

Biofuels Investment and Community Land Tenure in Tanzania

The Case of Bioshape, Kilwa District



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Tanzania Natural Resource Forum is a non-profit organization that seeks to change policy and practice for the better, through improved governance and accountability in Tanzania's natural resource sector.

Maliasili Initiatives is a non-profit organization that supports the growth, development and performance of leading civil society organizations working to advance sustainable natural resource management practices in Africa.

1.0 Summary

Like much of sub-Saharan Africa, Tanzania has experienced a surge in land-based investment during the past decade. While expanding private investment in agriculture is a core ambition of the G8's New Alliance for Food Security and Nutrition, experiences of prior investments raise questions about possible negative impacts. A notable element of this pattern of international private investment in Tanzania has been the emergence of biofuels as a form of agriculture; biofuel investments occurred rapidly and on a large scale around 2005–2008, with about four million hectares around the country requested for allocation to commercial biofuel projects. Many of those investments were large-scale projects based on the cultivation of jatropha or sugarcane, headed by European companies. One of the most well-known biofuel investments was that of Bioshape, which acquired approximately 34,000 ha in Kilwa District for the cultivation of jatropha.

By 2009, Bioshape was bankrupt and had withdrawn from Kilwa, only ever cultivating a small area of jatropha trial plots and engaging in some timber harvesting from their much larger plot of land. The land they acquired was, according to formal procedures under the Village Land Act, transferred from village land to general land in order to grant the land lease to the investor, Bioshape. Bioshape's demise, like that of a number of other high-profile biofuels investments in Tanzania and throughout Africa, created uncertainty as to what would be the impacts on the local communities that had ceded their land, and in fact their perpetual customary rights to that land, to the company. This report examines what the impacts and implications are from the collapse of such large-scale land-based investments, and what lessons can in retrospect be derived from the experience of Bioshape in Kilwa.

The report documents, insofar as is possible using available information, the process Bioshape and government authorities at national and district level undertook to acquire the land from the four villages in Kilwa where Bioshape established operations. This process deviated from the official legal procedures in a number of key respects, such as in the retention by Kilwa District Council of more than 50 percent of the total compensation paid by Bioshape for the land acquired, the issuance of the land lease by the Ministry of Lands, and the uncertainty surrounding the publication of the transfer from village land to general land in the government gazette. In addition, as other studies have documented, the communities that granted their land to Bioshape did not have an understanding of the details of the agreement, including such critical information as the boundaries or total extent of the land in question, or the fact that it would be transferred from village to general land.

This case study has important implications for land tenure, rural development and investment policy in Tanzania, and perhaps other African countries as well.

The investment framework whereby foreign investors acquire village land through its transfer to general land, which extinguishes communities' customary right to the land in question, results in local communities bearing a high proportion of the risk in these investments. When investments fail, as they often do, particularly in high-risk and speculative industries such as biofuels, using crops of unknown performance such as jatropha, investors lose their money (or rather their own investors' money), while the villages lose their land in perpetuity. Compensation, as calculated in this and other cases, is not based on true economic opportunity costs to the local people and does not replace the loss of their land assets. Such procedures should be reviewed and amended to strengthen safeguards protecting communities' customary land rights. Enabling local communities to directly lease land to foreign investors, with safeguards in place to protect customary tenure rights and ensure transparency and accountability to local landholders, could be a component of addressing the problems inherent in the existing arrangements.

Beyond questions of the legal framework, the outcomes witnessed in the Bioshape case reveal a range of governance issues revolving around lack of adherence to existing laws and policies by government officials; a failure to adequately inform local communities about their rights, options and interests; and unequal power relations between investors, government and local communities. In order to address existing concerns around similar 'land grabs' that are intensifying across Tanzania and much of sub-Saharan Africa at present, legal reform is only one component of the solution; efforts should be redoubled to empower local communities with the tools and information they need to defend their rights and negotiate on more even terms with investors. Ultimately this is a key to reconciling the interests of rural communities with those of commercial agricultural development and investment.

2.0 Introduction

During the past several years Tanzania, like much of Africa, has experienced large and growing demand for its lands for commercial agriculture, biofuels, wildlife tourism and other investments. Issues of land tenure and land rights have been among the most important social and economic issues in the lives of Tanzanians, particularly those living in rural areas, since the colonial era. The land reforms of the 1990s which resulted in the 1999 Land Act and Village Land Act were expressly targeted towards, at least in part, increasing the security of rural communities and providing safeguards to prevent uncoordinated or undemocratic alienation of communities' customary lands. Today, with pressure on land growing globally and within the country, land use and land acquisition has returned to the top of the country's development and human rights agenda.

Among the main sources of commercial agricultural investment in land since 2005 has been the cultivation of biofuels, often based on plans for developing large-scale

monocultures of crops such as sugarcane, jatropha and oil palm. In Tanzania, the main large-scale biofuel investments have involved plantations of up to tens of thousands of hectares. Financing for these projects has come from a variety of large-scale, generally foreign-based investments, with the main interest in biofuels being driven by European companies. By 2007–2008, these proposed investments requesting large areas of land, often routed through the Tanzania Investment Centre (TIC), were multiplying and concerns spread amongst policy makers, civil society organizations, the media and the general public about the social and economic impacts and implications of these projects, which were being initiated in the absence of any formal policy on biofuels in Tanzania to guide them. In particular, concern grew about the impacts of these biofuel investments on the environment – particularly through clearing of coastal forests for plantations and diversion of large amounts of water to feed the crops – and on the land rights and access of the communities whose land was being targeted for these investments. For example, in some villages in Rufiji District up to 80 percent of certain villages' lands were proposed for acquisition by investors via TIC (Sulle and Nelson 2009).

As a result of these growing concerns, felt not only in Tanzania but throughout Africa, a number of studies were carried out during 2008 and 2009 to examine the impacts of these new biofuel investments (Kamanga 2008; Songela and Maclean 2008; Gordon-Maclean et al. 2008; LARRRI 2010; Shemdoe and Mwanyoka 2010). The Tanzania Natural Resource Forum (TNRF), in partnership with the International Institute for Environment and Development (IIED), which was then carrying out research on agricultural and biofuel investments throughout Africa (Cotula et al. 2008; 2009), also carried out its own study to appraise the status of the emerging biofuel investments in Tanzania and their impacts on local communities' land tenure and development opportunities (Sulle and Nelson 2009).

That report from 2009 produced a clear inventory of the status of the various biofuel investments around the country and described the processes they had followed to acquire land for their projects. Among other findings with regards to the impact of biofuel investments on local land rights, the report expressed concern over the way land was being acquired from Village Councils, particularly in terms of the way compensation was being calculated and paid. Specifically, the report raised the concern that the land acquisition process involved having villages, often with district government facilitating these transactions, agreeing to transfer their village land to general land under the control of TIC, which would then lease it onwards to investors. The investors would pay compensation, but in some instances this compensation depended on their obtaining project financing, using the leaseholds to the land as collateral. This situation seemed to place disproportionate risk on the local communities, as they would only be compensated for lost land holdings once the investors obtained financing for their projects. In addition, should the investments fail for whatever reason, the land would still be general

land and would be disposed of (sold, seized, etc.) as the property of the investor. Lastly, compensation was being calculated not on the real economic value of the land and its resources, such as the economic value of forest products, but instead on 'improvements' to the land such as cultivated areas, trees planted or permanent structures (Sulle and Nelson 2009).

These concerns proved prescient as the global economic crisis that took hold in late 2008 was creating conditions that would contribute to a much more difficult investment climate for relatively speculative projects such as these. Since TNRF's initial report on biofuels and community land tenure was published three years ago, the pace of biofuels investments has slowed considerably. This is due to government action that placed a moratorium on new projects prior to finalizing the biofuel guidelines and ensuring policies are in place (Prime Minister, July 2008, in Afandi 2008) as well as the global economic slowdown. As a result of these and other factors, a number of the highest-profile and largest-scale biofuel investments, which took place from 2005–2008, have been suspended, abandoned or sold off to third parties that may or may not revive the original projects. Notably, as of early 2012 a number of the most prominent biofuel investment companies (e.g. Sun Biofuels Tanzania Ltd. operating in Kisarawe District) are reported to have sold their properties in Tanzania. Bioshape Tanzania Ltd., another major investor, has since November 2009 abandoned its property in Kilwa District and appears to be defunct.

These developments raise important questions and reflect the concerns voiced in the original report in 2009: what will happen to the village lands that were granted for these projects, and what will the longer-term impacts be on community land, natural resource rights and development options? Promises and contractual obligations, which provided the basis for communities to cede their land to these investments, have been cancelled as projects have been abandoned. This has left communities with neither their original land and resource assets nor the longer term economic benefits they were promised. The immediate impacts and long-term prospects arising from the abandonment of biofuel investments need to be better understood by policymakers, civil society groups, investors, and rural communities as well.

This recent situation with biofuels investments in Tanzania has important policy implications not only for biofuels development but for land-based investments more generally, such as tourism and agriculture. In particular, the implementation of the recent agricultural development initiatives such as Kilimo Kwanza, the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) and the G8's New Alliance for Food Security and Nutrition – all launched by the government of Tanzania in collaboration with private sectors, donors and foreign countries – may be better informed by this case. For instance, the New Alliance launched at the G8 Summit in the US in May 2012 aims to deliver \$3bn from both African governments and multinational

companies for investment in public-private-partnership agriculture-related projects with the goal of lifting 50m people out of poverty. Implementing these initiatives in their current frameworks is likely to lead to a greater demand by national elites, public agencies or foreign companies for large areas of land, thus excluding the majority of the local poor from access to land and other resources. Already, this is promoted in the development of recent policies and legal frameworks. For instance, the newly passed National Irrigation Act (Kaijage 2013) illustrates how villagers are likely to lose arable-irrigable land to large-scale agricultural investments backed by the central government.

