academicJournals

Vol. 11(8), pp. 413-425, August 2017
DOI: 10.5897/AJEST2016.2160
Article Number: 2170B2365189
ISSN 1996-0786

http://www.academicjournals.org/AJEST

International Journal of Biodiversity and Conservation

Review

Evaluating the environmental law and energy policy dimensions of land-grabbing

Semie Memuna Sama

University of Ottawa, Ottawa, Canada.

Received 29 June, 2016; Accepted 11 June, 2017

This article seeks to investigate whether concern for food security and investment liberalization are the principle drivers of land-grabbing in Africa. The investigation demonstrates that, in addition to food security concern, climate change and energy security considerations have been key catalysts arousing hunger for farmland, forests, and fisheries resources in Africa. In particular, certain provisions of the *United Nations Framework Convention on Climate Change, the Convention on Biological Diversity*, and Directive 2009/28/EC of the European Parliament have rendered tree planting, agro-biofuel cultivation, and forest conservation attractive investments in Tanzania and Uganda. This finding challenges the prevailing discourse that links land-grabbing, solely, to global demand for food and the liberalization of investment. The recommendation from this outcome is that African governments must not always embrace reforestation and forest conservation projects as technologies to fight climate change and protect biological diversity, given their potential to undermine the rights and opportunities of local people to meet their basic human needs. The governments of Tanzania and Uganda should rather embark on legislative and policy measures to protect the rights of indigenous peoples and local community members, while striving to combat climate change and achieve environmental sustainability.

Key words: Land-grabbing, environmental laws, energy policies, Tanzania, Uganda.

INTRODUCTION

Recent years have seen the creation of a fertile environment for agricultural corporations and some environmental groups to acquire millions of hectares of lands (including water, pasture, fisheries, and forests resources), through numerous mechanisms and agendas. For example, Oxfam International stated that since 2001 “227 million hectares of land, an area the size of Western Europe, has been sold or leased,” mostly to international investors (Zagema, 2011). These acquisitions are commonly termed “land-grabbing” because they involve “taking possession of and/ controlling a scale of land [and forest resources] for commercial and industrial agricultural production that is disproportionate in size in comparison to the average land holding in the region” (Odeny et al., 2010). Large- scale commercial land transactions have been criticized because they frequently

E-mail: semie_memuna@yahoo.com.

lead to violation of globally recognized human rights, particularly the rights to food, water, housing, free, prior, and informed consent, as well as the principle of self-determination of local peoples (Cotula et al., 2008; International Land Coalition, 2011; De Schutter, 2011; Sama 2016). Among others, former UN Special Rapporteur on the right to food, Oliveier De Schutter, reported that most, if not all, of these dealings result in the pervasive devastation of ecosystems and natural resources that are crucial for societal well-being, with accompanying cultural, economic, and social destruction, including local food insecurity and landlessness (De Schutter, 2011, Shiva, 2014; Peebles, 2014). If subsistence farmers continue to lose the basis of their existence (farmland) to agricultural corporations, realizing the UN goal to leave no one behind by 2030 may be difficult (UNDRIP, 2007).

It is true that the food price crisis of 2008 and demand to grow more food and animal feed, and to liberalize trade and investment have pushed foreign investors and rich governments of food-importing and land-scarce countries to invest in plantation agriculture abroad (Akram-Lodhi, 2015; Murphy, 2013; Daniel and Mittal, 2009). Daniel reported that reinvesting in agriculture in countries with crop-producing potential now seems to be the strategy in Gulf States to improve their food security and reduce their rising food import bills (Daniel, 2011). Notwithstanding, this article seeks to clarify that concerns for food, feed, and financial security are not the only factors arousing hunger for land, forests, and fisheries resources, and hence promoting land-grabbing in developing countries. The author argues that the phenomenon of land-grabbing has been promoted, greatly, by conservation projects and climate resilience and low greenhouse gas emissions developments; this is what this article sets to draw attention to. So, this paper will highlight the role of law and policy in land-grabbing in developing countries, directly through some environmental laws and energy policies which have been creating a fertile environment for the conversion of farmland and forest resources into a new kind of global commons**.** The focus is on Africa, as it is the major recipient of foreign agricultural investments. A World Bank study (Deininger and Byerlee, 2011) indicates that 70% of global land deals have happened in Africa, a continent where 60 to 70% of the population depends on land for their livelihoods, including access to food (FAO, 2006; Friends of the Earth, 2010; Hall, 2011; Hoffmann, 2001). Specifically, six of the top 10 countries targeted by investors for agribusiness are in Africa; by the end of 2013, total large-scale land deals documented in Africa stood at about 40 million hectares (Oram, 2014), roughly the land area of Switzerland. Furthermore, three-quarters of all global land acquisitions have occurred in Sub-Saharan Africa (Peebles, 2014).

Following the article discuss the key features of the *1992 Convention on Biological Diversity* (CBD), the the *1992 United Nations Framework Convention on Climate Change* (UNFCCC), and the Directive 2009/28/EC of the European Parliament (Directive, 2009/28/EC) that have been inciting tree and energy plantations, and forest conservation investments. Drawing on available data, subsequently the analysis of four case studies across two African countries was presented, in order to highlight different ways in which indigenous peoples and members of the local public can easily forfeit their land, forests, and fisheries resources; the source of their livelihood to investors of agro fuel, tree plantation, and forest conservation. The expectation is that this article will make a strong case for African governments to disregard any form of global propaganda to use the farmland of the poor and most vulnerable to mitigate climate change or promote energy security.

LAWS, POLICIES, AND AGRICULTURAL INVESTMENT FLOWS

The law is “a body of rules that governs the behavior of whomever, or whatever, is subject to it” (Muldoon et al., 2009). Seen from this perspective, law should lead us to the direction of justice, be it environmental, economic, or social, so that we may be protected from dangerous projects and programs. Yet, injustice may be supported by command and control forms of regulation. Environmental laws, for example, have received a lot of criticisms, given the ways they are implicated in injustice (Chertow and Esty, 1997; Cohen, 1997; Golub, 2000). Law has been used to justify, administer, and sanction Western conquest and plunder, resulting in massive global disparities” (Mattei and Nader, 2008). Thus, “…the rule of law frequently legalizes and legitimates the dispossession of the powerless’’ (Peluso and Lund, 2011). This part of the report unlocks the potential of environmental laws and energy policies to inspire foreign investments in farmland, fisheries and forest resources in Africa.

Environmental laws

Among others, African countries are members in international agreements that have provisions for large-scale investments in farmland, fisheries, and forest resources. The most relevant of those and the number of African nations that are members in them are (1) the 1992 *Convention on Biological Diversity* that was adopted at Nairobi on 22 May 1992 (Secretariat of the Convention on Biological Diversity 2005) and signed by 150 government leaders at the 1992 Rio Earth Summit (CBD) and (2) the *United Nations Framework Convention on Climate Change* (UNFCCC) that was adopted at the

United Nations Headquarters, New York on the 9 May 1992 (UNFCCC). At present, there are 197 parties of the UNFCCC, among which are African governments (UNFCCC Status of Ratification). These agreements are among the greatest happenings of the 1992 Rio Conference on Environment and Development. Like any other international agreement, signing and ratifying the CBD and UNFCCC signified State Parties` pledge to promote 'rationale/sustainable exploitation of their respective countries' diverse natural resources in their individual development efforts' (Fuo and Sama, 2012). African governments, therefore, have a responsibility to enhance sustainable (agricultural) development in the continent.

