chinese companies interviewed. Customers buy the rice directly from the farm's shop. The Chinese investor is a producer, processor, and seller of own agricultural products, which in most cases are not branded. Although the low prices of rice charged by Chinese investors will contribute to improving Uganda's food security, this might also lead to the loss of incomes and livelihoods for the rural people/small scale Ugandan businesses engaged in similar activities.

⁸⁶ FAO (2014), "Impacts of Foreign Agricultural Investment on Developing Countries: Evidence from Case Studies." Food and Agriculture Organization of the United Nations, Rome 2014.

⁸⁷ Supra note 63.

4.5 Policy Needs of Chinese Investors Engaged in the Agriculture Sector

The Uganda Investment Authority (UIA) is Uganda's one stop centre for investment-related information, advice and assistance. Majority of the Chinese companies interviewed had not interacted with the UIA. The Chinese companies that had interacted with the UIA claimed that the investment-related information and support they had received was lacking.

While majority of the Chinese companies were operating without government support with some of them unsure whether government could provide any useful advice that they did not already know, some of the Chinese companies interviewed were interested in understanding better, a range of Ugandan policies, laws and guidelines. These included tax policies; guidelines and certification standards for export of agricultural products.

Some of the Chinese companies had already exported some agricultural products to as far as China even when they were not aware of the export requirements for the agricultural products. This further demonstrates that some Chinese companies are operating smoothly without policy support from the Government.

4.6 What Differences and Similarities Exist Between Chinese Investments and Non-Chinese Investments in the Agriculture Sector?

To effectively appraise the Chinese investments in Uganda's agriculture sector, we carried out a *mini* comparative study with other non-Chinese agricultural investments in the country. One particular company, Agilis Partners, was chosen to serve the purpose.

A privately owned agricultural commodities company founded in January 2013, Agilis Partners is owned by three American brothers; Benjamin Prinz, Philipp Prinz and Eduardo Browne. The company runs two holdings, the Asili Farms and the Joseph Initiative. The former engages in commercial farming as well as supplying nucleus and smallholder farmers with agricultural inputs. Joseph Initiative deals in merchandising of the grain. In other words, the Asili Farms is the farming arm of Agilis Partners whose products are traded by its other arm, the Joseph Initiative.

They own large farms of grain in Kasese and Masindi districts. On top of that, they have developed a 50,000 member out-growers' scheme that supplements their grain production capacity. Their model is premised on building and intensifying an agricultural value chain that includes smallholder farmers deep in the villages of Uganda so that "we can grow together, make money together, and preserve our environment together."

They set up twenty village-level grain procurement and input distribution centres called “Joseph Centres”. They have created a network of village agents whom they train to work with the local farmers to raise productivity and consolidate supply. They also operate large-scale grain processing and storage facilities in Masindi, Kasese, and Mubende. At their processing centres they provide local farmers with services such as bulking, drying, cleaning, bagging, storage, warehousing, and distribution. They also coordinate various established agro-cooperatives such as Bunyoro Growers Union and Kwagro Ltd.

Compared with the Chinese companies that we interviewed, Agilis Partner’s model seems to be better integrated with the agricultural rural community development aspirations of Ugandan Government. For example, they have built over one hundred rural input retail and farmer resource hubs, fifty demonstration plots, and also trained over one hundred agricultural extension service providers. They employ over 200 input sales representatives and village agents.

They also link smallholder farmers in the network with research organizations, financial service providers, input suppliers, as well as equipment distributors. They also offer the local farmers with free services such as variety testing, soil testing and analysis, and farming policy advocacy. All these investments are intended to empower the local farmers to raise their productivity so that they can supply the company with more grain. It is a win-win formula.

Agilis Partners manages a farm in Uganda of about 2500 hectares.⁸⁸ It was not possible to obtain information on the terms under which the land was acquired and to establish whether there were any squatters on the land and how they were compensated. It is useful to note, however, that not many firms – both local and foreign – achieve the level of operation, in terms of agricultural rural development, like that of Agilis partners. The Ugandan government should further strengthen its efforts to enable Ugandan and foreign investors – including Chinese – to aspire to that model and provide relevant policy incentives.

⁸⁸ See <https://stockbridge.cns.umass.edu/career-opportunity/agilis-partners-limited-farm-manager>. Accessed on July 7, 2016.

5.0 Conclusions and Recommendations

We have examined some of on-the-ground facts concerning the Chinese investments in Uganda's agriculture. We have seen that the Chinese investment in Uganda's agriculture has both positive and negative socio-economic benefits to the local communities. More importantly, we have seen that the investment projects have some perceived environmental effects on local livelihoods. However, such negative effects may be shared by other local and foreign investors and can be minimised and/or the investment projects can be made more beneficial to the local communities if proper measures were taken. In this section, we present some of the recommendations to the government, the investors and the civil society in general; which they can adopt to protect the interests of local communities. The recommendations can also be used by other policy makers and can contribute to public discussions on the subject matter.

5.1 Recommendations to the Government

The government has the obligation to protect the interests of local communities while also promoting its development policies. True, for Uganda to transform her economy, it will require a strong, well-functioning agriculture sector. It is equally agreeable that China's experience in agricultural development is quite impressive and its lessons are relevant to countries such as Uganda. However, development must not be carried out with complete disregard to local communities.

