



Transforming traditional land governance systems and coping with land deal transactions

Christopher PI Mahonge

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Abstract

This study aimed to gain insight into how land deals have affected traditional Tanzanian land-based interactions and networks, and what coping mechanisms those affected have deployed. Case studies of land deal transactions — in both the Kisarawe district, in the Coast region and the Same district in the Kilimanjaro region — show the impact of cultivating bio-energy crops on traditional land. While the Same district employed an out-grower model to cultivate biofuel, Kisarawe district adopted the plantation approach. Traditional land governance systems and actors are affected differently by out-grower and plantation biofuel production models; the plantation model leads to traditional land governance frameworks being totally dismantled, while the out-grower model has insignificant impact on traditional land governance systems. For both models, laws and guidelines governing biofuel cultivation are ineffective: plantation and out-grower biofuel cultivation exacerbates a vicious cycle of poverty and environmental degradation. More research in other socio-ecological environments is necessary to understand broader interactions between land deals and traditional governance systems, and then to develop concrete, sound guidelines to govern foreign, national and local institutional actors involved in land deals.

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Acronyms

CIFOR	Centre for International Forestry Research
COMPETE	Competence Platform on Energy Crop and Agroforestry Systems
FEWS NET	Famine Early Relief Systems Network Tanzania
FAO	Food and Agriculture Organisation
ICAS	Initiatives in Critical Agrarian Studies
JOLIT	Joint Oxfam Livelihood Initiative for Tanzania
LARRI	Land Rights Research and Resource Institute
MP	Member of Parliament
NGO	Non-governmental organisation
OXFAM	Oxford Committee for Famine Relief
TIC	Tanzanian Investment Centre
URT	United Republic of Tanzania
WACOD	Women and Community Development Organisation

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1. Introduction

Numerous land deals are being transacted in developing countries, so that investors can acquire land to produce bio-energy crops using out-grower/contract and plantation systems. The transactions involve transnational companies from developed countries, nations and rural communities, driven by the global fossil oil/fuel crisis — a scarcity of fossil fuel (Mndeme 2008; Sulle & Nelson 2009) driving fuel/ oil costs higher, which has created pressure on transnational companies to establish alternative sources of energy. Bio-energy crops are one potential alternative, but cultivating the crops requires land, thus increasing transnational demand for land alongside rising fuel/ oil costs.

In Tanzania, transnationals made land deals with the Tanzanian government and/or local people to cultivate biofuel crops. Biofuel production investments currently use plantation and out-grower models, resulting in new institutional arrangements that interfere with the nature and functioning of traditional land governance systems. Biofuel approaches can potentially influence the food and income security of traditional systems, and skew conventional relationships and interactions among multiple actors from various sectoral backgrounds at different organisational levels.

Implementing plantation and out-grower models has resulted in different experiences, which have either yielded benefits or led to insecurity. Important questions that arise from these interactions include:

- Who wins and who loses?
- How do the losers react?
- How do these reactions trigger the actors' reactions?

Large scale biofuel producers prefer the plantation model because it enables production economies of scale, cutting production costs per unit output. In the case of biofuel as feedstock, production costs are high — ranging from one-third to three-thirds of the overall production costs (RDBB 2008 cited in Elbehri, McDougall & Horridge 2009). Companies may struggle to secure land because of the possible threat that smallholder out-growers could collude to control supply and thereby increase the price of biofuel crops sold to transnational (Sulle & Nelson 2009; Smolker *et al* 2008).

However, the plantation approach has some negative implications for the smallholder producers. The model does not create a technological spill-over effect, nor does it greatly increase employment for local people (Arndt *et al* 2009). It can create local tensions as people are displaced and deprived of their access to land and other natural resources (Sulle & Nelson 2009; Smolker *et al* 2008); it restricts labour wages and rights, and creates the possibility of replacing plantation employees with machines (Sulle & Nelson 2009). In Arusha, new and existing conflicts were exacerbated when biofuel plantations displaced the long-term local livelihood interests of some players (Sijaona 2001; Laltaika 2009; Olengurumwa 2010).

In the institutional process for acquiring land to establish a plantation, some players follow the rules, while others circumvent them: some companies followed the laid-down procedures for acquiring land, but were out-manoeuvred by other companies who colluded with local leaders and used shortcuts to acquire the same land (Sulle & Nelson 2009). Sometimes, investors also make verbal promises (including providing local social services and transport infrastructures) to acquire plantation land, but do not deliver on these promises (*ibid*) resulting in tension between investors and local people.

On the other hand, the out-grower model — in which smallholder farmers engage in producing biofuels — is commended as being more pro-poor because it allows the accrual of rents to the farmers (Arndt *et al* 2009). It also allows farmers to keep control of their land while delivering outputs to investors (Boras & Franco 2010). Benefits to smallholder producers may emerge in the form of receiving a share of the commercial profits, as was the case with the Kilombero Sugar Company and Mill out-grower scheme (Bekunda *et al* 2008). Also, the out-grower model provides inputs to smallholder producers (Benfica 2006) and enables a technology spill over from cash crops to food crops (Arndt *et al* 2009; Benfica 2006; Uaiene 2008), thereby raising overall farm efficiency (Uaiene 2008).