The convention on biological diversity

In ratifying the Convention on Biological diversity (CBD), African governments devoted themselves to undertake measures designed at achieving three objectives: (1) The conservation of biological diversity; (2) The sustainable use of its components; and (3) The equitable sharing of benefits arising out of the utilization of genetic resources (CBD, Article 1). Article 2 of the CBD defines sustainable use as "the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations." This definition encourages the use of genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity in a manner that does not prevent others from meeting their needs from such resources.

To translate these three objectives into mandatory obligations, Article 6 of the CBD calls on State Parties to develop national biodiversity strategies, action plans or programmes for the conservation and sustainable use of biodiversity (NBSAPs) (CBD, Article 6). By 2002, a decade after the CBD was opened for signature and at the sixth Conference of the Parties (COP 6), State Parties have developed their NBSAPs and further committed to homogenizing measures for conservation and sustainable use into their national plans, programmes and policies (Convention on Biological Diversity, COP 6 Decision VI/26). As of 4 April 2008, 160 of the 190 parties of the CBD have finalized NBSAPs (Convention on Biological Diversity and IUCN, 3). It should be emphasize that Article 8 of the CBD deals with in-situ conservation. In view of that, contracting parties are required to establish areas where special measures need to be taken to conserve biological diversity, protect natural habitats, rehabilitate and restore degraded ecosystems, and promote the recovery of threatened species (CBD).

Stallworthy (2008) notes "many aspects regarding conservation are premised upon what amounts to encouragement of appropriate protection measures". This suggests that the CBD has a critical function in the context of the conservation and sustainable use of plants and animals, and their habitats. As can be seen, parties to the CBD have committed to integrate goals and targets for conserving biodiversity and promoting their sustainable use into their national policies and plans. Particularly, African governments have supported tree planting programmes and projects (by a wide group of players in the continent) in their efforts to translate articles 6 and 8 of the CBD and hence ensure the sustainable use of land, forests, and fisheries resources.

The framework convention on climate change

The UNFCCC was targeted at mitigating greenhouse gas (GHG) emissions and promoting equity between developing and developed countries. In its Article 4(1) the UNFCCC states that all Parties shall "promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans ...'' (UNFCCC). The *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (Kyoto Protocol) that was enforced February 16th, 2005 translates the UNFCCC (Kyoto Protocol, 1998). It does so by setting emission reduction targets for industrialized nations and establishing three "flexible mechanisms" such as the Clean Development Mechanism (CDM), Emissions Trading Mechanism, and Joint Implementation Mechanism to enable implementation of the UNFCCC (Kyoto Protocol, 1998, Articles 6, 12, 17).

The CDM has two objectives. First, to assist developing countries in achieving sustainable development and in contributing to the objective of the UNFCCC, which is to reduce or prevent emissions of greenhouse gas emissions (GHG) (Kyoto Protocol, 1998, Article 12). Next, to assist Annex I countries in achieving compliance with their quantified emission limitation and reduction commitments (Kyoto Protocol, 1998, Article 12). Under article 10 of the Kyoto Protocol all Parties are mandated to formulate cost-effective programmes containing measures to improve the quality of local GHG emission factors, mitigate climate change, and facilitate adequate adaptation to climate change. According to the Kyoto Protocol, such strategies include measures relating to the energy, transport, agriculture, forestry, and waste management industries/sectors (Kyoto Protocol, 1998, Article 10).

Article 3(3) of the Kyoto Protocol upholds reforestation and afforestation activities as appropriate for the CDM.

During its 7th session that was held at Marrakesh from

29 October to 10 November 2001, the Conference of the Parties (COP) serving as the meeting of the Parties to the Kyoto Protocol adopted a draft decision on land use, land use change and forestry, and requested the Subsidiary Body for Scientific and Technological Advice to develop definitions and modalities for including afforestation and reforestation project activities under the CDM (UNFCCC Report of the Conference of the Parties on its Seventh Session). While reforestation refers to "direct human-induced conversion of non-forested land back to forested land on land which was subject to another land use as of December 31, 1989…" (Gillespie, 2003) afforestation is equated to "direct human induced conversion of non-forested land back to forested land that has not been covered by forest for at least 50 years" (Gillespie, 2003).

Participation under the CDM "may involve private and/or public entities, and is to be subject to whatever guidance that may be provided by the executive board" of the CDM (Kyoto Protocol, 1998; Article 12). This may entail a partnership of actors of diverse legal character. Specifically, it will involve parties, national and international organisations, agencies and other entities, as well as profit and non-profit private entities (Steward et al., 2000: 85). Forest projects such as foreign direct investment in tree plantation, and those which circumvent deforestation and conservation projects would appear therefore to be consistent with the UNFCCC parameter whereby initiatives dealing with climate change are cost-efficient, as some have argued that such investments may provide very low-cost emission credits (Brander, 2003).

Aside from the CDM, the United Nations Programme on reducing emissions from deforestation, reducing emissions from forest degradation, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks (REDD+) is another policy instrument that was developed by the COP and finally launched in 2010 at COP-16 (Voigt, 2016). It was formulated to act as a mechanism under the UNFCCC to encourage developing countries to scale up their efforts in implementing the UNFCCC and adapting to a changing climate. REDD+ aims to incentivize "mitigation action in developing countries and at capturing and channeling developed countries` financial resources to do so" (Voigt, 2016).

On the face of it, there is a close connection between the objectives and commitments of the CBD and those of the UNFCCC and its implementing instruments. This relationship indicates the significant role that afforestation (tree planting) and forest conservation play within these agreements, and provides a legal basis for incorporating tree planting and forest conservation under the CDM and REDD+. The crucial concept in this regard is "sink", which mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere" (UNFCCC, Article 1). The premise of the CDM is that emissions of GHG occurring in country A can be offset by processes, activities or mechanisms which sequester or removes a GHG in country or region B. Nonetheless, is this achievable without correspondingly promoting land-grabbing, the dispossession of local and indigenous peoples of lands and resources that their survival depends on? This is the question the study intends to answer subsequently.

Energy policies

It is said that global drive for biofuel production derived from two alliances, which quite frequently represent differing interests: "States that are concerned about their energy security and environmentalists who are concerned about environmental degradation due to carbon dioxide ($CO_{2)}$ emissions" (Skarstein, 2011). Europe does not have a policy that unambiguously indorses foreign agricultural investment. Yet, European Union agribusinesses and pioneers do retort to legislative incentives. Article 1 of the European Union Directive to promote the use of renewable sources (Directive 2009/28/EC) establishes a framework to promote energy from renewable sources, and sustainability criteria for bioliquids and biofuels. Biofuels are a type of fuel obtained from solid biomass (feedstock) through chemical or biological processing (Gasparatos et al., 2012).