As this report will describe, Tanzania's recent experience suggests the need to rethink the basic framework governing investments in land, and the ways that local communities, outside investors and government policymakers interact and the roles they play. Specifically, it is evident that the practice of transferring village land to general land as the basis for commercial investments is not compatible with local land management and development interests, since this permanently extinguishes community rights over land regardless of the performance or fate of the investment. In cases where investments bear a substantial level of risk of failure, which in reality applies to many investments occurring in Tanzania's challenging business environment, villages wind up bearing the majority of this risk. This is due to the permanence of forfeiting their land rights for investments that ultimately may not generate offsetting benefits. Over the long term, this practice is likely to increase rather than reduce poverty in rural areas. Moreover, such transfer of land should not be necessary to facilitate investment in land in rural areas. Mechanisms that enable communities to directly lease village land to foreign investors – an already feasible mechanism for Tanzanian-owned commercial investments – would eliminate this problem. These issues should be carefully considered in relation to potential revisions of the Land Act and Village Land Act, as well as guidelines for biofuel and other agricultural investments. This concern should further inform the development of new paradigms for land acquisition and land-based investments in Tanzania today, and may also be relevant to other countries in the region struggling to balance local land rights and livelihoods with the desire to promote commercial agricultural investment.

This report provides an updated case study and policy analysis of the Bioshape Tanzania Ltd. investment in biofuels production in Kilwa District, Lindi Region, in southeast Tanzania. This investment was one of the largest (~34,000ha) and most high-profile biofuel investments to take place in Tanzania to date. By examining the outcomes from this investment and tracing the causes and consequences of its collapse since 2009, it is possible to generate important insights for informing policymaking around land, investment and rural development in Tanzania and other parts of Africa today.

3.0 Scope and Methodology

3.1 Objectives of the study

The main objective of this report is to examine the outcomes and impacts that arise from the withdrawal or bankruptcy of a large-scale, land-based investment in Tanzania, and to use this evidence to draw insights for policy and practice around local land rights, livelihoods and investments. This is done by presenting a detailed case study of Bioshape's investment in Kilwa District, which includes a brief description of its original objectives and business model; its acquisition of land and initiation of operations; its impact on local communities; and the reasons for its eventual failure and abandonment. Ultimately, the study compares the outcome of Bioshape's investment with original expectations at different levels in Tanzanian society with the actual impact on local livelihoods, land rights and the Tanzanian economy. The report examines these outcomes in relation to the design and performance of the investment, and provides informed recommendations for improved land tenure and investment policies in general.

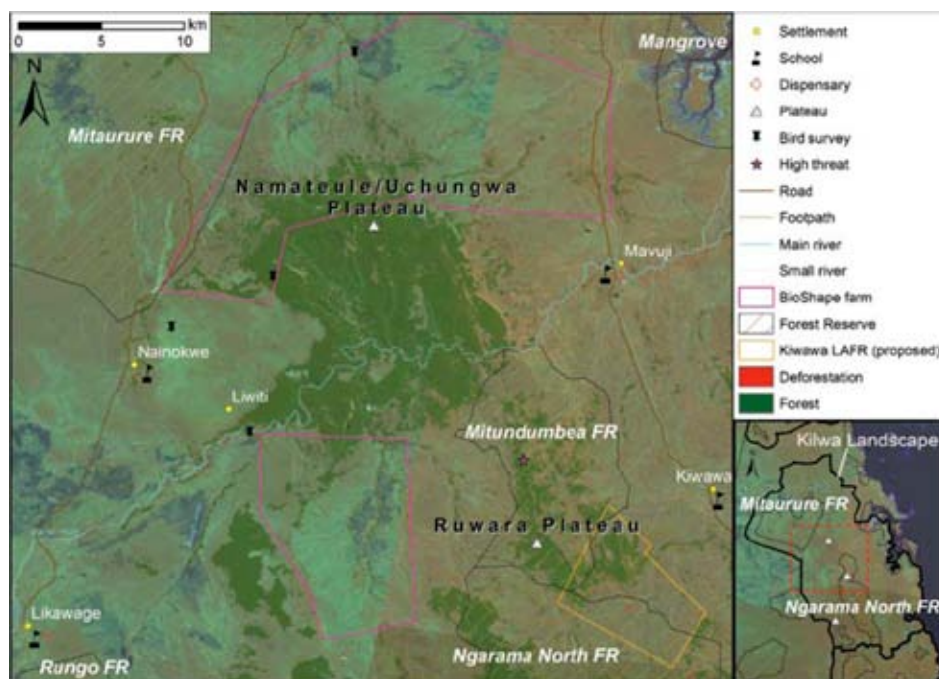
Specifically, this research provides insights into the following areas:

- The economic implications of a failed land-based investment project in Tanzania, including in relation to the local economy, resource ownership and management, as well as the powers of the local communities to raise their voice against the possible loss of their rights through a commercial investment project.
- Processes used by investments to acquire community lands, both in law (*de jure*) and in practice (*de facto*).
- Sharing of risk between local communities, government and private investors in the design and implementation of commercial projects in emerging industries.
- Recommendations for improving the design of land and investment policies, developing fair processes of acquiring lands for investments and identifying opportunities for strengthening the voice and ownership of local communities over their lands.

3.2 Study site

This study was conducted in the four villages of Mavuji, Liwiti, Nainokwe and Migeregere. These are the four villages that gave part of their land to Bioshape Tanzania Ltd. (hereafter 'Bioshape').

Figure 1: Map of the study site and surrounding villages and geography in Kilwa District.



Source: <http://www.fibronot.nl/Bioshapetanzania-english.php>.

3.3 Data Collection

This study included fieldwork at the study site as well as background desk research. A number of other recent studies were reviewed which touch on Bioshape, including describing its land acquisition process and the compensation paid to both the Kilwa District Council and the villages (e.g. Gordon-Maclean et al. 2008; LARRRI 2010). A range of web-based articles and reports were also included and are cited throughout the course of the study. In addition, updated information on land acquisition and investment trends in Tanzania and in Africa is included as contextual information. Overall, the study builds on what has already been reported by Sulle and Nelson (2009) in an effort to update the analysis and draw out clearer implications for policymaking in light of new developments.

Fieldwork in Kilwa District was carried out for eight days. The researcher (ES) interviewed individuals from government offices, NGOs and communities and also conducted focus group discussions in the relevant villages, as well as consulting other key informants. Interviews were also held with Kilwa District land and natural resources officials as well as a number of former Bioshape employees. Additional in-person interviews were carried out in Dar es Salaam and others were contacted by phone or email. NGO officials interviewed in Kilwa District include the Mpingo Conservation and Development Initiative (MCDI) and World Wide Fund for Nature (WWF).

In Dar es Salaam officials were interviewed at the Ministry of Lands and Housing Development; Tanzania Investment Centre (TIC); the Ministry of Natural Resources and Tourism (MNRT), particularly the Forestry and

Beekeeping Division; and finally, a number of Bioshape representatives. It was notably difficult to get feedback from Bioshape's former top officials in Kilwa, but a few responded to various email requests for information. Some of the contacted people declined to speak about the company, with the claim that they no longer want to associate themselves with the company³.

The field research was guided by the following general questions:

- What was the original rationale and design of the Bioshape project in relation to economic production and use of land and natural resources?
- What were the causes of Bioshape abandoning the project?
- Following the abandonment of the Bioshape project in Kilwa, what is the status of the land granted by villages to the project in terms of land use and land rights and tenure?
- What has been the impact of the Bioshape departure on local communities in the project area, in the villages that ceded land for the project? Have villages been paid compensation for land that was agreed to? Are there impacts on local employment or access to resources? What are local perceptions of the failed investment?
- Who has born most of the costs/risk of this failed investment?

4.0 Background

4.1 Biofuels Investment and Land Acquisition Trends

Tanzania, like the rest of sub-Saharan Africa, is experiencing a surge of conflict around large-scale land acquisition and investment. In Africa as a whole, there were up to 134 million hectares reportedly acquired from 2000 to 2011 (Anseeuw et al. 2012), out of a global total of 203 million ha dealt during this period. A World Bank report on these processes highlights that sub-Saharan Africa is particularly targeted for land acquisition because of a perception that large areas of land are available at relatively cheap prices, in a context of highly centralized land governance that often does not recognize or take account of local customary rights (Deininger et al. 2011; Neville and Dauvergne 2012). As a result, the recent surge of land-based investment across Africa is setting the stage for major long-running conflicts as local communities are dispossessed of their customary lands in order to make way for large-scale commercial investments (Alden Wily 2011).