However, some out-grower schemes show a class bias, as rich farmers access a project while poor smallholders are excluded (van Baren 2009). Creating small producers' organisations can help smaller and/or poorer farmers access the out-grower scheme and defend their interests (*ibid*). Even so, as reported by German *et al* (2010), farmers have abandoned *Jatropha* farms because companies did not come to buy the seeds when the crops matured, despite government and company promises (given when promoting the programmes) that biofuels would yield high economic

benefits. So, conflicts have emerged between local people and local government staff, and the local community now distrusts government leaders who persuaded them to partake in biofuel cultivation.

In some areas of Tanzania, acquiring land to establish plantations is difficult because the state has no land; all land is occupied by individual local people. Because investors prefer the plantation model, they arrange to transfer land from individual users to investors; and some villagers endanger their primary livelihood sources by selling much of their land (up to 72 per cent) (Sulle & Nelson 2009), which undoubtedly threatens their livelihood security. Sometimes this reaction is compounded because farmers' are ignorant about the consequences of selling their land, and the investing companies exploit the ignorance to acquire more land for investment at cheap prices (Olungurumwa 2010). These cases may imply that poor governance structures exist for administering and managing land deals between investors and local people.

However, many other factors account for the preference of one type of biofuel production arrangement over the other, including:

- the exact labour requirements to produce a particular biofuel crop;
- the capital needed;
- the amount and accessibility of land needed (Arndt et al 2009);
- the local context (including population density);
- the capacity of local people to engage in cultivating biofuels; and
- price dynamics (Sulle & Nelson 2009).

For example, Mozambican research (Benfica, 2006) showed that producing sugarcane using the plantation approach was less labour and land intensive, but more capital intensive, while *Jatropha* cultivation, using the contract farmer model, was more labour and land intensive, but less capital intensive. Benfica (2006) also documented an instance in which a company preferred to adopt the out-grower/contractual approach in biofuel production because using the plantation model was more labour intensive, translating into higher production costs. Access to insufficient labour to manage large plantations may also drive a company to adopt a hybrid model, using the smallholder-based approach alongside the plantation model (McLea 2008). Despite the labour problem, investors want to use the plantation approach to secure the feedstock supply and offset costs incurred in developing infrastructure (e.g. irrigation and roads) because smallholders are unable to produce at large scale and recover the costs incurred in infrastructural development (FAO 2008).

Implementing biofuel production models can be challenging; the contractual approach is characterised by unequal bargaining powers for prices and output grades, unstable and fluctuating prices on the world market, and low productivity and production at farm level (Benfica 2006; Gerber 2008). Poor transport, infrastructure and storage facilities are also major barriers to implementing the contractual approach (Gerber 2008). At institutional level, ambiguous property rights and (local and national) land use planning processes constrain biofuel cultivation (Herrmann & Brüntrup 2010). Other cases indicate that, due to traditional authorities negotiating without consulting communities, communal land governance law may be violated, resulting in conflicts between not only investors and communities, but also communities and their leaders. In yet other cases, land tenure imposes insecurity on farmers and investors: investors want long-term leaseholds to ensure ownership of the grown biofuel crops, while farmers feel unprotected if they are deprived of land access for extended periods (*ibid*). This implies that tenure and legal frameworks play a critical role in motivating (or not) local people and investors to take part in developing the biofuel industry.

2. Methodology

The Kisarawe district in Coast region and the Same district in Kilimanjaro region were chosen these to represent regions where out-grower and plantation systems of biofuels were practised. Prior to the actual data collection exercise, a pre-survey was conducted to find out which approaches were being used for producing biofuel in the coastal areas including Kisarawe, Rufiji, and Kilwa. Because the coastal areas were mostly used for the plantation model, I looked for another site where the out-grower approach had been adopted and selected the Same district. While the out-grower approach was used in Same district, the plantation cultivation model was adopted in Kisarawe

district. For the study, I carried out a systematic examination of the role of land deal investments on traditional land governance and institutional structures in these study districts.

A multiple method research approach was adopted for data collection using focus group discussions, key informant interviews and documentary analysis. I held interviews with key informants, including village and district staff. I conducted focus group discussions with land councils at the ward and village levels and with groups of farmers of different ages and gender. I also studied various relevant documents and reports, collected both from district offices and the internet. The collected data were analysed using content analytical procedures and I categorised the qualitative information into meaningful units and themes, in line with the research objectives.

3. Background

3.1 Land laws and property rights in Tanzania

Land use and administration in Tanzania is governed by legal pluralist frameworks involving statutory and customary laws and tenure systems. Although the vast majority of land areas fall within the customary ownership arrangement, only in recent years has state law recognised these arrangements (Deininger 2003). Statutory land laws are categorised into two Acts: *The Land Act of 1999* and *The Village Land Act of 1999*. The Village Land Act provides for and recognises customary institutional arrangements. Under these arrangements, land is controlled by traditional leaders representing their clans. All the issues related to land use and disputes within these social networks are decided under the guidance of these headmen, but when issues are outside respective clan boundaries, hybrid institutions integrating village and customary/clan leaders intervene.