Each Member State, under this directive, shall ensure that the "share of energy from renewable sources, in gross final consumption of energy in 2020 is at least its national overall target for the share of energy from renewable sources in that year" (Directive 2009/28/EC). This Directive defines "energy from renewable sources' to include, *inter alia*, biomass, the biodegradable fraction of products, waste residues from biological origin from agriculture, forestry and related industries" (Directive 2009/28/EC). Also, it obligates Member States to support schemes and "measures of cooperation between different Member States and with third countries for achieving their national overall targets" (Directive 2009/28/EC).

Unlike aggressive renewable energy percentages that European Union Member States have, the federal government of the United States has no clear targets for renewable energy generation. Yet, tackling energy-related GHG emissions, in particular, and climate change in general may constitute an essential priority. Renewable energy policies, such as the Renewable Portfolio Standards (RPS) (Government of Oregon) and Mandatory Green Power Options (MGPO) (Carley, 2009) require electric utilities providers to generate electricity from renewable sources and/or exchange renewable the UNFCCC defines as "any process, activity or energy credits or certificates, in order to meet RPS and MGPO. At the federal level, the US *Energy Independence and Security Act*, which was revised in 2007, calls for the

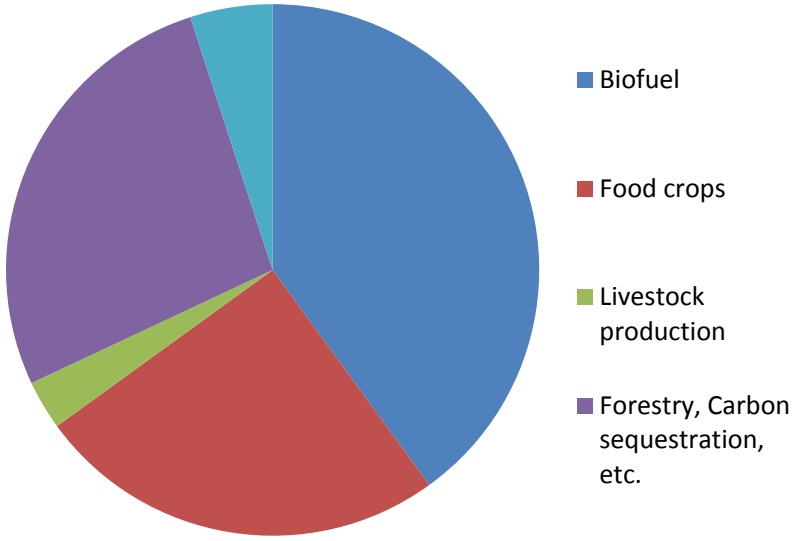

Figure 1. Global land acquisition by sector. Source: Adapted from Anseeuw et al. (2012).

use of 36 billion gallons of biofuels by 2022, up from about 7 billion gallons in 2007 (Earley and McKeown, 2009). In addition the European Union and the United States, an increasing number of countries in Africa, Asia, and Latin America are becoming significant manufacturers and installers of renewable energy technologies (REN21, 2015). There is therefore a general agreement among members of the international community that biofuels would improve energy security and help reduce global dependency on oil.

AFRICA AS CONTEXT: LAND GRABBING WITHIN AFRICA

The literature review shows that Africa has been the target of land-grabbing for biofuel cultivation. Statistics from a study conducted by the International Land Coalition indicates that 40% of global land deals are for the production of biofuels, 25% are for food crop production, 5% for other nonfood crops, and 3% for the production of livestock (Anseeuw et al., 2012). According to these figures which have been represented in Figure 1, 73% of land acquisitions in the world is for farm production, compared with 27% for carbon sequestration, forestry, and others. Compared with global land deals, land acquisition for biofuel production in the African continent is slightly higher. The study also shows that whereas 15% of land deals are for food crop production, 60% of the agreements are to produce biofuel (Anseeuw et al., 2012). Although it is unclear what is responsible for the remaining 15% of land agreements, the finding shows that the percentage of land acquired for biofuel production outweighs that for food. In other words, the 2007 to 2008 food price crises is a contributor, but not the primary driver, to the recent rush by foreign investors in Africa, considering the reasonably high percentage of farmland allocated for the production of biofuels.

Another study by the Center for International Forestry Research (CIFOR) indicates that biofuels-related activities accounted for 2/3 of the total land area acquired for plantation agriculture in Sub-Saharan Africa (Schoneveld, 2011, 15). In particular, 43% of the alienated land in sub-Saharan Africa is envisioned solely for biofuels, 25% is for export food production, 20% for both biofuels and export food, and approximately 9% is for tree plantations (Schoneveld, 2011:9). According to this study, the percentage of land acquired for biofuels production supersedes that for food, and thus, challenges the prevailing discourse that links land deals, solely, to food price crisis. CIFOR also claims that Western companies from the United Kingdom, Denmark, Sweden, Finland, France, and the United States have been at the forefront to accumulate land for agro-biofuel cultivation, especially, in Madagascar Ghana, Liberia, Mozambique, South Sudan and Zambia (Schoneveld, 2011:15). These countries jointly account for about 2/3 of the total land area acquired for the cultivation of biofuels (Schoneveld, 2011:15).

Biofuels in Tanzania

Within the past ten years, interest in biofuel development in Tanzania has been on the rise. The International Institute for Environment and Development (IIED)

Table 1. Land-grab for biofuel cultivation in Tanzania by 2009.

Investor	Crop	Hectare acquired
African Biofuel and Emission Reduction Co. TZ. Ltd	Croton megalocarpus	20,000
African Green Oils	Oil palm	860
BioShape	Jatropha	34,000
CMC Agriculture Bio-energy Tanzania	White sorghum	25,000
Donesta Ltd and Savannah Biofuels Ltd	Jatropha	2,000
FELISA	Oil palm	4,258
InfEnergy Co. Ltd	Oil palm	5,818
Kapunga Rice Project	Jatropha	50,000
Kikuletwa Farm	Jatropha and Aloe vera	400
Prokon BV	Jatropha	10,000
SEKAB BT	Sugarcane	22,500
Shanta Estates Ltd	Jatropha	14,500
Sun Biofuel	Jatropha	8,211
Tanzania Biodiesel Plant Ltd	Oil palm	16,000
Trinity Consultants/ Bioenergy TZ Ltd	Jatropha	16,000

Sources: Adapted from Sulle and Nelson (2009, 7).

Table 2. Land-grab for biofuel cultivation in Tanzania by 2013.