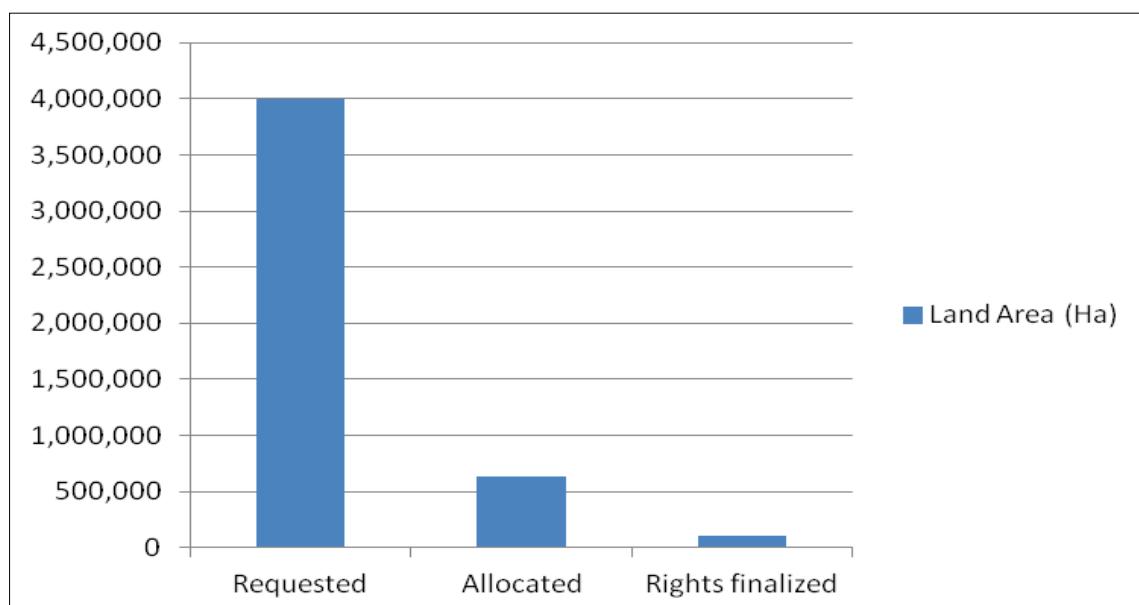
In Tanzania, recent findings by Land Rights Research and Resources Institute (LARRRI/HAKIARDHI) report that Tanzania may be experiencing up to five land conflicts daily, with many of these involving investors or other economically or politically powerful actors (Kasumuni 2012). Issues of land acquisition or 'land grabbing' have attained higher profile in public debate recently, such as around the large-scale (~120,000ha) agricultural project by an American investor (Agrisol) in Rukwa Region. And in 2011, Parliamentary debate over land issues nearly led to MPs' rejection of the Ministry of Lands' annual budget proposal (Liganga 2011).

Biofuels investments have been a major part of the recent surge in global land investments, accounting for 37.2m ha globally, of which 18.8m ha is in Africa. This figure reveals that two-thirds of all cross-referenced land deals in Africa during the past decade have been related to biofuels (Anseeuw et al. 2012). Drivers behind this biofuels investment surge include the European Union requirement to source 20 percent of domestic energy from alternative energy sources; Brazilian commoditization of ethanol, and its exportation of an ethanol production model to developing countries; and the fuel blending ration established in the US (Hultman et al. forthcoming).

In Tanzania, biofuels investments dominated the media headlines in 2007–2008 as large-scale commercial investments involving previously little-known crops, such as *Jatropha curcas* ('jatropha'),⁴ began to spread and attract the attention of the public. The first major inquiry into these new biofuel investments, and their relation to land tenure issues, was carried out in 2008 by LARRRI/HAKIARDHI (Kamanga 2008). These initial inquiries reflected concern amongst the public, as well as Members of Parliament, about the government sanctioning large-scale biofuel projects without adequate understanding of risks and benefits associated with these new crops (see Afandi 2008).

By 2009, the government of Tanzania had received official requests for land for biofuels investments reaching 4m ha, while the amount officially allocated was about 640,000ha. Furthermore, the lands that had been formally granted rights at that time totalled less than 100,000ha, while the balance of lands were still undergoing the process of obtaining full granted title (Sulle and Nelson 2009).

Figure 2: Land area requested and allocated for biofuel investments in Tanzania as of 2009.



Source: Sulle and Nelson 2009.

4.2 Policy, Legal and Institutional Framework for Biofuels in Tanzania

Concern about the pace of land allocation for biofuels eventually led to the government placing a moratorium on new grants of land for biofuels while the government completed work on formal guidelines as an initial policy statement on biofuels. In November 2010, after several years of development, the government released the guidelines for development of sustainable liquid biofuels. These guidelines have incorporated some of the main recommendations made in reports published between 2008 and 2010 by a number of organizations such as TNRF, WWF, LARRRI/HAKIARDHI and the University of Dar es Salaam. For instance, the guidelines promote the use of sustainable business models such as hybrid and contract farming, as suggested by some recent reviews (e.g. Sulle and Nelson 2009).

The guidelines require developers/investors to consult local, regional and national stakeholders during the feasibility study and project planning phases, and require the signing of a memorandum of understanding with the relevant local (village) authorities in all areas that fall within the project boundaries. Initially, all approved projects receive five-year land tenure for biofuels development as an interim period to demonstrate their legitimacy and viability. If proven successful, the developers' leases may then be extended to 25 years. Approved land must be used only for the purpose stated in the investor's application and the maximum land acquisition is 20,000ha per developer/investor. However, as this report will describe, the guidelines do not, and in and of themselves cannot, address the fundamental problems involving local land rights in relation to biofuels and other commercial agricultural investments.

An Environmental and Social Impact Assessment is also a prerequisite to any project development. In addition, the guidelines state that biofuels development should not cause any displacement of local people or threaten food production and security. According to the guidelines, biofuels development must not take place in areas with high biodiversity or cultural value. Furthermore, investors must give employment priorities to communities in the locality, process biofuels feedstock in Tanzania and ensure quality of the products meets internationally accepted standards.

According to the guidelines, the Ministry of Energy and Minerals will be the Secretariat of the Biofuels Technical Advisory Group (BTAG). BTAG is formed by the experts from the Ministries of Land, Energy, Natural Resources and Tourism, Agriculture and Food Security, Land Use Planning, Investment, Water, and Industry. Other experts will be called upon from time to time to advise on specific issues. However, the BTAG excludes existing think tanks and universities, which play an important role in providing research and expertise.

4.3 Village Land Tenure in Tanzania: The Governing Framework for Rural Communities and Commercial Investors

Village land is under the authority of Village Councils and Village Assemblies, with the latter comprising all the residents of a village who are over the age of 18. The Village Land Act No 5 of 1999 provides the basic framework for local communities to manage and govern their customary village lands. The Act lays out specific procedures that need to be followed for an investment to take place in village land. For instance, for an investor to get an area of village land greater than 250ha it has to be transferred to general land (S. 4 (6)). This transfer requires the President's approval and public announcement in the government gazette.

Procedures for investors to obtain village land are substantially different from those used to acquire land directly from the TIC, because such investments must undertake the transfer of land from village land to general land as well as additional procedures. In contrast to obtaining land from the TIC 'land bank', where the investor does not negotiate with local communities, investors seeking village land have to start negotiations from the village level. They then proceed upwards to the Ministry of Land until the final transfer of land from village land to general land is approved by the President. The process is as follows (as summarized by Ngowi and Makwarimba 2011):

1. A prospective investor identifies an area where suitable land is located, usually with the help of local brokers, or possibly officials from TIC, or a local MP;
2. The investor, facilitated by the broker, approaches the District Council (usually through the land officer) and makes their intentions known;
3. District officials identify suitable locations and approach the villages in whose jurisdiction the land lies, to secure their approval;
4. The village governance organs, principally the Village Land Council and Village Council, must approve the request and convene a full Village Assembly meeting to approve the request. When the Village Assembly approves the request for land, minutes of the meeting will be evidence of the village having given consent for its land to be used for investment purposes;
5. These minutes are then submitted to either the TIC or the Commissioner of Lands for the land to be transferred to general land.
6. The village land transfer will take place subject to compensation.

Box 1. Excerpts from the Village Land Act on the transfer of village land

4.-(1) Where the President is minded to transfer any area of village land to general or reserved land for public interest, he may direct the Minister to Transfer of village land to general or reserved land proceed in accordance with the provisions of this section.

(2) For the purposes of subsection (1), public interest shall include investments, of national interest.

(3) The Minister shall cause to be published in the Gazette and sent to the village council having jurisdiction over the land which is the subject of the proposed transfer, hereinafter called 'village transfer land' a notice specifying-

(a) the location of the area of the village transfer land

(b) the extent and boundaries of the village transfer land-

(c) a brief statement of the reasons for the proposed transfer

(d) the date, being not less than ninety days from the date of the publication of the notice, when the President may exercise his power to transfer the land or a part of it.

(8) No Village transfer land shall be transferred

(a) until the type, amount, method and timing of the payment of compensation has been agreed upon between-

(i) the village council and the Commissioner- or

(ii) where subsection (3) and (9) apply, the persons referred to in those subsections and the Commissioner; or

(b) if the matters of compensation referred to in paragraph (a) cannot be agreed until the High Court has agreed as an interim measure, pending final determination of the matters of compensation, to the payment of any sum on account which it thinks proper by the Commissioner to the village council and to the persons referred to in subsection (3) as the case may be; or

(c) if general or reserved land is to be exchanged with the village transfer land, that general or reserved land has been identified and is ready to be transferred to the village.

5.0 The Impacts of Failed Large-Scale Investments: The Case of Bioshape

Bioshape Tanzania Ltd. is a branch of Bioshape Holding BV, a company based in the Netherlands. According to Bioshape's official website, Bioshape Holding BV was founded by three entrepreneurs who have been active in the energy sector since the 1990s. Its share capital was divided amongst five private businessmen, Kempen & Co (a merchant bank) and Eneco Energy, which joined in 2007 and took over 50 percent of the share capital. The company established a number of strategic alliances with other players in the market as well as with a number of suppliers (see <http://www.bioshape.nl/>).