With regard to biofuel investments, the Village Land Act allows investors to be granted land, provided that they invest in a village. This has been criticised by some analysts (e.g. Mallaya 1999), on the basis that it is likely to allow some financially powerful people to grab land from poor peasants and pastoralists in the name of investment (Åberg 2005). However, currently there is no one biofuel investment law although national biofuel investment guidelines have been prepared.

Land laws, amongst others, defend and protect the existing property rights arrangements. This implies that legal mechanisms go along with property rights, defining the use, distribution and administration of land. In Tanzania, several forms of property rights exist, including state rights, communal/customary rights and private rights. Recently, there has been a large threat to customary and communal rights arrangements, and among the factors threatening this right system are foreign and local investments in the form of private rights arrangements (Oxfam 2003). As a result, traditional and customary tenure arrangements are currently changing, manifesting shifts towards individualised rights of these communal landholding systems. One of the reasons for this privatised arrangement is to allow tenure security in such a way that land can be used as collateral by specific owners to access credits (Åberg 2005).

The Tanzanian land laws categorise land into village land, reserve land and general land. Village land is the land that falls within the boundaries of a given village under customary right of occupancy, including land with registered boundaries, land that has been used by villagers for more than 12 years though is not yet registered and land obtained through negotiation between a village and its neighbours. Reserve land includes all the land that is protected — including forest reserves, marine reserves, national parks, game reserves, etc. General land is defined as the land that is neither reserve land nor village land, and confusingly, this includes village land which is not occupied or used (Sulle & Nelson 2009). The three categories of land; village; and general land are relevant in biofuel production. While the general land is suitable for implementation of the plantation biofuel cultivation approach (for which large land is needed), village land — land owned by individual villagers — is the venue for the out-grower or contracted model.

3.2 Biofuel experiences

As noted above, cultivation of biofuel in Tanzania employs the use of different models. This background focuses on the two sites that were studied: Same district and Kisarawe district. In Same district, an out-grower model is used, where companies do not directly purchase land, but practise contract farming in which the investing companies provide *Jatropha carcus* seeds and the necessary facilities, free of charge and undertake, upon successful crop maturity, to buy *Jatropha* seeds from farmers. On the other hand, in Kisarawe district, the plantation model was adopted, in which biofuel was produced through the purchase of land by investing companies, Sun Biofuel in particular. The following background information outlines the types of crops cultivated, and the actors involved, as investors and cultivators of biofuels.

Same district

Same district is one of six districts of the Kilimanjaro region. Based on the Tanzania Census of 2002, it has a population of 212 235 inhabitants with an average population density of 36 people per square km. The district covers an area of 5152km² and has an altitude ranging from 500m to 2462m, with temperatures ranging from 15°C to 30°C. Bimodal rainfall ranges from 400mm–600mm and long rains are experienced from March to May, whereas short rains occur from October to December (Mziray 2002; Mndeme 2006).

Economically, Same district depends on small scale agricultural producers who produce primarily for subsistence and sell the surplus. Although there are a few cash crops (cardamom, ginger, coffee, lettuce), the main food crops (for example, maize, cassava, potatoes), are also used for income generation. Because Same district is in the semi-arid regions of Tanzania, agriculture produces drought resistant crops, including short term maize varieties, sweet potatoes and cassava (Mndeme 2008). As a solution to addressing food insecurity in the district, irrigation farming initiatives have been instituted. For example, the government of Japan in 2006 supported the establishment of an irrigation infrastructure that serves 680ha of land (URT 2006). Another economic activity carried out by the inhabitants of Same district is keeping livestock. Goats, indigenous cows, sheep and donkeys are the main livestock. However, the main challenge to livestock is the availability of pasture and water as this area experiences drought through most seasons of the year. Apart from the indigenous *Pare* inhabitants, the Maasai pastoralists are mobile livestock keepers who graze their herds in different places at different times, depending on the availability of pasture and water, and this has been a source of conflicts between the sedentary Pare ethnic group and the migratory Maasai tribe. Although the out-grower model land deals allow smallholder farmers to control their land while cultivating biofuel crops, there have been struggles for land between the agro-pastoral *Pare* and the pastoral Maasai.

In Same district, land deals for biofuel production entail cultivation of *J. carcus*. The production of *Jatropha* occurs in Njoro and Hedaru wards of this district. A Dutch NGO, Yes-Africa, has influenced and promoted the cultivation of *Jatropha* since 2005. Because the owners of this company are based in the Netherlands, coordination of most of their activities is done by its partner, the church based organisation, Caritas. The Dutch NGO formed a partnership with Caritas because the latter had experience of carrying out initiatives of growing Moringa with farmers for the purpose of water purification. Not only does Yes-Africa, through Caritas, provide knowledge, seeds for tree nursery management and the necessary facilities, including polythene tubes for cultivation of *Jatropha*, but it also establishes demonstration plots on which farmers can learn to cultivate this crop.

In Hedaru ward, Yes-Africa has extended its activities of *Jatropha* cultivation through a Roman Catholic Brothers Station, Brotherhood of Jesus the Good Shepherd (Mndeme 2006). These two Roman Catholic institutions have imparted skills on biofuel crops cultivation to farmers in Hedaru and Njoro wards. This means that Yes-Africa adopts the out-grower model through church based organisations in which farmers cultivate *Jatropha* in their own land, governed by customary land tenure arrangements. Prior to establishing *Jatropha* nurseries, local people were mobilised through their village and customary leaders.