Company	Crops	Hectares
Safe Production Ltd	Maize	3,500
InfEnergy Co. Ltd	Oil palm	5,818
Africa Biofuel and Emission Reduction Co.'TZ. Ltd (Wilma Group)	Croton	20,000
AgriSol Energy LLC US	Maize	80,317
AgriSol Energy LLC US	Maize	219,800
Sithe Global Power, LLC	Oil palm	50,000
African Green Oils	Oil palm	30,000
CHAWAGWA	Jatropha	200
Donesta Ltd & Savannah Biofuels LTD	Jatropha	2,000
Eco Green Fuels Tanzania Ltd		500
RUBANA Farm	Jatropha	400
SAVANA Biofuel	Jatropha	5,000
Shanta Estates Ltd	Jatropha	14,500
Tanzania Biodiesel Plant Ltd	Oil'palm	16,000
Trinity Consultants/Bioenergy TZ'Ltd	Jatropha	16,000

Source: Adapted from Sulle and Nelson (2009).

reported in 2009 that over 4 million hectares of farmland have been requested for jatropha, sugarcane, and palm oil investments (Sulle and Nelson, 2009, 18). By the end of 2008 640,000 hectares of the 4 million hectares had been allocated (Sulle and Nelson, 2009). Table 1 is a summary of current biofuel investments in Tanzania, illustrating that by 2009, some 229,547 ha of land had been transferred to biofuel companies, including SEKAB BT, sun biofuels, among others, to grow biofuels such as sugarcane, oil palm, jatropha, and white sorghum. Sulle and Nelson (2009) also cited 15 biofuel investors that are currently operating maize, oil palm, jatropha and sorghum plantations in Tanzania as shown in Table 2. It goes without saying that these land deals will prevent local Tanzanians from farming, fishing, hunting, or harvesting of non-timber forest products on land that has been allocated to biofuel investors.

Sun Biofuels

Sun Biofuels, headquartered in London, is an agrofuel

company. In 2008, Sun Biofuels established a jatropha plantation on a land area estimated at 8,211 ha that were leased from 11 villages in the Kisarawe district in Dar es Salaam, Tanzania (Oakland Institute, 2012, 1). In return, Sun Biofuels promised financial compensation, water wells, 700 jobs, improved schools, health clinics and roads to the affected households (Oakland Institute 2012, 1). Studies have shown that biofuels farming could, indeed, provide different forms of benefits to the host communities and countries, including opportunities for rural development, the new export market for land-rich countries, and long-term energy security (Cotula et al., 2008). However, the case of the Sun Biofuels project was somehow different, as the project left lots of indigenous and local peoples in anguish as they became landless and hopeless about the future.

To begin with, the property allocated to Sun Biofuels, according to the Oakland Institute, was jointly held forest and bush land. The land in question accommodated the communities` social and economic activities, including grazing, charcoal production, and harvesting of timber, poles, firewood, wild food, fodder, and medicine (Oakland Institute, 2012, 4). These are additional activities that community members depended on to enhance their food and income security beyond subsistence farming. Statistically, up to 70% of the household income of some of the affected families came from the land in question (Oakland Institute, 2012, 4). It was obvious that, sooner or later, the establishment of the Sun Biofuels investment on land that the local populations historically had access to graze animals, cultivate crops, and engage in traditional practices would cause the villagers to lose access to these additional sources of income and traditional way of living.

The villagers were displaced, and their lives shattered, chiefly because Sun Biofuels, after grabbing their land, refused to fulfill its promises, including the pledge to compensate for lost wages. Having acquired about a quarter of the villagers' farmland, the Guardian newspaper wrote, Sun Biofuels was still unwilling to provide the affected villagers with (adequate) compensation. For example, one family received barely 13 million Tanzanian shillings (£4,835) for 670 ha of his farmland that was lost to Sun Biofuels (The Guardian, 2011). The promise to provide new classrooms, books, and materials to the affected communities was never appropriately honored. For those who agreed to become agricultural workers, their wages were dishearteningly little to compensate for the loss of income previously received from subsistence farming (The Guardian, 2011).

A few months after some of the displaced villagers rushed to take jobs at Sun Biofuel's plantation, the promised £42-a-month salary turned out to be a scam. While trying to inquire why the agreed wage did not materialize, Saidi Abasi (a community member) received this response from his employer (Sun Biofuels): "if you want to work, work. If you don't, get out" (The Guardian, 2011). As if the degrading situation of the employees was not enough, plantation workers were asked to spray pesticides without protective equipment (The Guardian, 2011), an act that is associated with severe health impacts according to the World Health Organization (Phung et al., 2012).

One of the plantation laborers claimed he was not paid the full severance pay due for his 18 months of service after his contract was terminated (The Guardian, 2011). Beside farmland, the establishment of the project led to an excessive loss of access to water and other non-timber forest resources such that the villagers started buying charcoal and water (Oakland Institute 2012, 4), resources which were generously accessible before the establishment of the project in the area plantation. Some of those affected by this investment see their predicament as "the return of colonialism" in the country (The Guardian, 2011).

The company initially announced that the investment would generate 1,000 to 4,000 jobs for each village participating in the project, paying USD 1,095/person/year (Habib-Mintz, 2010: 3985-3987). It, however, became evident, as the investment proceeded that the pledged wages could not be attained, perhaps because jatropha oil was not as profitable as initially projected (Romijn and Caniëls, 2011). In 2011 Sun Biofuels closed down its company in Tanzania due to economic concerns (Gasparatos et al., 2012, 33). The company's shares were bought by 30° East, which then lay off about 600 employees of Sun Biofuels, to mothball the project. At the time the Oakland Institute was conducting its research, 3D East had just 35 workers (Oakland Institute, 2012).

Considering all of the above, it could be said that overall the populations affected by the Sun Biofuels investment eventually became financially worse off. The media has also captured many other biofuel schemes in other parts of Africa that have been left in limbo. In Ghana, for illustration, profits generated through jatropha-related investments could not offset losses from other revenue sources in the affected communities (Schoneveld et al., 2011, 10). Most of these projects appear to have harmed the people they were supposed to help by causing them to lose their farmlands, supply of potable water, access to non-timber forest products, and the promised employment opportunities and social amenities. There are no signs that the plantations will be returned to the former users which is the affected communities.

SEKAB Bioenergy Tanzania Limited

SEKAB BioEnergy Tanzania Limited (SEKAB BT) was formed to engage in the production of bioethanol in Dar es Salaam, Tanzania (SEKAB BioEnergy (T) Limited 2008). It is important to mention here that SEKAB BT is a

subsidiary of Swedish Ethanol Chemistry AB (SEKAB). SEKAB belongs to four energy companies in Sweden (Skellefteå Kraft, OK, Örnsköldsvik Energi, and Umeå Energi (SEKAB BioEnergy (T) Limited 2008), and produces and distributes ethanol in large quantities. SEKAB represents 15% of the European Union ethanol market and 75% of the Scandinavian ethanol market, in addition to providing low blends, E85, ETBE, and bus fuels (SEKAB BioEnergy (T) Limited, 2008). Moreover, the majority of the ethanol fuel that will be produced in Tanzania by SEKAB BT will be exported (SEKAB BioEnergy (T) Limited, 2008).