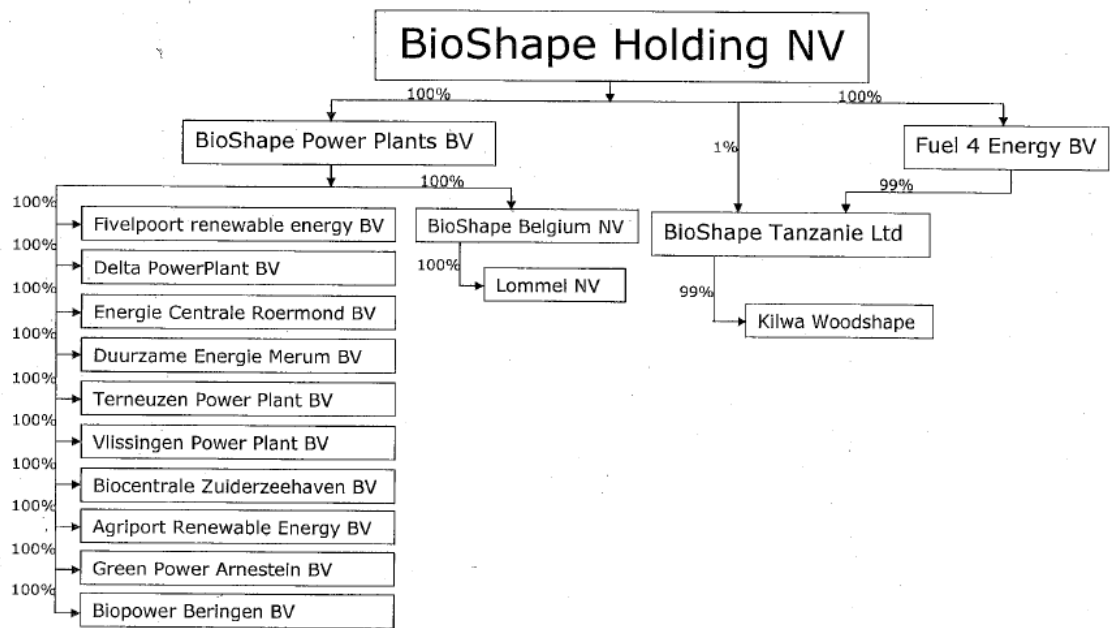
Bioshape's Tanzania operations were geared towards producing jatropha seeds to export to the Netherlands. As with other European biofuel investments, a major market incentive for this operation was the European Union fuel efficiency standards, which created a premium demand for non-carbon based fuel sources.

Bioshape appears to have selected jatropha production in Africa for similar reasons as many other investments engaging in large-scale jatropha production in Africa and around Tanzania at this time: the perception that jatropha was a high-yield crop ideally suited for poor soils and relatively dry conditions, and the ability to acquire large areas of land at relatively low cost. During this 2006–2008 period, Tanzania's coastline, with its poor soils, relatively higher rainfall and proximity to ports for transporting export crops, was a focus of biofuel investments, including many of the large-scale jatropha plantations (Sulle and Nelson 2009).

In 2006, Bioshape started the search for land in Tanzania when officials of Bioshape Holding BV visited both TIC and Kilwa District. Initially, the company requested roughly 81,000ha of land for development of jatropha, but in 2008 it finalized the legal acquisition of 34,000ha of land.

Currently, the Bioshape investment in Kilwa is dormant. Less than 500ha out of the 34,000ha obtained have been cleared and developed as jatropha plantations, and these plants have since been left untended. According to district

Figure 3: Corporate structure of Bioshape Holding BV in the Netherlands and its Tanzanian affiliates.



Source: <http://www.fibronot.nl/Bioshapetanzania-english.php>.

officials, Bioshape directors have been communicating with them that the company will re-open its operations in Kilwa.⁵ However, Valentino (2011) reports Bioshape's assets to be subject to bankruptcy proceedings, with its assets, including its land, being shopped by a legal firm to new prospective investors. Dutch media reports also state that Bioshape has entered bankruptcy proceedings, with negative equity of €3.9m and debts of €7.6m.⁶

Like other biofuels projects initiated during the brief boom of 2006–2008, Bioshape's investment was to a large degree the victim of changing global economic circumstances brought about by the economic crisis – and particularly the loss of cheap credit to fund high-risk or speculative investments – that began in 2008 and which, particularly in Europe, continues to this day. In addition to these global factors, local problems with regards to the suitability of the climate and soils for the production of jatropha seeds with a suitable oil content also appears to have played a role in undermining the investment's prospects.

5.1 Bioshape's initial business plans

Initially, Bioshape set a target to produce biofuels from jatropha seed using plantations and to later develop outgrower schemes. It was reported to have invested about €25m in its Kilwa facility, which planned to produce 45,000t of oil from jatropha seeds annually. This was estimated to be enough production to supply approximately 25 megawatts to roughly 50,000 households. From 2006 until its bankruptcy, Bioshape's operating expenditures were reported to be about \$9.6m (Valentino 2011). According to interviews with former employees of the company in Kilwa, most of these costs were incurred during the purchasing and transport of agricultural and forestry machinery, including its sawmill. During visits to the field, a number of company vehicles and machines were seen left in the company's operation site in Mavuji Village (Figure 4).

Figure 4: Equipment on Bioshape property in Kilwa District.



5.2 Bioshape's land acquisition process

A key to understanding the impact and lessons of the Bioshape investment in Kilwa lies in how it acquired its land, and particularly how the land acquisition process did or did not adhere to the processes defined under the Land Act and Village Land Act as summarized in Section 3. Reconstructing the land acquisition process is challenging, particularly now that the investment has collapsed and has been subjected to unfavourable media coverage both in Tanzania and in Europe. This has made it more difficult to obtain information about the land acquisition process from former Bioshape officials, as well as Tanzanian government representatives. And there are a range of irregularities that may involve failure to follow proper legal procedures, which may add to the reluctance on the part of some officials to make all documentation relevant to this case available.

Despite these limitations, it is clear that at some point in 2005 or 2006 Bioshape finalized its plans to site its jatropa plantation in Kilwa and began to engage with district and village representatives to obtain land in the target communities. The following provides a very rough timeline of the land acquisition process.

- **September 2006:** Nainokwe Village Assembly approves a broad request for land for growing jatropa as submitted to the Village Land Council and Village Council by Bioshape. The only conditions attached to this approval are that Bioshape drill a borehole for the village and build a village office.
- **August 2007:** Kilwa District officials send formal approval to TIC for Bioshape's land request of 81,000ha, while providing Bioshape with estimated surveying costs for the land in question of approximately 52.8m Tshs.⁷
- **September 2007:** TIC provides Bioshape with a clear description of the process for TIC to issue Bioshape with a derivative right of occupancy (or 'title') to the land requested and approved at village and district levels.⁸

As is described in somewhat greater detail below, it is clear that during 2006–2007 Bioshape did obtain formal approval from the authorities at the village and district level for the land it was seeking to acquire. However, it is also clear that the village members, and also perhaps at least some District Council members, did not understand that the process of land acquisition in this case necessarily involved transferring land from village to general land and thus extinguishing the communities' customary rights, and thus any future claim over the land. Thus, as other reports (LARRRI 2010) about this case have also

documented, while the communities' approval was sought and obtained, that approval was not adequately informed by an understanding of the legal ramifications of their acquiescence to Bioshape's request.

What remains unclear in this case is, very importantly, how the title granted to Bioshape was ultimately issued and if, in fact, the land in question was ever formally transferred from village to general land, an act that must be published in the Government Gazette and can only be done by the President. There is no available documentary evidence that this transfer took place, and, somewhat strangely, accusations of irregularities on the part of the Ministry of Lands and Housing Development have come from the TIC itself. As will be discussed later in this report, the question of whether the transfer of land from village land to general land was published in the Gazette as required by law is an extremely salient one surrounding the claims and interests of the communities affected by this land acquisition.

The following sections, based on the fragmentary evidence available, provide some additional discussion of what transpired at national, district and village levels during the land acquisition process.

5.2.1 National Level

The TIC spelled out the land acquisition process clearly to Bioshape in its letter to the Tanzanian Managing Director of the company dated 7th September 2007. This letter states that in order for TIC to issue Bioshape with a derivative right of occupancy ('derivative title') to the land that Bioshape was requesting, the following steps would have to be completed:

- Survey the boundaries of the property
- Value the property to determine compensation amount and pay compensation
- Transfer the land from village land to general land

Following the transfer of the land from village land to general land, TIC would then issue a derivative right of occupancy to Bioshape. But following this initial correspondence, it appears that the process of land acquisition deviated from that described by TIC to the company. The TIC Executive Director was subsequently quoted by a local reporter (Simbeye 2010) as stating that, 'Some smart guys at the ministry [of lands] processed the lease agreement without involving my office.'

Attempts to obtain official details from the Ministry of Lands and Development of Human Settlement with regard to Bioshape's actual lease agreement have proven unsuccessful. It is unclear why the land acquisition process in this case apparently bypassed TIC as claimed by the TIC Executive Director.

5.2.2 District Level

The process of land acquisition in Kilwa District in this case was facilitated by district and regional officials. Government representatives were reported to have joined the company officials on visits to a number of villages where they identified the potential investment land.

However, during the Kilwa District Council meeting to deliberate on the transfer and allocation of village land to Bioshape, a number of councilors reportedly questioned the safety of the investment in relation to villagers' land rights and environmental impacts of the proposed crop. One councilor expressed possible dangers of allocating huge pieces of land to foreign investors, citing the conflicts around the commercial farming sector in Zimbabwe. According to the councilor, the government should not be scared of having idle resources, but rather fearful to lose those resources: 'It is not bad to have abundant natural resources, but it is bad to not have them.'¹⁰

However, a District Council member interviewed for this study also expressed that the councilors who resisted allocating the requested land to Bioshape were not sufficiently conversant about their options to resist the proposed land allocation. In addition, they were challenged by government officials both from the regional and district offices, who insisted that the investment would provide significant benefits and that approving it is in line with the government's plans to promote more foreign direct investment. One of the councilors further explained the significance of this pressure from higher levels of government in influencing approval of the Bioshape land acquisition in Kilwa, in what serves as a useful snapshot of the conflicting interests prevailing within elected local government in Tanzania today: 'It is hard for you as a councilor to resist orders of the regional official who holds you accountable both in the government and the ruling party.'