Some investors use incentives to motivate the local people to engage in the production of biofuel crops. Apart from Yes-Africa, people are aware of the existence of an anonymous company that came to Same district from Arusha to sensitise local people to the potentials and benefits of cultivating *Jatropha*. To attract the local people's attention to the importance of biofuel crops, the company demonstrated a truck that was allegedly run on biofuel oil, organised a village meeting and provided the locals with meals and drinks. Consequently, the company provided the farmers with *Jatropha* seeds to establish a tree nursery. Although the local stakeholders were not yet aware of what was to come out of the bio-energy crops investments, the incentives managed to motivate them to establish *Jatropha* tree nurseries. However, from the time that local people planted the *Jatropha* (in 2007) until the time that this study was conducted (July–August 2009), the anonymous company has not communicated with farmers about the arrangements to buy biofuel crops from them.

Kisarawe district

Kisarawe District is located along the coastal belt in the eastern part of Tanzania. This district is situated between latitude 6° 5' and longitude 38° 15', 1000m above sea level. It is one of the six districts of the Coast Region, the others being the Mkuranga, Kibaha, Bagamoyo, Rufiji and Mafia districts. Kisarawe district neighbours Kibaha district to the north, Mkuranga district to the east, Rufiji district to the south, and Morogoro Region to the west. According to the 2002 Tanzanian census, Kisarawe district has a population of 95 614 people. Temperatures vary from 28°C to 30°C and average at 29°C. The average rainfall is 1000mm per annum (Kipobota 2007).

For many years the economy of Kisarawe district depended on cashew nuts, although for the past eight to ten years the production of this crop has been dwindling. The most important reason for the decline in the production of cashew nuts has been poor and unreliable markets — to the extent that farmers have abandoned this crop in favour of alternative crops and sources of income (www.allafrica.com). Since 2001, production has been fluctuating for several years, with the increase and decrease based on price fluctuations, but 2008/2009 saw a remarkable decrease in production from 976T to 39T in 2009/2010. This has possibly played a significant role in the villagers' decision to dispose of their land for biofuel cultivation.

Farming is the main livelihood activity in Kisarawe. Other activities include small business, fishing, timber, charcoal production, raising cattle, handcraft and civil employment. The main food crops include cassava, legumes, sorghum, sweet potatoes, millet, banana, fruits and vegetables. The cash crops are coconut and cashew nuts. However, this is one of the districts in Tanzania that are stricken by food shortages. For example, the Famine Early Warning Systems Network Tanzania (FEWS NET 2003) described a case in which one household began to eat wild root crops due to food shortages. Thus tradeoffs between biofuel investment and food security concerns are critical issues in such vulnerable situations.

Kisarawe district is one of the districts in the coastal regions which have in recent years attracted much academic and media attention about land acquisition and land grab issues. This has stimulated discussion by national research and civil society institutions and international research agencies from various perspectives, including livelihoods, human rights, and food security. The greatest concern has been the trade-offs between food security and bio-energy in the country (for example, Sulle & Nelson, 2009; Congressi & Kennedy, 2009). In Kisarawe district biofuels are cultivated through the plantation approach. In recent years, a company called Sun-Biofuel, which has headquarters in Britain but has a subsidiary company in Tanzania, has acquired 8.211ha of land for undertaking large-scale production of *Jatropha* and cassava for biofuel purposes. This land was previously held under the tenure of 11 villages and land acquisition has affected more than 10 000 residents in these villages (Sulle & Nelson 2009).

Because the land which is currently occupied by the Sun-Biofuel Company was previously owned by the villages, the land had to be changed from the category of village land to general land, and transferred from the villagers to Sun-Biofuel. This was done through Tanzania Investment Centre (TIC) in February 2009. The company was responsible for paying compensation to the villagers who disposed of their land. A total of one million British Pounds was given to compensate the villagers, though there are claims amongst the farmers that compensation was not adequate.

Many promises were made as to how the local people would benefit through this plantation based cultivation of *Jatropha*, including improvement of the livelihoods of the marginalised poor by providing them with employment, water and social services. These were intended to motivate the villagers in this area to accept the investment by disposing of their land. Not only did the investor make these promises, but various governmental political players, such as the Kisarawe Member of Parliament (MP), mobilised people to sell their land to the investor on the basis that their livelihoods would be improved. However, it appears that these promises are far from being realised in carrying out the project. Villagers complain that the employment opportunities that were promised for local poor have ultimately fallen into the hands of elites, who network with colleagues from towns at the expense of the marginalised local inhabitants.