There are viewpoints that the creation of SEKAB BT in Tanzania was facilitated by the governments of Tanzania and Sweden through the Swedish International Development Cooperation Agency, a government agency of the Swedish Ministry of Foreign Affairs (SIDA) (Hakiardhi, 2011). In particular, SEKAB BT was created to develop a sugar cane plantation and ethanol production plant in Razaba in Bagamoyo district, among other parts of Tanzania. SEKAB BT claims that the Razaba estate "will be the first in the development of BioEthanol/BioElectricity projects in Tanzania." Besides, the company estimated that, to achieve this objective, 15,000 ha at Razaba will be planted with sugar cane, with yields estimated at 90 to 110 tons/ha. In fact, the project kick-started in 2007 when the company established a seed cane nursery of 240 ha of the acquired land area (SEKAB BioEnergy (T) Limited, 2008).

SEKAB BT argues in its EIA report that the plantation represents a carbon sink and that a cessation of the project would mean increased atmospheric GHG emissions from transportation in the region (SEKAB BioEnergy (T) Limited, 2008). Two important factors that directly relate to the environmental impacts of the project need to be outlined are: First, the EIA report shows that the project will be a monoculture, involving the use of fertilizer. The Union of Consent Scientists has asserted that monoculture agriculture is highly reliant on synthetic fertilizers and pesticides, and can adversely impact the environment, economy, and health of subsistence communities (Union of Consent Scientists). Next, the SEKAB BT project will be irrigated with water from the Wami/Ruvu River basin, two of the main river basins that provide water to the local communities (SEKAB BioEnergy (T) Limited, 2008). Given its location, the probability that this project will likely impact water quantity and quality is high. It is plausible that rare and endemic species and sensitive habitats that are found in the forest thickets, including mangrove ecosystems that are present at the estuaries of these rivers, and that helps in sedimentation will be adversely impacted.

The District Game Officer at Bagamoyo, Tanzania, in addition to other researchers, has argued that biofuel projects (such as the one that SEKAB BT) is operating in the Bagamoyo area would, generally, encroach into reserve buffer zones, mangrove areas, and migration routes (Larsen, 2013). Other Tanzania officials have pointed to prevailing conflicts over water supply between local users, particularly in neighborhoods where agricultural production is more intense (Larsen 2013). The World Wide Fund for Nature (WWF) is also worried about the amount of irrigation water and the effects of farm run-off of this project on local water supplies and ecosystems (Larsen, 2013). However, SEKAB BT has disregarded these concerns, arguing that water is abundant at the site's downstream location and that the "use of water at this location … is a benefit as the water would anyway have drained to the ocean" (Larsen, 2013).

The company also claimed that adopting the no project alternative would mean "missing all the positive benefits such as increased revenue, better and quality services, introduction of a new cash crop and employment opportunities" (SEKAB BioEnergy (T) Limited, 2008). In 2009, the parent company, SEKAB was awarded the prestigious "Sustainable Bioethanol Award" in recognition of the company's effort to promote sustainable development in, among other countries, Tanzania. Nadim Chaudhry, Managing Director of Green Power Conferences, is of the viewpoint that the award was created "in order to promote the tangible benefits of biofuel and to encourage additional focus on sustainability criteria throughout the biofuel value chain" (Sustainability Award for SEKAB, 2009).

On the other hand, concerns about how SEKAB and its subsidiary, among other biofuel investors, valued land and livelihoods have been raised by many different analysts, including the Stockholm Environment Institute (SEI) and Action Aid. SEI reported that the project will contribute to loss of local land rights and access to farmland, as well as grounds for fishing, hunting, grazing, and collection of forest resources. Four particular points of concern to the affected villagers have been underlined. These are that (1) land valuations excepted the fact that the villagers might lose access to customary land upon which they rely for livelihood, (2) the valuation process undervalued significant fruit trees, among other resources on the land that provided additional income as well as food, (3) on-farm investments in, for example, soil and water conservation, were not fully considered, and (4) farmers were given land plots of smaller size and of lower quality during relocation (Larsen, 2013).

As indicated in the EIA report that was conducted for this project, Bagamoyo District had a total population of 228,967 in 2002 (SEKAB BioEnergy (T) Limited, 2008). The report also suggests that the project area, before the establishment of this project, was populated by farmers, hunters, traders, and fishers. These groups of people undoubtedly depended on the project area for grazing, farming, hunting, charcoal production, and collection of forest resources, some of which are of high medicinal value (SEKAB BioEnergy (T) Limited, 2008). Government

officials at the Rufiji Basin Development Authority have also reported that the "upper areas are characterized by high population densities and a hospitable climate and that land use is dominated by smallholder farming systems that produce mainly cassava, banana, cashew nut, maize, rice and pineapples." The middle part of the basin has typically been under pastoralist land use, although increasing competition for land has pushed ranchers to the bottom of the basin (Larsen, 2013).

The SEI report shows that farmers, about 600 families, who formerly worked on the Razaba farm while it was operational, have since continued to live there (Larsen, 2013). While analyzing the impacts of the SEKAB BT project, Action Aid noted that the project was likely to displace 185 households (approximately 350 to 500 people) living in the project impact area (Gama Makaani) in 2011 (Ross and McDiarmid 2015). The Tanzanian government has refused to explicitly recognize the customary rights held by the indigenous peoples and others affected by this project as mandated by international human rights law, arguing the land formally belongs to the government (Ross and McDiarmid, 2015). Because they have lived on the land and depended on the fruit trees planted on it by their ancestors for over half a century, the affected populations are entirely convinced that they are the rightful owners of the land that was allocated to this investor (Larsen 2013).

It is unfortunate that after EcoEnergy bought the shares of SEKAB BT in Tanzania (Larsen, 2013), the new company "came with warnings and posters saying that the locals were not allowed to do any agricultural activities in this area." On the one hand EcoEnergy acknowledged that the project involved 'involuntary' resettlement, and promised to provide financial and material compensation to each household that has been affected, physically and economically (Ross and McDiarmid, 2015). On the other hand, the affected villagers have complained about the quality of the compensation, including the land being offered and the absence of binding commitments from EcoEnergy (Ross and McDiarmid, 2015). It has also been reported that some of the 185 affected households in the company's concession have refused to accept resettlement and initiated a legal dispute with EcoEnergy over what they claim is their right to the land (Ross and McDiarmid, 2015).

It was expected that EcoEnergy would honor its predecessor's promises on social development such as the building of schools in the affected communities. It must have been difficult to hold the company accountable for these undertakings, given that some of them were disputable, given they were unwritten according to Action Aid report (Ross and McDiarmid, 2015). Enforcing an oral agreement may be challenging if there is no written document signed by the concerned populations to whom these pledges have been made and the company making the commitments. After its fact-finding mission in Tanzania, WWF-Sweden reported that the absence of knowledge among villagers suggests a "special responsibility for investors to ensure that local livelihood compensation and social development are adequately addressed" (Roberntz 2009:21). It is unfortunate that EcoEnergy, despite hopes to address the issues of the local people that it inherited from SEKAB, withdrew in 2010 due to complications and conflicts with the affected villagers (Larsen, 2013). At this point, it is doubtful whether the land will be returned to the villagers or will be resurrected.