This study has found out that by and large Ugandan government's oversight role over foreign agriculture investment is poor, and at worst totally missing. Everything—land acquisition, proper environment management, workers' rights, and local community livelihoods—seems to be dependent upon the investors' own goodwill! Government is visibly absent in the private investment projects we interviewed. It is only seen when a powerful politician is invited by the investor to officiate at the launch of his farm's activities, sometimes even when those activities or the company itself have flouted the laws and investment guidelines. In this regard, the following are recommended:

Government should uphold the rights of local communities over land by extending legal protection for such land. Some of the land being leased out by local elites to Chinese investors was communal land providing essential livelihoods—farming, pasture for animals, landing sites for small-scale fishermen and sport fishermen etc. The government should secure access and user rights to smallholder farmers on such land. Importantly, the government needs to come up with a plan urgently to manage unscrupulous local leaders

and business people who could be grabbing communal land and leasing it to investors. Such a central role of the local elites in our research echoes a well-established finding in the broader Africa's "land-grabbing" literature.⁸⁹ Both the government and the local elites should be accountable to local communities and Chinese investors should exercise due diligence in terms of their potential impacts on local communities – regardless of any assertion from the Ugandan land owners.

Much as Uganda is a liberal economy, large scale agricultural projects should be licensed only after full consultation with local communities. This will give the communities the opportunity to assess how they will benefit and/or be affected by the farms and to be prepared for such outcomes. In other words, the approval of large-scale agricultural investments should be based on a holistic economic appraisal as opposed on the prevalent approach based on financial appraisal alone. Expected economic benefits and costs of the proposed investments must be known to the local communities.

If the proposed agricultural investment is deemed to have negative effects on local communities but should go ahead anyway, then the local people must be compensated properly. For instance, those who had been growing crops, grazing animals, fetching water, collecting grasses or firewood on the land should be given an alternative land. Large scale agricultural projects not only dispossess local communities of the important assets for their livelihoods, we have also seen that they can result in eviction of local people.

There is need for strong regulatory enforcement of EIAs. In this regard, the government should strengthen its institutional capacity to monitor and regulate the activities of foreign investors. Institutional capacity building should be made in all regions of the country where these agricultural investment activities are being carried out. NEMA and district local government must enforce the environmental management regulations. Government should pro-actively educate Chinese and other investors about key regulations, standards, laws and recommended investment practices relating to their investments.

The current unregulated channel irrigation practices deteriorate and deplete the lake water resources. The investors understandably seem oblivious of and unconcerned about the environmental effects of their poor water-use practices and low overall water-use efficiencies – practices that are detrimental to the environment. It is government's responsibility to ensure that these companies comply with the regulations and guidelines.

⁸⁹ Cotula L. (2013), *The Great African Land-grabs? Agricultural investment and the global food system: African arguments*, Zed Books. London & New York.

Increased use of both inorganic fertilizers over the years will contaminate the nearby lakes and leads to excessive nitrate levels in crops, thus making this practice environmentally unsound. Strict regulation and supervision by NEMA and other local government environmental entities such as District Environment Offices will be needed to ensure balanced and integrated use of fertilizers together with organic fertilizers as well as other agro-chemicals. Use of pesticides and their improper handling by unprotected workers might induce serious environmental and human health hazards in the long run.

5.2 Recommendations to the Chinese Investors

As found out in this study, one of the local community members where a Chinese agriculture investment was set up was deprived of his livelihood from the land now leased to the investors. Some of the households were compensated while his was not. Investors have the obligation to ensure that all the affected households are compensated by the land owner. This will ensure sustainability of their investments and also eliminate any possible form of hostility that may result from dissatisfaction, some of which we encountered during our field visits.

Although most of the Chinese investments in agriculture are still at their early stages, and they are already making some contribution to the local food security by selling their produce in the local market, and at lower prices, all of the companies we interviewed except one, were planning to export their products in the near future once they become fully operational. They should ensure that a substantial percentage of their output continues to be sold locally to ensure food security.

The investors may also consider providing food aid for the needy in the communities where these farms operate. In future the investors may also set up funds to help local people for social purposes such as education, medical or other special needs.

All foreign companies should emulate one investor who is supporting the local people by providing seeds, fertilizers, pesticides and technical advice. They should also link the local farmers in the value chains of their companies.

It is the responsibility of the investments to undertake measures to protect the environment, soil and water resources through sustainable farming. Although government and its agencies are tasked to supervise and monitor the activities of the investors, the ultimate responsibility lies to the resource users. The companies must ensure that they comply with the environmental regulations and guidelines even in the absence of the regulators. In any case sustainable use of natural resources is self-rewarding.

5.3 Recommendations to Civil Society Organisations

The role of civil society organisations is well known – helping local voices, particularly the local communities (often the voiceless) to be heard so that the desired attention is given to them. In this regard, after obtaining accurate understanding of the situation of each investment project, they should help put pressure on companies – local, Chinese and other foreign investors – their respective home authorities, as well as Ugandan government to ensure that these investments are carried out sustainably.

For example, civil society organisations should conduct a robust study of the likely impacts of increased irrigation rice farming around the shores of Uganda's main water bodies and make appropriate recommendations.

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ISBN: 97 8997 034 0477



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