Reading from the above, implementing plantation and out-grower biofuel production approaches in these two cases embrace social, economic, political and institutional links between the investors and local people. These dimensions are determining factors in understanding the development of the biofuel industry in Tanzania. However, while other aspects have, to some satisfactory extent been studied, the role of land investments on institutional and traditional land governance and their transformations has not been researched in detail. The overall aim of this study was to compare the implementation of plantation and out-grower biofuel production approaches in Kisarawe and Same districts respectively and to determine how traditional land governance systems are influenced by these two investment models. The following hypotheses follow this contrast:

1. The impact of the two different models of biofuel production (contractual and plantation approaches) on the traditional land governance systems in the study area are different.
2. The existing laws and guidelines which govern the implementation of land deals transactions for the production of biofuel crops are effective.
3. Land deal transactions worsen food insecurity and environmental degradation.

4. Findings

4.1 Effects of plantation and out-grower models

Implementation of plantation and out-grower biofuel cultivation models seems to affect traditional land governance, local actors and systems of property rights. However, the two models have different influences and impacts on traditional land governance and local actors.

Plantation approach

Plantation models seem to displace the traditional institutional arrangements and skew the property rights systems. The rights that are communally respected and observed under traditional rules systems are extinguished when land is converted from traditional tenure arrangements to an investment tenure system. This study found that in Kisarawe district, following the acquisition of village land by the Sun-Biofuel investor, villagers were banned from accessing natural water resources and were also forbidden to trespass on that land, which had served as a shortcut from one village to another. Under the Tanzanian water law, even when natural water resources exist within a land owned by individuals, this resource is regarded as being for the public good and nobody should block other people from using it. The plantation investment in this area therefore seems to operate above the water law and contradicts this legislation.

Also, a change in land use tenure is emerging: land is re-allocated to those able to make capital investment (rich farmers and companies) to their advantage and at the expense of poor farmers. Through transforming this tenure, communal or collective access to some of the natural resources erodes in favour of a few powerful private actors. The land previously used to provide local users (11 villages) with ecosystem services and goods — including medicinal plants, fuelwood and hunting — was allocated for *Jatropha* production and hence displaced the local poor from accessing it. This occurs when people are not aware of their rights over the alienated land and the potential consequences of giving out the land. For example, while the land that carries natural resources growing on it is a very valuable resource, the investing companies compensate only for crops that grow on this land, such as cashew nut trees and mangoes.

Furthermore, the plantation based investment pressures customary land governance systems. In some villages of Kisarawe district (for example, Mtamba village), some elites in their clans made decisions about selling land to investors who approached them. Other members did not support these decisions. For example, when land was sold to the investing company, the revenues accrued from this transaction (compensation) were not equitably shared among the clan members. Conflicts among the clan actors are inevitable under such circumstances. Because the land is primarily governed under customary tutelage, the role of the government institutions has been reduced to mediating conflicts between clan members, especially when conflicts among them are not successfully resolved by the elders in their clans. In the wake of land demands from foreign and local urban investors therefore, conflicts over land within clans have been exacerbated because the traditional land issues mediating structures seem to be overpowered.

Lack of transparency is a characteristic of plantation based land deal transactions in villages around Kisarawe district. Although the district office has recorded that the Sun-Biofuel Company has thus far acquired 8211ac from Kisarawe villagers, the latter are not aware of how much land has been taken from them, as a chairperson of Mtamba village revealed during an interview. According to this local leader, the area was not surveyed before, and therefore it was difficult to know how much land was alienated from villagers. This echoes what Bashiru, Mgumia and Mvula (2007) found while interviewing villagers and leaders of Rufiji district: local actors had insufficient awareness about the procedures and law regarding transfer of land to biofuel investors. In the Bagamoyo district council, Kamanga (2008) noted that in spite of participating in the process of appropriating land to investors, village councils were not certain about the quantity of land given to investors.

Apart from lack of transparency in the land acquisition process, ignorance of one or several actors is taken advantage of by others. On the one hand, this lack of awareness implies a lack of active local participation in the process or transactions. Villagers' claims that they received little compensation for the land they previously held suggests that although these locals do not know the quantity of land appropriated, they are generally aware of the worth of the land under question. The fact that the investor has already paid compensation implies knowledge of the area of land he/she acquired, and the investor must know the amount of land acquired because of the TIC's requirement that this land must be registered to the Ministry of Land, Housing and Settlement Development before TIC gives the investor a derivative title. While the investor and the district agents are aware of the land acquired by the company, local people

are not informed as to the size of land they have been given, and this results in the lack of a firm basis for judging the amount of compensation. Instead, they just lament that the compensation was insufficient.

Out-grower approach

The out-grower approach, on the other hand, as observed in Same district, has temporarily changed the existing rights in terms of introducing new cash crops and displacing food crops, although the productive land remains under the control of smallholder farmers. Also, interactions between local land authorities and smallholder producers become tense when investors do not honour some agreements. While at the outset, the investing companies may attract local formal and informal leaders to the deals, they ultimately end up introducing conflicts between local leaders and farmers. Promised assurances from the companies that farmers were going to benefit from biofuel investment seem to be a dream because although *Jatropha* seeds were provided free of charge, after the establishment of *Jatropha* nurseries the investing companies never turned up for the planting out stage, as was explained earlier; villagers were not only disappointed, but also blamed their leaders for persuading them to engage in the *Jatropha* production arrangements.