Tree planting in Uganda

Like Tanzania and many other African countries, Uganda is experiencing an increasing number of large-scale land investments, mostly by private agricultural investors and wealthy nations who are mainly driven by, among different stimulus, the motive to establish tree plantations over thousands of hectares of croplands and forest reserves, with the objective of capturing emissions of carbon dioxide from the atmosphere and storing it, in return for carbon credits. The Ugandan Carbon Bureau (UCB), a firm created to advise and support carbon credit buyers, among others wanting a better understanding of climate change and the carbon emissions trading markets, says Uganda is one of Africa's "leaders in the fast developing carbon finance markets" (Ugandan Carbon Bureau). While selling trees for carbon credits is good for the environment, increasing evidence points to such investments as unable to deliver net benefits to indigenous peoples and local community members. Such investments can forbid local peoples to graze animals, hunt, fish, farm, burn charcoal, collect firewood, or cut trees in the project area. In some cases, primary forest is being replaced with secondary forests (Eucalyptus and pine plantations).

Green Resources (AS)

Green Resources (AS) is a Norwegian-owned carbon offset company that has acquired land and established tree plantations through its Ugandan subsidiary- Busoga Forestry Company, to generate timber products and carbon credits. This investor holds two licenses over 11,864 hectares of two forest reserves in Uganda (Bukaleba Forest Reserve in eastern Uganda in 1996 and the Kachung Forest Reserve in northern Uganda in 1999). The proposed project is a reforestation activity: the company plan is to reforest part of the acquired land for carbon sequestration and conserve the remainder of the property (Green Resources Busoga Forestry Company Ltd .

It should be mentioned that these plantations have been validated as an afforestation and reforestation projects under the Forest Stewardship Council (FSC), the Verified Carbon Standard (VCS) in 2012, the Climate Community and Biodiversity Standards (CCBS) in 2011, and the Clean Development Mechanism (CDM) (Green Resources, Busoga Forestry Company Ltd.). This is to say that Green Resources is committed to complying with these internationally recognized conventions, guidelines, and standards related to the company's line of businesses. Again, this project is a carbon and forest offset projects under the CDM, FSC, CCBS and VCS.

Green Resources aims to have an overall positive impact on the environment, surrounding communities, and stakeholders (Green Resource, Environmental and Social Impact Report, 2016). In particular, Green Resources seeks to ensure that its activities are environmentally sustainable, and believes its activities continue to have a positive environmental effect (Green Resource, Environmental and Social Impact Report, 2016). Accordingly, Green Resource, through its subsidiary, will, while striving to reduce its greenhouse gas emissions, evaluate the impacts of its operations on ecosystem, biodiversity and vulnerable communities. Put differently, the company is determined to promote a sustainable socio-economic development and environmental protection, in addition to obtaining an FSC certification. Green Resources is convinced that the project will sequester GHG emissions through the establishment and sustainable management of tree plantations in areas that meet conditions for CDM eligibility.

On its Project Idea Note of 2010 Green Resources states: "the project area is predominantly grassland with a few scattered primary trees with less than 10% of crown cover…" It further notes that the Bukaleba Central Forest Reserve is in a degrading state due to "forest offorest remnants which were cleared…through encroachment from local communities' (VCS, Bukaleba Forest Project). Encroachment activities would include cultivation, grazing, bushfires…and charcoal production". Green Resources also declared that "most of the plantation area underwent deforestation for conversion to subsistence agriculture which gave way to shrubland and grass after it was abandoned by community members. According to Green Resources, "the project activity will establish and manage exotic and indigenous reforestation on approximately 2,061 ha of degraded shrub and grassland" (VCS Project Database).

However, a 2014 report by the Oakland Institute (that was aimed to give voice to the affected villagers) shows that the concession was never abandoned as the company claims. According to the report, the affected villages "are traditionally dependent on shifting cultivation and small-scale subsistence farming and fishing for their livelihoods" (Oakland Institute, 2014:5). This information proposes that the affected populations were farmers and fishermen and were actively involved in non-mechanized farming, cultivating food and cash crops. In particular, the populations cultivated beans, pigeon peas, groundnuts, cassava, sweet potato, millet, maize, sorghum, rice, among other food and cash crops (Oakland Institute, 2014:5) that are critical for their survival, an indication that the land in question was not neglected as the company claims.

Framtiden (The Future in our hands - FIOH) is the largest Norwegian environmental organization that works for a fair distribution of the world's natural resources. This group reported in 2012 that "approximately 8000 farmers and fishermen were living inside the reserve, and thus inside the company's concession area," which is estimated at 9165 ha of land in the Mayuge district in Uganda (Framtiden i våre hender). Local leaders in the affected villages reported that "Hunger is a problem…There is no land where we can cultivate our crops…Some of us are employed [with the Green Resources] but getting through a whole month without food is difficult…" (Framtiden i våre hender). It has been difficult to meet their basic needs as, according to the villagers, Green Resources "harasses us. They don't want us to cultivate food. Some of us have a few animals, but they chase us and the animals away" (Framtiden i våre hender). In the area where the villagers "cultivated food they have removed the crops, we ask the company to let the remaining areas persist, so that we can cultivate food there" (Framtiden i våre hender).

To Green Resources, however, "forestation is one of the most effective ways to generate superior return for its shareholders, provide an excellent working environment for its employees, protect the environment and help develop the local communities where it operates" (Green Resources Objectives and Goals). The company is determined to become the "preferred partner for subsistence communities in the affected areas and be "Africa's best and the world's best positioned forest and carbon credit (Green Resources, Objectives and Goals). Because thousands of farmers and fishermen, etc. lived within Green Resources' concession area and supported themselves by means of farming, cattle, and fishing as these reports show, establishing a pine and eucalyptus plantation in the concerned property will only help to deteriorate the environmental, social, and economic conditions for the affected villagers. Specifically, it will reduce local access to the land, water, and other resources that were available to the locals to cultivate their crops and carry out other activities that are necessary for their survival. Green Resources, by 2014 had suffered three fatalities because of road traffic accidents (Green Resources Environmental and Social Impact Report) which left the company's continued focus on accident prevention, health and safety training, and the provision of a safe working environment questionable.

Green Resources' first carbon credits were purchased by the Swedish Energy Agency to offset the country's pollution (Green Resources, Ugandan Plantations). So, on the one hand the Government of Norway is using Green Resources to meet the country`s emissions reduction targets under the climate change regime and the company is benefiting from earnings from selling carbon credits. On the other hand poor villagers are the ones to suffer the loss (losing farmlands, and grazing lands, and forest resources) associated with combating climate change and mitigating its impacts. This context is similar to what justice advocates called 'environmental injustice,' a concept that Francis Adeola (2000) defines as "any undue imposition of environmental burdens on innocent bystanders or communities not parties to the activities generating such burdens".

Moreover, the establishment of this project is in violation of the rights of indigenous peoples (and villagers), including the right not to be subjected to the destruction of their culture under internationally recognized environmental and human rights laws. The United Nations Declaration on the rights of indigenous peoples (UNDRIP), under its 8th article, condemns actions which have the aim or effect of dispossessing local and indigenous communities of their lands, territories or resources (UNDRIP, 2007). States shall, under this declaration, provide mechanisms for the prevention of land and resource grabbing, cultural degradation, and forced population transfer which has the objective of undermining any of indigenous and local rights (UNDRIP, 2007).