5.2.3 Village Level

The research findings for this report concur with previous studies (LARRRI 2010). The four villages did agree to grant land to Bioshape, but they did not understand the terms of the land allocation that they were approving, nor did they know the amount of land that was actually being allocated. No villages have a copy of any legal agreement with Bioshape, and the village

meeting minutes that were obtained suggest that the agreement was extremely vague and poorly defined. For example, the minutes from Nainokwe's Village Assembly meeting do not include any reference to the area of land being allocated. Mavuji's Village Council minutes refer to an allocation of 100,000ha, an area of land that is greater than all the land in the village and greater than the total land area that Bioshape had sought. While some of the interviewed villagers agreed that they gave Bioshape the land for 25 years, others said they allocated their land to Bioshape for 30 years. However, as has also been reported by LARRRI (2010), in all four villages interviewees mentioned that they agreed on the condition that if the company fails to develop the land for over three years then the land reverts back to the communities.

Of great importance is that it seems clear that the village members did not understand that approval of the land acquisition by Bioshape involved extinguishing their customary rights over the land and transference of the land from village land to general land. This, of course, precludes the villages' stated belief that in case the project failed or did not develop the land allocated, then it would revert to the villages. Indeed, this lack of understanding of this transference process extends to the District Council representatives of the area. All four councilors interviewed (three councilors representing villages that have given their land to Bioshape and one from Kilwa Masoko), expressed that they were not aware that the land was indeed permanently gone. They also agreed that villagers were not informed about the issues of derivative rights and transfer from village to general land during the land acquisition processes.¹¹

Compensation

All enquiries agree that Bioshape did pay compensation for the land it acquired, based on a valuation of 15,000 Tshs (or ~\$12) per acre; there is no evidence as to what this figure was based on or if it was negotiated with the affected communities. Valentino (2011) quotes the Bioshape Chief Executive Officer, Wilfried Hermans, as stating that total compensation paid by the company ran to \$676,000 (~811m Tshs), and that this was paid to Kilwa District Council.¹²

As has been documented previously by Gordon-Maclean et. al (2008), ultimately about 50 percent of the total compensation was retained by the District Council, with 50 percent being distributed (unevenly) to the villages as seen in Table 1.

Table 1: Compensation paid to the villages in Kilwa District by Bioshape

Village Name	Land Leased	Compensation Paid
Mavuji	6,475.11	89,420,000
Migeregere	13,759.61	170,284,000
Nainokwe	6,663.25	49,800,000
Liwiti	11,331.44	95,605,600
Totals	38,229.42	405,109,600

Source: LARRRI 2010 and field research 2011¹³

As Sulle and Nelson (2009) and LARRRI (2010) note, the district does not itself possess any rights over land and thus the basis for the District Council to award itself 50 percent of the total¹⁴ compensation seems expropriative, particularly in light of the highly questionable basis for calculating total compensation, as will later be describe in greater detail. During village focus groups, villager members also questioned the basis for the District Council to retain half of the compensation, and most disagreed with the way the Bioshape compensation was apportioned by the District Council. They expressed disappointment in district officials who did not help village members understand their legal options and land rights as well as related procedures.¹⁵ District officials, for their part, contended that they were entitled to get this share of the compensation paid by the company because villages lack authority to give more than 250 hectares to an investor without the approval of the District Council.

5.3 The Impacts of Bioshape's Investment in Kilwa

5.3.1 Local Economic Impacts

Bioshape's arrival in Kilwa District led to rapid and significant changes in the local economy. There was high demand for workers, both agricultural experts and unskilled labourers, to work for the company. This attracted skilled and casual labourers from various corners of the country, with heavy competition for the relatively high salaries and benefit packages offered by the company. According to some district officials in Kilwa, some government employees were tempted to apply for work with the company because of its salaries and benefit schemes¹⁶. While there is no official data from the government labour offices in Kilwa, media reports indicate that before it suspended its operation in Kilwa the company had 100 workers and 700 casual labourers, with many of the latter coming from the local area (Simbeye 2010). There are also different numbers of the company's workers reported through the media and other sources. For instance, the same reporter also indicates that Yono Auction Mart Ltd. was scheduled to sell Bioshape properties to pay close to 200m Tshs in salary arrears to 98 workers of the company. Available data from TIC records shows that Bioshape had created about 1,000 jobs while investing about \$10.88m in total¹⁷.

Housing rents skyrocketed in Kilwa, and there was increased demand for food and services. People even started to build new houses to rent to the company for office space and residences¹⁸. Being among the first biofuel companies in the country, Bioshape's establishment also attracted a range of visitors and researchers both from within and outside the country to visit the district and villages where the company was operating. This led to the establishment of new small restaurants, guest houses and houses for rent. The local tourist hotels in Kilwa hosted directors of Bioshape and some of the company's staff from the headquarters in the Netherlands.

The company also paid license fees of 21,388,200 Tshs to the MNRT, whereby 1,069,410 Tshs was returned to Kilwa District Council for a total of 224.83m³ of standing tree volume that Bioshape harvested from its property¹⁹.

5.3.2 Development Projects

Additionally, Bioshape established a developmental aid program for the local communities in its project area, which included medical care and education. These activities were planned to be run by the Bioshape Benefits Foundation (BBF). Until the company closed its operation in Kilwa, it provided or established a number of its promised projects that included²⁰:

- Construction of a market in Mavuji village²¹
- Construction of a maternity ward for 42 beds at Kinyonga Hospital in Kilwa Kivinje
- Construction, in cooperation with the Dutch Ukengee Foundation, of three classrooms; furnishing a new classroom which functions as a teachers' office; and providing electricity and internet facilities for computer classes
- Establishment of a vegetable garden and a school kitchen for the preparation of daily lunch for about 200 pupils who live far away at Mavuji Primary School²²
- Facilitating Dental Care in Kilwa Masoko primary schools
- Supporting UWAVUKI, a group of seven HIV/AIDS infected women in Kilwa Masoko, to generate income through a vegetable garden
- Hosting Dutch volunteers at the Kilwa Masoko Secondary Day School
- Renting a house in Kilwa Masoko, which is in use as an orphanage for the elderly lady 'Bibi' and the seven orphans she takes care of
- Donating computers to Kilwa Masoko Secondary School
- Drilling water wells in Nainokwe village

The subsequent departure of Bioshape in Kilwa District had significant impacts on Kilwa Masoko's economy and that of the surrounding villages. The company was a new opportunity for businesses and employment to grow. Therefore, its departure led to the rapid loss of the benefits that had been generated by its presence in a boom-and-bust pattern. Much of this was felt in Kilwa Masoko itself, where restaurants, hotels, the housing market and other service industries all felt the impact of Bioshape's collapse.

However, local communities in the villages where Bioshape's property was situated were perhaps even more affected by the fall of the company than businessmen and skilled labourers. Educated people are more likely to move around within the labour market than locals who lack formal business and other skills. For instance, after Bioshape's collapse, most of the unskilled labourers remained jobless in their villages while those with skills secured jobs elsewhere. This was clearly put in a statement by a resident of Mavuji village who stated:

'We are now left jobless, and we can't see those who gave us jobs when the company was alive.... some of us closed our small businesses in Dar es Salaam for the hope of permanent employment in jatropha fields, but with the departure of the company, we have remained hopeless²³.'

Unfortunately, since the project only lasted for two to three years, there is no development or other livelihood improvement aspects. The capital investments made in the plantation are quickly eroding following Bioshape's pullout. For instance, the company has left houses, a wood plant and jatropha nursery unchecked and unmaintained for two years; cars and machines are rusting in the area. The rest of the land which was obtained by Bioshape, fully 34,000ha, is subject to disposal to a new buyer as part of the company's assets in bankruptcy proceedings.

5.3.3 Compensation and Opportunity Cost

In evaluating the economic impacts of Bioshape on the communities whose land it acquired, it is important to consider the compensation paid in relation to the actual economic value of the land. It is not clear how compensation is being calculated, but it is clearly not being calculated and paid based on an understanding of the economic value of the resources on that land or of existing opportunities for communities to capture revenue from those resources.

In Kilwa District the most valuable resource in rural areas is timber, which communities can harvest once they establish Village Land Forest Reserves (VLFs) and prepare harvesting plans. The Mpingo Conservation and Development Initiative (MCDI), based in Kilwa, is the leading organization in Tanzania working with communities on sustainable timber harvesting from village lands. It has assisted approximately ten villages in Kilwa to establish VLFs and for several of these to begin harvesting *mpingo* (*Dalbergia melanoxylon*) and other hardwoods in the past several years²⁴. All of this timber harvesting operates under a group certificate from the Forestry Stewardship Council (FSC), a global timber certification body, which assures buyers that the timber they are buying is sustainably sourced. MCDI is working with the villages that lost some of their land to Bioshape, as these villages have set up or are establishing VLFs in other parts of their village land. MCDI conservatively estimates revenues available from sustainable timber harvesting in these villages as follows:

'With minimal premium for FSC certification and without exploring all the lesser known species, already both Liwiti and Nainokwe villages can look forward to incomes in excess of TZS 200 million per year (>\$120,000 per year). Both Liwiti and Nainokwe's VLFs are expected to be able to yield over TZS 30,000 per hectare annually; other communities' forests will need time for stocks of valuable species to recover before they can hit similar heights unless markets for lesser known species really take off or premiums for FSC certification rise substantially (MCDI 2011)²⁵.'