When comparing the plantation and out-grower models, the latter seems to have insignificant implications on traditional land governance. In Same district, where the out-grower approach has been used, clan based land governance procedures remain intact in addressing land issues. However, although the out-grower model does not currently seem to affect customary land governance, we cannot predict the future institutional trajectories, especially as the demand for land for biofuel production intensifies. Because the actors (formal and informal) who enforce, and are governed by these institutional guidelines are already experiencing pressure from non-local factors in their existing practices, there is a likelihood that new unpredictable institutional and governance trajectories will emerge to adapt to and cope with these influences.

On the basis of the foregoing analysis in this section, the hypothesis that plantation and out-grower models of biofuel production affect traditional land governance systems and local actors seems accurate. However, the scale of impact seems to be more severe for the plantation model than the out-grower model.

4.2 Effectiveness of legislation and guidelines governing biofuel cultivation

In Tanzania, the legislative challenge of land based investments is the distinction between formulating the laws and guidelines and implementing those laws. The law may serve as a guideline for actions to attain certain goals, but it may not necessarily guarantee the security of some interests and of property. Various gaps may exist in executing the guidelines and laws due to weaknesses in one or more dimensions or the synergetic effect of multiple factors. The problem may not be ineffective laws/guidelines but rather the incapacity of the enforcers or the deliberate skewing of the rules by some agents to suit specific predetermined ends at the expense of others; on the other hand, the problems may be attached to ineffective laws and guidelines and not to those enforcing the institutional frameworks. Alternatively, both actor-oriented and rule-based weaknesses may exist. This section is based on the hypothesis that legislation and the guidelines surrounding biofuel production in Tanzania are effective.

Currently in Tanzania a formal law on biofuels does not exist. Two institutional mechanisms address issues related to allocating land to investors for producing biofuel, especially when it involves the plantation approach. These are the Tanzania Investment Centre (TIC) and the Biofuel Guidelines prepared under the steering role of the National Biofuel Task Force formed in 2006. The TIC, based on the Tanzania Investment Act of 1997, has been mandated to identify and allocate land to foreign investors. It does this firstly by identifying land which is less productive, and secondly, by changing the land tenure from being recognised as village or reserve land, to general land. Depending on the need, the investing company is granted derivative title, indicating the time for such tenure. It is contradictory to classify land as marginal, but to still appropriate it to the investors producing biofuel crops (for example, *Jatropha*, Moringa, etc).

The Biofuel Guidelines are an interim institutional procedure adopted because formulating biofuel law in Tanzania could take as long as two years and more. These guidelines were formulated and endorsed by the cabinet in 2009. The guidelines cater for legal aspects, food security, human rights, marketing, compensation, energy, production and environmental factors, as well as the participatory aspects of the biofuel investment in order to ensure the national interests and the interests of investors and local people and the environment in the process (Sawe 2008). Some provisions advocated by the guidelines contradict the actual practice in the field, which suggests that the implementation does not comply with the guidelines (*Figure 1*).

Figure 1: Comparison of biofuel guidelines and field realities

	What the guidelines say	What is practically happening in the field
Compensation	Land acquisition for biofuel production should not displace people but rather should incorporate land owners — land should be their collateral.	Although the local people were compensated (regardless of their claims that the compensation was not adequate), they have been displaced from their land.
Consultancy	Biofuel projects should be transparent, consultative and participatory in order to involve most key stakeholders.	In Kisarawe district, although theoretically the process was termed bottom-up, in practice it takes the form of imposition from above; land acquisition and project activities seem not to be conducted explicitly: persuasion rather than consultation was used.
Food security	Biofuel production should not impair food security.	In Same district, farmers forewent cultivation of food crops and instead cultivated biofuel crops. The investors did not appear and hence farmers had no income to buy food.
Human rights	Biofuel production should adhere to human/labour rights and gender equity.	In Kisarawe, farmers were promised employment opportunities in the plantation, but in the project, job opportunities went to urban based actors.

Other examples have exposed the violation of procedures and guidelines because authorities at higher bureaucratic levels were the cause of the non-compliance to the procedures at the lower levels. Land authorities and organs at district level do not seem to have power over decisions on land issues happening at the local level. TIC and political actors at national level appear to have direct decision making power over locally available land. This was exposed in the two districts where this study was conducted. Generally, the local land staff claimed a lack of compliance with the procedures and laws stipulated in the Land Acts in the tenure of the two biofuel cultivation approaches. At Kisarawe district, where the plantation model was used, a district land officer remarked that, conventionally, land acquisition issues would take a longer time if the stipulated bureaucratic procedures were to be followed. However, the pressure for land for investment in favour of the Sun-Biofuel Company originated from the higher national level, and it was not easy to identify who was behind it as the respondents used the words ‘big bosses’.

Interviews with district staff in both districts revealed that while some technocrats at the district level resisted this biofuel transaction in favour of food production, others who had administrative positions were worried about losing the authority entrusted to them by the aforementioned bosses at higher levels. There were threatening arguments from administrators to technocrats that ‘if you had known who are behind this move, you would not resist but rather allow it to proceed as it is’ (Kisarawe District Agricultural Official 2009). In this respect, although the technocrats at the district level explicitly acknowledged the violation of the established institutional procedures, they saw themselves as having no power to shape such aberrations and instead, they threw the blame onto higher political domains.