New Forests Company in Uganda

Licenses were granted in 2005 over plantation areas to London-based New Forests Company (NFC) by the Ugandan National Forestry Authority (NFA) to allow for NFC`s carbon offset projects. NFA embarked on procedures (between 2006 and 2010) to remove the former residents who have been described as "illegal encroachers" (Grainger and Geary, 2011). Archival research by Oxfam illustrates that the over 22,000 people that were under threat of eviction to make way for NFC's operations had lived in the concession company since the early 1970s (Grainger and Geary, 2011).

Some of the villagers that were affected by the NFC project claimed that they had lived on the land for decades: The land in question was allocated to them during the Idi Amin regime in acknowledgment of their ancestors having fought in the British army during World War II. They also claimed that they were "strong and thriving permanent communities" that had been paying taxes to the government (Grainger and Geary, 2011). The villages had functioning government structures, including schools, local council systems, health centers, churches, permanent homes, and farms on which they cultivated crops to sustain their families and sell the surpluses on the domestic market (Grainger and Geary, 2011). Francis Longoli, Oxfam claims (Grainger and Geary, 2011), is one of those that were evicted from their farmlands, houses, and other resources to allow for NFC's carbon offset projects. He claims:

"I remember my land, three acres of coffee, many trees - mangoes and avocados. I had five acres of banana,' Francis Longoli articulates. "I was given awards as a model farmer. I had cows for milk, ten beehives, two beautiful permanent houses. My land gave me everything from my living to my children's education. People used to call me Omataka –someone who owns land. Now that is no more. I am one of the poorest now."

Oxfam International's report, which was confirmed in REDD-Monitor, The Guardian, The New York Times, and Al Jazeera, shows that "the people evicted from the land are desperate," having been driven into poverty and landlessness (REDD-Monitor). Claims by the company that the displaced people "voluntarily and peacefully" evacuated the area have been challenged: One of the evictees told Oxfam that the company took their land, adding that the firm's employees and the "Ugandan security forces enforced the evictions, setting fire to homes and crops and in some cases beating and imprisoning people" (Guardian). It must have been a painful time for the villagers, especially the ones that saw "gun-toting soldiers and an 8-year-old child burning to death when [a] home was set ablaze by security officers" (New York times). Residents who were evacuated say they now live in extreme poverty (AL JAZEERA). This case is yet another instance of local communities that are losing out as a result of foreign land-based investments.

CONCLUSION

The objective of this article was to clarify whether concerns for food security and trade and investment liberalization were the only factors arousing hunger for land, forests, water, and fisheries resources in Africa. The investigation demonstrates that considerations for energy security and climate change have been key drivers in the African land-grab over the past few years. Certain provisions of the *United Nations Framework Convention on Climate Change, the Convention on Biological Diversity*, and the EU Renewable Energy Directive have encouraged foreign investment in agriculture and forest conservation in Africa. The majority of the alienated land in sub-Saharan Africa is envisioned solely for biofuels and forest conservation, suggesting that the percentage of land acquired for the production of biofuel and sequestration of greenhouse gas emissions outweighs

that for food. This challenges the prevailing discourse that links land-grabbing, solely, to food price and global food security and financial crises: Tree planting, agro-biofuel cultivation, and forest conservation have made acquisition of land attractive investments in Tanzania and Uganda.

As reported in 2012 by Fuo and Sama, the main challenge for African countries, therefore 'remains the need to balance environmental sustainability and short and long-term development imperatives'. Large-scale investments in agricultural and conservation projects have the potential to promote unsustainable developments by threatening the rights and opportunities of local and indigenous peoples to meet their basic human needs. Therefore, African governments must not always perceive and embrace carbon offset and biofuels projects as the only technologies to combat climate change and adapt to its impacts. Without effectively considering the socio-economic and cultural impacts of energy and climate policies, realizing the 2030 SDG to leave no one behind will be difficult. The governments of Tanzania and Uganda should embark on measures, both legislative and policy measures, to protect fundamental human rights, including rights to food, housing, water, etc. while striving to achieve environmental sustainability and sustainable development.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

Adeola FO (2000). Cross-National Environmental Injustice and Human Rights Issues: A Review of Evidence in the Developing World. Am. Behav. Sci. 43(4):688.

Akram-Lodhi A (2015). Haroon Land Grabs: the Agrarian Question and the Corporate Food Regime. Canadian Food Studies 2:233-241.

Anseeuw W, Wily LA, Lorenzo C, and Taylor M (2012). Land Rights and the Rush for Land: Findings of the Global Commercial Pressures on Land Research Project. (Rome: ILC).

Brander L (2003). The Kyoto Mechanisms and the Economics of their Design, in Faure M, Gupta J, and Nentjes A (eds) Climate Change and the Kyoto Protocol: The Role of Institutions and Instruments to Control Global Climate Change (Northampton: Edward Elgar). p. 36.

Carley S (2009). State renewable energy electricity policies: An empirical evaluation. Energy Policy 37:3071-3081.

The Guardian (2011). Sun Biofuels have left us in a helpless situation: They have taken our land. Available at: http://www.guardian.co.uk/environment/video/2011/nov/09/biofuel-tanzania-video.

Chertow MR, Esty DC (1997) Thinking Ecologically: The Next Generation of Environmental Policy (Yale: Yale University Press).

Cohen SA (1997). Employing Strategic Planning in Environmental Regulation (New York: State University of New York Press).

Convention on Biological Diversity, CBD (1992). 31 I.L.M. 822.

Cotula L, Dyer N, Vermeulen S (2008). Fuelling Exclusion? The Biofuels Boom and Poor People's access to Land (London: IIED and FAO).

Daniel S (2011). Land grabbing and potential implications for world food security. In Sustainable agricultural development. Springer Netherlands. pp. 25-42.

Daniel S, Mittal A (2009). The Great Land Grab Rush for World's Farmland Threatens Food Security for the Poor (Oakland: Oakland Institute).

Deininger K, Byerlee D (2011). Rising Global Interest in Farmland: Can it Yield Sustainable and Equitable Benefits? (Washington D.C.: World Bank).

Earley J, McKeown A (2009). Smart Choices for Biofuels (Washington D.C.: Worldwatch Institute/Sierra Club). P 3.

Food and Agriculture Organization (FAO) (2006). The State of Food Insecurity in the World 2006: Eradicating World Hunger – Taking Stock Ten Years After the World Food Summit (Rome: FAO).

Fuo ON, Sama SM (2012). Cameroon's environmental framework law and the balancing of interests in socio-economic development, in Faure M and Du Plessis W (eds.), The Balancing of Interests in Environmental Law in Africa (Pretoria: Pretoria University Law Press, pp. 78-81.

Friends of the Earth (2010). Africa Up for Grabs: The Scale and Impact of Land Grabbing for Agrofuels (Brussels: Friends of the Earth Europe).