As noted, the land that Bioshape acquired also had or has significant timber stocks, which Bioshape harvested from the land they cleared. As MCDI states, a conservative annual sustainable yield averaging TZS 30,000 per ha is reasonable to expect for the forested lands in Liwiti and Nainokwe villages from the harvesting of high-value hardwoods²⁶. In comparison, the figures in Table 1 show that Liwiti and Nainokwe were paid around TZS 7,400-8,400 per ha in compensation for the roughly 18,000ha of land that Bioshape acquired in these two villages. That 18,000ha could generate in excess of TZS 500 million every year from sustainable timber harvesting under the FSC certification plan, if all of it holds viable timber stocks. The total Bioshape area of 34,000ha would thus have a potential annual yield of around TZS 1bn, which is greater than the entire compensation paid to both district and villages in Kilwa by Bioshape.

The point is thus clear that the compensation paid does not come remotely close to covering the real economic value of the asset surrendered by the communities, or their long-run opportunity costs in terms of future development options. Those opportunity costs, when factoring in the ability to regenerate timber stocks in developing VLFs and likely increasing value for some scarce hardwoods, runs into the tens or even hundreds of billions of shillings over the next 20-30 years. When these real values and opportunity costs are taken into account, it is apparent that the economic losses incurred by the villages by this investment are extremely high, and may have been substantial in the long term even had Bioshape succeeded commercially.

5.4 Local Response to Bioshape's Collapse

In the four villages where Bioshape acquired land, community members are frustrated with the company's unfulfilled promises. When the company started its operation in the district, it promised to finance establishment of a number of social services such as schools, water and health facilities as well as roads in the area. While some of the early projects financed by the company seemed generous to locals, the unfulfilled promises are a prominent local complaint.

Villagers' frustration varies from village to village. In Mavuji, where the company established its jatropha nursery, the village provided extra land to be used

temporarily to grow jatropha seeds. In Mavuji, Bioshape built a village office and market. It provided office furniture, but the unfinished market building seems to have been built in a road reserve and might soon be demolished as the construction of the highway from Dar es Salaam to Mtwara is ongoing.

While most of the villagers' frustrations have been reported both in the government-owned newspapers and private media organs, no significant steps have been taken to address these concerns. Their concerns have also been raised during several meetings with their councilors, with some villagers taking this issue to both district and regional offices. With these unsuccessful attempts, villagers expressed that they are even tired of getting interviewed by researchers and media people. This was strongly expressed by a Mavuji sub-village Chairman.

Following the loss of their land the communities express displeasure with the company and government officials who are claimed to have facilitated the whole process of land acquisition. In 2008, Gordon-Maclean et al. reported that the communities in the area Bioshape was operating in were satisfied with the company's approach. This was perhaps due to the company's initial investments in the communities' social services and the early employment opportunities that were created. This sense of satisfaction is however no longer in evidence. In Liwiti Village, a focus group discussion turned into an impromptu crisis meeting after the participants lamented their poor understanding of the laws and procedures involved in reclaiming their village land.

Indeed there is a demonstrable change in the attitudes of the local communities towards outside investments. Village members in these villages are no longer willing to commit themselves to further investment in their village land. For example, there have been recent cases of villages being resistant to or refusing natural resource-related investment proposals²⁷. Positively, there is a stronger understanding of the mistakes that were made in not understanding and scrutinizing the investment proposal and being more careful with the conditions that were attached to allocating the land.

According to the Kilwa District Commissioner, the district is no longer willing to give away its land to other investors intending to plant jatropha. However, if an investor is willing to invest in other types of crop farming, the district might consider the possibility of giving land for that particular investment²⁸.

6.0 The Biofuel Boom and Bust in Tanzania, 2005–2011

The period 2009–2012 witnessed the wholesale puncturing of the biofuel boom that occurred from 2006 to 2008 in Tanzania and much of sub-Saharan Africa. The country and the sub-continent as a whole are now littered with abandoned and failed projects. Whether this cycle will proceed to a new period of investment that perhaps

leads to more financially sustainable biofuel investments is unknown; certainly the global demand for alternative fuel sources has not ebbed and will continue to grow in coming years. However, it is now clear that crops such as jatropha have a number of limitations that were not understood in the early days of eager speculation and large-scale investment. This section examines the reasons underlying the rapid collapse of Bioshape in Kilwa, as well as recapping the similar collapse of some of the other large-scale biofuel projects elsewhere in Tanzania and neighbouring African countries.

6.1 Reasons for Bioshape's failure

Bioshape's failure can be attributed to a combination of factors, all of which increased the project's level of risk and exposure and reduced its ability to weather the adverse conditions of the 2008 global economic crisis.

Water and soil conditions: For a European company attempting the large-scale cultivation of a non-native tropical crop in a coastal African landscape, there were a lot of unknowns for Bioshape in terms of crop productivity and potential limiting factors. As it turned out, both soil and water – two critical variables for any agricultural crop – turned out to be constraints in Kilwa District. After planting jatropha seeds in its nursery in Mavuji village, it was observed that the area's clay soil would get progressively drier after the end of the rains, eventually cracking and fissuring, creating deep holes and exposing jatropha roots to sunlight and heat (Figure 5 below)²⁹. There were also reports that lack of sufficient irrigation water, given these dry soil conditions, was a constraint on production, although the company was able to successfully drill several new boreholes. Some water was reportedly salty and not suitable for irrigation.

Negative publicity: Bioshape was caught up in the emergence of concern over large-scale biofuel projects

Figure 5: Dry and cracking black cotton soil at the Bioshape property in Kilwa.



in Tanzania and in Africa, the links of these projects to European alternative energy requirements, and the local impacts of these projects in terms of the local environment (e.g. forest clearing and water use) and community livelihoods and land rights. The company was subjected to critical coverage both in the Tanzanian media and at home in the Netherlands. This may have reduced its ability to attract or retain investors for its project.

Capital outflow: In 2009, Eneco Energy, which owned 35 percent of Bioshape's shares, withdrew from the Bioshape Holding investment. This withdrawal, occurring as it did after several years of large-scale build-up of capital investments in Kilwa and on the heels of the global financial crisis, led to Bioshape experiencing severe cash flow problems, soon leading to suspension of its operation in Kilwa, Tanzania. In 2007 and 2008 the company reported losses of €1,595,957 and €5,141,243 respectively.

High-risk business model: As with a number of the other large-scale European biofuel investments taking place in Tanzania at the time, Bioshape envisioned a large-scale operation that required a high level of initial capital investment, using a crop with essentially presumed but unknown production and performance levels. Bioshape could not have foreseen how volatile the global marketplace would soon become, but the scope of their operations, the high up-front costs involved and the lack of knowledge about the local environment and

jatropha's productivity in coastal Tanzania all greatly enhanced the risks involved in the project.

It should also be noted that Bioshape's investment, and the entire wave of biofuels projects taking place in Africa at the same time, occurred during a period of unprecedented cheap credit which made money readily available for project financing. Money was available for

high-risk, speculative projects such as Bioshape's that would not have been available at other more fiscally conservative times.

One element of Bioshape's original business plan that remains somewhat unknown, but is important, is the role that timber harvesting played in their business model. While the project was always presented as primarily oriented towards the production of biofuels, and clearly this is the Bioshape parent company's main line of business (power generation), Valentino (2011) claims that timber harvesting was always a key part of the business plan:

'According to its confidential business plan... Bioshape expected to earn up to 6.7 million dollars in profits from logging and to use this money to partly subsidize its biofuel project.'

What is evident is that the Bioshape property contains a wide range of valuable hardwoods and that Bioshape installed a sawmill for processing trees cleared as part

Box 2: The Role of Timber Harvesting in Bioshape's Business Model

There is some evidence that Bioshape planned to, or ultimately came to, rely on timber production to finance its operations in Kilwa while in the process of establishing its jatropha crop. HTSPE (2009) reported that Bioshape has one of the largest and busiest sawmills in the southern Tanzania. The report also indicated that the company was producing sawn timber transported to Arusha for furniture construction by a subsidiary while the company was still applying for export license (HTSPE 2009). Timber processing and dissemination by Bioshape in the country was well known in different parts of the country to the extent that the company was known for its timber business instead of its primary goal of developing biofuels. According to media reports, the available record at Tanzania Business Registration and Licensing Authority (BRELA) indicated that Kilwa Woodshape Tanzania Ltd. – a company established by the boyfriend of the daughter of a senior manager of Bioshape Tanzania Ltd. – had the primary goal of processing and exporting timber (see Simbeye 2010).

Records indicate that Bioshape harvested about 225m³ of valuable miombo hardwood timber in its initially cleared trial plot area of 70ha. Reports further estimate that the area under Bioshape's concession could produce between 200,000m³ and 800,000m³ of valuable hardwood worth \$50-150m (See HTSPE 2009; Finobort 2012).

While there is no mention of logging as part of the company's initial business plans, Bioshape was however reporting to its partners in the Netherlands its progress including logging. For instance, the report submitted on 27th February 2008 on its website reads:

'Our saw mill still performs below quoted capacity. According to the manufacturer it should be able to process 10 to 12 cubic meter of wood per day; in reality we achieve 2 cubic meters only. We've had a number of telephone calls with the supplier to no avail so far. As we see it there's two reasons for the low output; first our foreman and his people have little experience. Also, the wood we use is very hard and dense. We're now mainly processing white Acacia; a beautiful kind of wood, from dark brown, almost black in the centre to near white at the bark. As written though, very tough to process. We're looking for solutions...'