Instituting guidelines and legislation governing biofuel cultivation may become ineffective because the enforcing actors at local levels of jurisdiction are not aware of their responsibilities in the institutional capacity-building process. Although Same district land officers are the closest actors to the locals, they regard building capacity and empowering local people on issues related to land deals as the responsibility of the TIC. I learned this during interviews with land officers at Same district when I asked about the district’s stance in helping local people to benefit from land deals out-grower investment. They said that they had no role in this regard because it is the TIC that decides upon and endorses the process of foreign companies purchasing land from the locals/villagers. Based on this response, it appears that the district land authorities do not create awareness amongst the local people about the rights of poor people in face of the powerful agents (companies). The authorities seem to be completely overwhelmed by powerful state agents and excuse themselves from the process by being voiceless.

Political actors contribute to by-passing the existing land appropriation procedures. Being representatives of their electorate, these agents are regarded as bridges for existing and potential opportunities, allegedly for their people’s good. Based on prevailing political winds, however, sometimes these political representatives may assure people of forthcoming opportunities while they themselves are not thoroughly sure of such promises. An MP for the Kisarawe district is an example of this. Villagers and village government leaders revealed that although every village had some rules and by-laws to govern the allocation of land, these procedures were ignored during the appropriation of land to the Sun-Biofuel Company as this process was undertaken too quickly for local people to discern the realities behind

such deals. Focus group discussions revealed that the MP came to village leaders first to tell them that there was a good opportunity for employment for the local people because he had already talked to the owners of Sun-Biofuel, who were seeking land to invest in biofuel production.

4.3 Aftermath of implementation of plantation and out-grower biofuel cultivation

This section is based on the hypothesis that plantation and out-grower models of biofuel production cause a vicious cycle of livelihood insecurity and degrade the land resource. It describes the coping mechanisms that local people adopt in response to biofuel cultivation especially when such local actors perceive their interests as being compromised.

The plantation based cultivation of biofuel has resulted in displacing local people from the land they earlier owned and denying them access to ecosystem services including water, firewood, wild fruits, and construction materials, amongst others — as indicated in the Kisarawe case, in which land tenure has been transformed from local people to the investor. In contrast, the results of the out-grower approach in Same district, as described earlier, was the postponement of cultivation of food crops, but with no displacement effect because land remains in the hands of the local people. These findings are similar to those presented by Sulle and Nelson (2009) who noted that large-scale plantations can lead to the loss of livelihood opportunities and dislocation of resident communities, while they credited the out-grower approach with having no negative impact on local land tenure and being positive from a livelihood point of view. However, the present study found that the out-grower model can have negative implications on livelihoods when food crops cultivation is replaced with biofuel crops, but at the crop maturity stage the investors do not turn up to buy the crops, as shown in the Same district case.

The displacement effect caused by plantation based biofuel cultivation triggers the search for alternative livelihood options. Great pressure and concentration upon the few available natural resources seem to be among the options the local people resort to after their access to primary natural livelihoods sources has been lost. As a result, there may be sizeable degradation of the natural environment. This is the case in Kisarawe district where the plantation approach was used. For example, interviews with village leaders indicated that Ruvu forest reserve, which is a shared resource among various villages within the district and the neighbouring districts (for example, Kibaha), is being degraded by forest activities, especially charcoal burning. While people from various areas have concentrated on this forest resource, villagers from Kisarawe areas also moved to these bio-diverse resource areas as a coping strategy in order to harvest charcoal for livelihood. Apart from the forest reserves becoming increasingly vulnerable, other social impacts include the degradation of other livelihood services and support offered by forest ecosystems. Because encroachment of the reserve areas has increased, especially when local people have disposed of their conventional livelihood sources for biofuel production, livelihood services from the forests such as a sustainable supply of water, wild fruits, vegetables, non-wood forest products and wood-based products, including firewood, withies and construction poles are impaired.

The question to ask is: ‘What will be the next step when such livelihood and food insecurity sets in?’ Though it might not be easy to provide a perfect answer to this question at the moment, there is a high probability that if the unsustainable forest ecosystem use around the Ruvu forest reserve continues, the consequence will be a chain reaction of a degraded environment and livelihood security.

The account outlined in this section indicates that the aftermath of biofuel production can lead to displacement and subsequent livelihood insecurity. In turn, local people’s reactions create more pressure on naturally available livelihood sources, resulting in decreased livelihoods and environmental services. Although such responses may seem sustainable in the short term they are unsustainable in the long term. This, however, is not the case for the out-grower model wherein the displacement effect does not apply. As we have seen with the out-grower model, local people may stop cultivating biofuel if the cultivation does not meet their goals and expectations because they are the land owners (with no transfer of land tenure). Thus, although the hypothesis that biofuel can result in a vicious cycle of livelihood insecurity and environmental degradation is acceptable, it cannot be generalised to both case studies.