Gasparatos A, Lee LY, Von Maltitz GP, Mathai MV, Puppim de Oliveira JA, Willis KJ (2012). Biofuels in Africa: impacts on ecosystem services, biodiversity and human well-being. United Nations University Institute of Advanced Studies.

Gillespie A (2003). Sinks and the Climate Change Regime: The State of Play Duke Envtl L. & Pol'y F. 13:279-301.

Golub J (2000). New Instruments for Environmental Policy in the EU (New York: Routledge).

Grainger M, Geary K (2011). The New Forests Company and its Uganda plantations (Oxfam International, Ugandan Land Balance, GROW, 2011) 2 [Oxfam in Uganda]. P 2.

Habib-Mintz N (2010). Biofuel investment in Tanzania: Omissions in implementation. Energy Policy 38(8):3985-3997.

Hakiardhi (2011). Land Grabbing in a Post Investment Period and Popular Reaction in the Rufiji River Basin. https://www.farmlandgrab.org/uploads/attachment/LAND%20GRABBING%20IN%20A%20POST%20INVESTMENT%20PERIOD%20AND%20POPULAR%20REACTIONS%20IN%20THE%20RUFIJI%20RIVER%20BASIN..pdf [Accessed 09 August 2016]

Hall R (2011). Land grabbing in Southern Africa: the many faces of the investor Rush. Rev. Afr. Polit. Econ. 38(128): 193-214.

Hoffmann U (2011). Assuring food security in developing countries under the challenges of climate change: key trade and development issues of a fundamental transformation of agriculture (Geneva: United Nations).

International Land Coalition (2011). Tirana Declaration: Securing land access for the poor in times of intensified natural resources competition (Tirana: International Land Coalition).

Kyoto Protocol to the United Nations Framework Convention on Climate Change (1998). 37 I.L.M. 22.

Larsen RK (2013). Biofuel Production and its Impacts on Local Livelihoods in Tanzania (Stockholm: Stockholm Environment Institute).pp. 12-17

Mattei U, Nader L (2008). Plunder When the Rule Of Law is Illegal (Oxford: Blackwell Publishing). P. 1.

Muldoon PR, Lucas AR, Gibson RB, Pickfield P (2009). An Introduction to Environmental Law and Policy in Canada Toronto: Emond Montgomery Publications Limited, P. 3.

Murphy S (2013). Land Grabs and Fragile Food Systems: The Role of Globalization 1-12.

Oakland Institute (2012). Understanding Land Investment Deals in Africa: Tanzanian Villagers Pay for Sun Biofuel Investment Disaster (Oakland: The Oakland Institute).

Oakland Institute (2014). The Darker Side of Green Plantation Forestry and Carbon Violence in Uganda The Case of Green Resources' Forestry-Based Carbon Markets (Oakland: The Oakland Institute).

Odeny E, Leonhard R, Borras Jr S, Rocha M (2010). Land grabbing in Kenya and Mozambique: A report on two research missions–and a human rights analysis of land grabbing.

Oram J (2014). The Great Land Heist How the world is paving the way for corporate land grabs (ActionAid International).
Peebles G (2014). Destructive Development and Land Sales in Ethiopia in Ross AR (ed) Grabbing Back: Essays Against The Global Land Grab (Oakland: AK Press). P. 64.
Peluso NL, Lund C (2011). New frontiers of land control: An introduction. J. Peasant Stud. 38(4):667-681.
Phung DT (2012). Pesticide regulations and farm worker safety: the need to improve pesticide regulations in Viet Nam. Bulletin of the World Health Organization 90:468-473
REN21 (2015). Renewables 2015 Global Status Report (Paris: REN21 Secretariat). P 17.
Roberntz P, Edman T, Carlson A, Laizer J (2009). The Rufiji landscape the sweet and bitter taste of sugar cane grown for biofuel. (Sweden: World Wildlife Fund).
Romijn HA, Caniëls MCJ (2011). The Jatropha biofuels sector in Tanzania 2005–2009: Evolution towards sustainability?. Res. Policy 40(4):618-636.
Ross S, McDiarmid P (2015). Take Action: Stop EcoEnergy's Land Grab in Bagamoyo, Tanzania.
Sama SM (2016). Globalization and Land-Grabbing in Africa: The Implications of Large-Scale Agricultural Investments for Rural Populations in Cameroon, Nigeria and Tanzania, in Mawere M, editor. Development Perspectives from the South: Troubling the Metrics of (Under-)development in Africa. Bamenda: Langaa Publishers. pp. 287-312.
Sarat A, Kearns TR (1999). Justice and Injustice in Austin Sarat and Thomas R K (eds). Law and Legal Theory (Michigan: University of Michigan Press).
Schoneveld G (2011). The anatomy of large-scale farmland acquisitions in sub-Saharan Africa (Bogor: CIFOR).
Schoneveld GC, German LA, Nutako E (2011). Land-based investments for rural development? A grounded analysis of the local impacts of biofuel feedstock plantations in Ghana. Ecol. Soc. 16(4):10.
Secretariat of the Convention on Biological Diversity (SCBD) (2005). Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety (3rd edition) (Montreal: SCBD). P 404
SEKAB BioEnergy (T) Limited (2008). Environmental and Social Impact Statement of the Proposed BioEthanol Production from Sugar Cane on the former Razaba Ranch, Bagamoyo District, Tanzania at https://sverigesradio.se/diverse/appdata/isidor/files/3345/5833.pdf [Accessed 01 August 2015].
Shiva V (2014). Land Wars and the Great Land Grab "" in Ross AR, editor. Grabbing Back: Essays Against the Global Land Grab. (Oakland: AK Press). pp. 39-44
Skarstein R (2011). Peak Oil and Climate Change: Triggers of the Drive for Biofuel Production in Prosper MB, Havnevik K, and Beyene A (2011). Biofuels, land grabbing and food security in Africa (New York: Zed Books). P 65.
Stallworthy M (2008). Understanding Environmental Law (London: Sweet and Maxwell.
Steward R, Anderson D, Aslam MA, Eyre C, Jones G, Sands P, Stuart M, Yamin F (2000). The Clean Development Mechanism: Building International Public-Private Partnership under the Kyoto Protocol. Technical, Financial and Institutional Issues.
Sulle E, Nelson F (2009). Biofuels, land access and rural livelihoods in Tanzania (London: IIED). P 18.
Sustainability Award for SEKAB (2009). Press Release 18 March 2009. http://www.sustainableethanolinitiative.com/Eng/Standardsidor/Filer/090319%20%20Press%20release%20Sustainability%20Award%20PRN.pdf [Accessed 16 March 2016].
United Nations Framework Convention on Climate Change (UNFCCC), (1992). 31 I.L.M. 849.
United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), (2007). Resolution adopted by the General Assembly [without reference to a Main Committee (A/61/L.67 and Add.1)
Voigt C (2016). Research Handbook on REDD+ and International Law, (Cheltenham: Edward Elgar, P 2.
Zagema B (2011). Land and power: The Growing Scandal Surrounding the New Wave of Investments inLand (Oxfam International). P 2.