(See <http://www.bioshape.nl>)

of establishing the 285ha plantation and trial plots. It seems likely that as Bioshape's financial assets dwindled and debts mounted, it sought to exploit the one readily available and commercially valuable resource it possessed on its property – timber. Box 2 explores this aspect of Bioshape's business in greater detail.

6.2 Beyond Bioshape

Bioshape has not been the only large-scale biofuel investment to collapse since 2009. Sun Biofuels Tanzania Ltd., which established an 8,211 ha jatropha plantation in Kisarawe District (see Sulle and Nelson 2009), was also reported to have gone bankrupt and is in the process of selling its land holdings (Carrington 2011). The company has laid off 750 workers and is leaving without fulfilling its promises of improved social services as part of the agreement it signed with villagers (IPP Media 2011)³⁰. According to media reports both in Tanzania and the UK, Sun Biofuels has now stopped its operation with the exception of maintaining 25 employees to take care of the planted 2,000ha of Jatropha. As in Kilwa, the loss of village land in Kisarawe District is now regretted by the local communities that ceded land to Sun Biofuels, as these residents can no longer access their former land legally for hunting or collection of firewood, honey, mushrooms, building materials, medicinal trees and other important products (IPP Media 2011; Carrington 2011).

SEKAB Bioenergy Tanzania Ltd. – a branch of Swedish Alcohol Chemistry AB (SEKAB), a corporation owned by three municipalities in northern Sweden – is another unsuccessful biofuels company operating in Tanzania. The company started its operation in Tanzania in 2007–2008 when it managed to acquire 22,000ha of land in Bagamoyo. In 2008–2009, the company had unsuccessfully planned to acquire a vast area of land (400,000ha) in Rufiji District (Sulle and Nelson 2009). The company officials were reportedly attributing the failure to the global financial crisis. In addition, amid protests from environmentalists over its activities and the lack of proper policies to guide biofuels in Tanzania, opposition rose in Sweden and the company was forced to shut down its projects in Tanzania in early 2009. The same year, SEKAB sold all its African projects to its former CEO, Per Carstedt, for a token sum of €40. Carstedt has revived the Tanzania project and is setting up a sugar company with an 8,000ha sugarcane plantation and a refinery in Bagamoyo, Tanzania. His company, Bagamoyo EcoEnergy Ltd., is registered in Mauritius. The company reportedly intends to expand eventually to the original 200,000ha, and has applied for a credit guarantee from the Swedish International Development Agency (GRAIN 2012).

Similar collapses of biofuels projects are evident in neighbouring countries as well. Valentino (2011) reports that there are at least 30 abandoned biofuels projects in Africa in 15 countries, including Mozambique and Ghana. In Mozambique, following the collapse of one project, the community in Dezeve Village was 'left without land to cultivate, no income and no information about the

future plans for the project or the land' (Theting and Brekke 2010). Also in Mozambique, the UK-based company Procana's investment in bioethanol from sugarcane is reported to have collapsed (Observer, Oct. 2011). Other African countries have avoided the jatropha and general biofuels boom and bust because they have taken a more tightly regulated and deliberate approach to the development of these new crops. For instance, in South Africa there has been no investment in jatropha plantations because the government still considers jatropha to be an invasive species.

Since 2008, market factors have clearly played a role in the collapse of many biofuel projects, as have growing concerns about the social and environmental impacts of large-scale biofuel plantations in Africa. However, there is also growing evidence suggesting that, as was found in Kilwa, jatropha production – the basis for many of these projects – does not hold as much potential as was initially believed, and the crop may in fact be marginal without additional costly inputs. For example, a study by Kant and Wu (2011) collected data on jatropha production in India, China, Kenya and Tanzania, concluding there is a global collapse of jatropha as a biofuel feedstock. The report states that:

'In Tanzania the results are very unsatisfactory and a research study found the net present value of a five year investment in Jatropha plantation was negative with a loss of US\$ 65 per ha on lands with yields of 2 tons/ha of seeds and only slightly beneficial at US\$ 9 per ha with yields of 3 tons when the average expected Jatropha seed yield on poor barren soils is only 1.7 to 2.2 tons/ha. Even on normal fertile soils (average seed yield 3.9 to 7.5 tons/ha) Jatropha was no match for sunflower' (Kant and Wu 2011).

While Tanzania continues to experience a growing number of investments in the agricultural sector in the country, there appear to be almost no new investors looking for land to invest in jatropha. According to TIC officials, it seems that jatropha is no longer considered a good option as a biofuel crop given concerns about its productivity and economic viability.

7.0 Options for the Affected Villages in Kilwa

This section examines what options local communities have in relation to the current investment status. During the interviews in all four villages, it was observed that villagers need their land back and do not wish to leave it abandoned. Their demand for land is fuelled by the lack of any development on their land and the company's unfulfilled promises. Village members have expressed that they would like to have their land ready for future use, to engage in another possible investment or to develop productive activities such as agriculture or forestry.

7.1 Villages' Legal Options

The villages have several legal and procedural options to follow to regain their land. The exploration of legal options rests on the fact that up until the present there is no evidence that the correct legal process was followed in transferring the land from village land to general land, in terms of publishing notice and transfer in the government gazette. If improper procedures were used in issuing Bioshape with its derivative title without completing the transfer from village to general land, the communities will likely have a legal case that they can pursue.

Another option is for the villages to lobby for the return of their land through administrative channels. They could ask the Minister of Lands to de-register the land as the transfer didn't follow full or acceptable procedures, and on the basis that they were not adequately informed about the nature of the allocation as permanently extinguishing their customary rights.

There appears to be reasonable prospects for restitution of the villages' rights over their former lands based on recent positions on land acquisition and due process taken by the Minister for Land and Housing Development, Professor Anna Tibaijuka. For instance, in October 2011 the *Daily News* reported that the Minister for Lands, Housing and Human Settlements Development expressed that communities whose land has been irregularly given to large scale investors should contact the Ministry. The Minister was quoted as saying that the Ministry needs to get a formal complaint so that the process of restitution can start (Simbeye 2011 b). The Minister has generally shown some interest in securing illegally acquired public lands, including villages' lands taken by large-scale investors. For instance, the Minister stated, 'constant denial will not help. Every one of us here today must undertake honest self-evaluation to find out their contribution to the mess we are in.' The Minister further noted that the main problem that faces her Ministry was 'the chronic lack of respect for laws, rules and regulations,' adding that if everybody stuck to the professional code of conduct, 'Tanzanians – the clients – would have enjoyed better services and the image would have been positive and enviable.'

The observations made by the authors of this report in Kilwa also concur with what other researchers have concluded – that there was little consultation and that the laws were not properly followed in granting the village land to Bioshape. This is further substantiated by the Minister's statement that the Ministry is suffering from chronic disrespect of the laws of the land.

In addition to the prospect of support by the government, the restitution of improperly acquired land back to villages' ownership is supported by a number of conservation organizations working in Kilwa District and the nation at large because of its high conservation value. Mpingo Conservation and Development Initiative³² and WWF-Tanzania Program both work in Kilwa District and

are helping villages identify and conserve village forests. In a recent newspaper article, a WWF staff member is reported suggesting, 'the best way forward is for authorities to return the virgin coastal forest land to conservation under villages which had irregularly been deceived to give the same to Bioshape' (Simbeye 2011 a).

8.0 Policy Implications: Land and Investment

The events in Kilwa documented in this report, and the simultaneous collapse of a number of other high-profile foreign investments in biofuels around the country during the past several years, provide important lessons and implications for Tanzanian policy, as well as for other African countries facing similar challenges in reconciling local land rights with agricultural and other forms of commercial investment. Indeed, the experiences with biofuels investments in Tanzania highlight the need to rethink and revise how land is acquired by commercial investors, how such investments are structured, and how risks are shared amongst different parties. In reality, this may require some fundamental changes, supported by the relevant policy reforms, to the investment-based model of economic development that Tanzania has promoted for the past 25 years. This study provides lessons for new initiatives such as the Land Transparency Initiative on land and the extractives industry as well as the New Alliance for Food Security and Nutrition, both of which are in the implementation phase in Tanzania.

8.1 Sharing Risk

In the earlier review of biofuels developments in Tanzania published in 2009 by TNRF and IIED, one of the concerns highlighted was the way risk was being inequitably shared between the investors and the villages where the investments were situated. The report noted that where investors are acquiring village land, the land was transferred from village land to general land, often under the proprietorship of TIC, which would then lease it to an investor. The investor would then pay compensation to the affected communities, in some instances using project financing in the form of loans received, using the land as collateral. The critical point here is that, by transferring land from village land to general land so that TIC can lease land to foreign investors, the villages are permanently giving up their customary rights and claims to the land. The communities have to surrender their most economically valuable asset, often due to pressure from district, regional or national officials to approve the land transfers in order to facilitate investments which are aligned with national policy objectives.

For these communities, surrendering their lands in this way could in theory be either a good or a bad decision for their future social and economic development, depending on what benefits they are likely to receive from the investments. This, in turn, depends on the particular stipulations of agreements between the investors and the communities. The 2009 study also found that most

investments were being done without firm contractual agreements and that the communities had low capacity to negotiate formal contracts. It also depends on the ultimate economic prospects of the biofuel investments; namely, if these are sound business models and plans. If a business fails, then the investor loses their money, while the communities not only lose their future expected benefits, but also their land, which reverts to TIC.