6. Conclusion

This section focuses on a comparison between out-grower and plantation investment to provide an answer to the question of how traditional land governance is affected by land deal transactions. Generally, this study has noted that traditional governance systems are affected by the imposition of foreign investments for biofuel production. However, out-grower and plantation models have different implications for this governance authority. Since land governance rules and property co-exist, when the traditional ownership of land property gets transformed, the customary land

governing rules lack a basis/justification for continuing. Because under the plantation model land is alienated from local people to the investors, the former are displaced, and their governance system cannot be implemented. As a result, the traditional institutional frameworks are denatured. The case of loss of access to water resources in the land purchased by the company and failure of the traditional rules to address that situation in favour of local people exemplifies this phenomenon. On the other hand, the out-grower model has only insignificant effects on traditional governance systems. Although sometimes smallholder land livelihood bases adjust by adopting new or cash crops, the basic customary rule system governing the land remains alive and may enforce adaptation through termination of the imposed foreign interests imply that the influence of land deals on traditional governing systems is site and case specific, depending on the approach and the local situations.

Among the reasons for the breakdown of traditional land governance authority in the wake of biofuel plantation-based investments are: political factors, ignorance of local actors of the value of the decisions they make and bypassing stipulated institutional and procedural arrangements. This study has found that political pressure may result in bypassing institutional guidelines because the politicians may persuade local people to provide their land cheaply to investors, while the politicians themselves may not be well informed about the nature of the prospective land deals, which may result in public unrest. Some of the more powerful actors used local actors' ignorance to enforce the realisation of their interests, which favoured the former at the expense of the latter. Although procedures may exist, there is a tendency of some participants, especially at the higher levels of the bureaucracy, to disregard those procedures and to therefore compel players on lower levels to make decisions that may compromise the public good.

Coping mechanisms adopted by local people to deal with adverse outcomes in their interactions with investors differ for the two biofuel production models. For the out-grower model, because local people remain the sole owners of the land, but change the use of this land for cultivating biofuel crops, their coping mechanism has been to stop cultivating specific crops when these investments do not seem to be beneficial to them. By contrast, with a large-scale plantation model, local people become dispossessed of their land and therefore their coping response has been to shift to other livelihood strategies, if any. The Kisarawe case indicated that the outcome of farmers' displacement and dispossession resulted in a move toward scarce natural resources which could not guarantee livelihood support in the long term, and there is a potential for degradation of this natural resources base.

Based on the findings of this study, the view that local people's rights can be achieved through community consultations with outside investors is questioned because local traditional (and other) authorities are subject to changes in governance practices, which renders their roles as representatives of local people' interests somewhat ineffective. In fact, these foreign investment processes may undermine local systems of governance, both traditional and civil. This is the message to those who are grappling with how to harness investor interests without subjecting local communities to processes that bypass them and constitute 'land grabbing'.

Further research is recommended on the interactions among land deal investments and traditional institutional governance systems in other socio-ecological environments in order to make concrete and appropriate suggestions, because institutional actors (foreign, national and local), partaking in these deals are in a state of flux and are governed by diverse operating rules.

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LDPI Working Paper Series

A convergence of factors has been driving a revaluation of land by powerful economic and political actors. This is occurring across the world, but especially in the global South. As a result, we see unfolding worldwide a dramatic rise in the extent of cross-border, transnational corporation-driven and, in some cases, foreign government-driven, large-scale land deals. The phrase 'global land grab' has become a catch-all phrase to describe this explosion of (trans)national commercial land transactions revolving around the production and sale of food and biofuels, conservation and mining activities.

The Land Deal Politics Initiative launched in 2010 as an 'engaged research' initiative, taking the side of the rural poor, but based on solid evidence and detailed, field-based research. The LDPI promotes in-depth and systematic enquiry to inform deeper, meaningful and productive debates about the global trends and local manifestations. The LDPI aims for a broad framework encompassing the political economy, political ecology and political sociology of land deals centred on food, biofuels, minerals and conservation. Working within the broad analytical lenses of these three fields, the LDPI uses as a general framework the four key questions in agrarian political economy: (i) who owns what? (ii) who does what? (iii) who gets what? and (iv) what do they do with the surplus wealth created? Two additional key questions highlight political dynamics between groups and social classes: 'what do they do to each other?', and 'how do changes in politics get shaped by dynamic ecologies, and vice versa?' The LDPI network explores a range of big picture questions through detailed in-depth case studies in several sites globally, focusing on the politics of land deals.

Transforming traditional land governance systems and coping with land deal transactions

This study aimed to gain insight into how land deals have affected traditional Tanzanian land-based interactions and networks, and what coping mechanisms those affected have deployed. Case studies of land deal transactions — in both the Kisarawe district, in the Coast region and the Same district in the Kilimanjaro region — show the impact of cultivating bio-energy crops on traditional land. While the Same district employed an out-grower model to cultivate biofuel, Kisarawe district adopted the plantation approach. Traditional land governance systems and actors are affected differently by out-grower and plantation biofuel production models; the plantation model leads to traditional land governance frameworks being totally dismantled, while the out-grower model has insignificant impact on traditional land governance systems. For both models, laws and guidelines governing biofuel cultivation are ineffective: plantation and out-grower biofuel cultivation exacerbates a vicious cycle of poverty and environmental degradation. More research in other socio-ecological environments is necessary to understand broader interactions between land deals and traditional governance systems, and then to develop concrete, sound guidelines to govern foreign, national and local institutional actors involved in land deals.