As the earlier TNRF research pointed out, this model seemed, and seems, highly inequitable, as the cost to communities of losing their land, which is their principle economic asset and source of livelihood, is vastly greater than the cost to multinational investment companies, or the investment funds that finance such companies through debt and equity, of losing any particular individual investment. Tanzanian rural communities have thus been shouldering greatly disproportionate risk in these biofuel investments – and any other investment, such as for large-scale agriculture or forestry – that require them to surrender their customary rights over village lands if they want to engage in investments.

As it has turned out, these concerns expressed back in 2009 about sharing of risk and the long-term implications for communities surrendering their customary rights over village lands were highly prescient. Even in 2009, it was apparent that the global financial crisis was going to reshape markets for biofuels and the ability of investors to sustain their operations, particularly if demand weakened or they encountered problems on the production side. In fact, in retrospect the biofuel investments that were made from around 2005 to 2008 were much more speculative and high-risk than was appreciated at the time.

Many investors, including many of the companies that acquired large areas of land for biofuels in Tanzania at this time, had little experience in large-scale biofuel production in African settings and were largely taking advantage of the availability of cheap credit and the sudden speculative interest in biofuels as oil prices rose and Europe introduced its alternative fuel requirements. In addition to the broader macroeconomic factors that led to this speculative rush into African biofuels, the investment in jatropha as a biofuel crop was based on a wide range of knowledge gaps and unproven assumptions. Since that time, evidence has accumulated that jatropha is unlikely to be a 'miracle crop' as had been touted, and large-scale commercial production in the absence of irrigation and other inputs may not be viable at all. Ultimately, when one looks back on this period of initial biofuel investment in Tanzania and much of Africa, it is clear that many investors were playing fast and loose with their own investors' money³³ – but also, in reality, with local communities' lands and livelihoods.

Thus the communities that entered into these poorly planned, agronomically uncertain and highly speculative ventures, without any meaningful information as to the level of risk they were assuming, find themselves today in a worrying situation. They were paid compensation that was calculated in a dubious manner and does not

reflect the real economic opportunity costs for foregone use of the land and its natural resources. Their land now reverts in most cases to TIC as the title holder, and TIC may very well re-lease the land to an investor – quite possibly another highly speculative one – without the villages exerting any authority over the process. The villages' developmental options and prospects have materially declined as a result of these developments.

It is self-evident that the outcomes that have been documented in the case of Bioshape and other large-scale biofuel investments, in terms of the way risks are shared between communities and investors, are disadvantageous to those rural communities. In this way, these investments are not being designed in a pro-poor manner, and are in fact biased *against* the poor. Given the high risk of these investments and the concentration of that risk at the village level, the structuring of these investments is not supportive of the poverty reduction efforts articulated in Tanzanian policy and supported by foreign development partners.

It should be noted that this problem is not limited to biofuels, although biofuels, as it emerged during 2006–2008, were a particularly speculative component of the wider agricultural industry. Many investments in Tanzania, even in more well-established industries, will fail for one reason or another. The average lifespan for a private company in Europe's much more stable business environment is only about 12 years, meaning that most investments are likely to fail or at least change their form in a 10–20 year period (de Geus 1997). Given these realities, and the impermanence of many commercial investments, it seems inadvisable to require local communities to permanently surrender their land rights and claims in order to make way for such investments.

8.2 Acquiring Land for Investments

The crux of the problem is the way land is allocated and acquired in the process of foreign investment in Tanzania. Investors are required to obtain a lease for the land they wish to acquire from TIC. Foreign investors are not allowed, under the Village Land Act, to hold a derivative right to a customary right of occupancy. This provision was established in the Village Land Act to protect villages from sale of their customary lands by village leaders to outside investors. Instead of allocating land directly to the investors, the villages agree to allocate the land to the investment all the same, but they must then transfer their land to general land so that TIC can allocate it to the investor.

It should be evident based on the experience with biofuels, and perhaps with other sectors' experiences as well, that this system does not serve the land rights interests of villages. By transferring their land to general land so that TIC can lease it to investors, villages surrender all of their rights over the land. When the investment ends or goes bankrupt, as can happen with great frequency

in the 'frontier' market of Tanzania, rife with highly speculative and often poorly planned investments, the land remains lost to the local community.

The necessary corrective to the current situation is to develop mechanisms that ensure that when investments fail, land that a village has allocated to that investment reverts to the community as the rightful owner of that land. For this to be the case, the process of transferring land from village land to general land should be re-evaluated and replaced with an alternative process that retains communities' rights over village land. TIC's role in acquiring land and leasing it to investors also needs to change, as this creates the problematic requirement of transferring land from village land to general land.

The critical reform in law that could address the current situation is to amend the Village Land Act so that foreign investors may acquire a lease directly from Village Councils, subject to Village Assembly approval. This clause – which as noted above was ironically originally designed to protect communities' customary lands from sale to foreigners – is now the obstacle to investment models that could potentially be much lower-risk to rural communities, while still catering to the needs and interests of responsible investors.

Procedural safeguards could be put in place to specify that investors could not transfer a lease of village land to a third party without Village Assembly approval; that in case of bankruptcy or failure to pay annual lease fees, the lease would automatically be voided and the land thus return to its prior status (remaining village land throughout); and providing for approval of lease agreements by District Councils and the Ministry of Lands for leases above a certain size. The total size of land lease allocations in villages should be legally capped at, say, 25 percent of the total area of the village. Such safeguards could ensure that villages do not compromise their long-term landholdings and economic interests – as is presently happening under the current arrangement – when entering into lease agreement with third parties. To put it simply, if this had been the framework in place prior to the biofuels rush, the communities in Kilwa and Kisarawe would still hold customary rights to their village lands and all the attendant future economic options as a result of retaining those assets, after the withdrawal of Bioshape and Sun Biofuels, respectively.

Enabling villages to lease land directly to investors would also create a more empowering model for investment than the current model of routing investments through TIC. The existing model for investments in Tanzania effectively treats rural communities as obstacles to productive investment and development. They are to surrender their rights, be paid compensation, and then can continue to participate as passive recipients of benefits or employment, but they lose all their leverage over the investment itself. Communities are not enabled to partner with commercial operations – in the way, for example, that individual farmers or cooperatives do under outgrower schemes – in ways that more equitably share benefits and risk.

Part of the solution to growing concerns about land-grabbing in Tanzania may thus be to change the process governing the acquisition of land for foreign investments. Indeed, with all of Africa struggling with issues around land acquisition and tenure, the need is to find ways to reconcile the very real need for land-based investments in agriculture, biofuels and other natural resource sectors with the land tenure interests of rural communities (Anseeuw et al. 2011).

8.3 Land Administration and Governance

While legal reforms to provide a framework for and strengthen safeguards around village land leases would help improve the current situation, one important lesson to draw from Tanzania's recent experiences with biofuels and land is that effective laws and policies are necessary but insufficient for ensuring rights are respected and equitable outcomes promoted. Tanzania is known throughout Africa for having, relative to other countries, one of the most progressive land tenure frameworks with respect to recognition of customary rights (Alden Wily 2011). While the law in Tanzania can be improved, as the previous section described, the critical issue in Tanzania today is not the law's content but its administration and enforcement.

In the Bioshape case, it is clear that the Land Act and Village Land Act were not followed at critical points during the process of land acquisition. Specifically, the following can be pointed to:

- Kilwa District Council's retention of at least half of the compensation paid by Bioshape to the affected communities; there is no basis in the law for district government to lay claim to compensation paid for extinguishing customary land rights, which are held and exercised at the village level.
- TIC's claim that the Ministry of Lands processed Bioshape's land title without involving TIC or following proper procedure.
- Processing the land transfer and land title simultaneous with or before paying compensation to the communities; in general, the compensation process does not appear to follow the procedures laid out in the Village Land Act with any degree of precision.
- The fact that it remains unclear if a formal transfer of the village land to general land was ever published in the government gazette as required by law.

In addition to and perhaps related to these details is the fact that the communities were not given a clear explanation of what they were agreeing to in a legal sense,

and district and community officials were pressured by higher levels of government to agree to the deal.

All of the above point to critical governance issues that go well beyond the scope of law and policy, to the realm of administrative capacity and motivations, implementation capacity and political relationships. Ultimately the established legal procedures were used only partially, and critical questions about what actually happened remain where the paper trail is seemingly missing. Communities never had the information that they needed to negotiate in a meaningful way, and higher levels of government did not enable them to do so, but rather aligned their interests with attracting the capital investment in Kilwa.

These realities around governance highlight how land issues need to be approached not only as a policy or a legal reform issue, but as a much wider social and political concern. Power relations and information asymmetries must be addressed, for instance, if communities are to be able to protect their land and resource interests. This means widespread efforts in remote rural areas such as Kilwa to ensure local communities have access to information, such as basic legal knowledge, as well as neutral support during processes of negotiation. There is ample evidence from northern Tanzania, where many communities have successfully negotiated lucrative contracts with tourism investors, that communities that possess such knowledge are fully able to negotiate their own interests with investors.

9.0 Recommendations

This final section provides a number of basic, and hopefully actionable, recommendations for government, civil society and private sector actors with an interest in the Bioshape case more narrowly, and the way land-based investment and land acquisition are carried out in Tanzania more generally.

9.1 Civil Society

With respect to the local communities impacted by the Bioshape land deal in Kilwa, civil society organizations – both those in Kilwa and nationally – have a critical role to play in assisting those communities to pursue the restitution of their lands through legal or administrative means. This would create a powerful case study and lesson for other investors and government officials to ensure careful adherence to the law and avoid rushing through other land acquisitions in the future.

At the national policy level, civil society organizations should continue to engage in the monitoring of investments, generation of information, and use this information to influence policies such as land reforms and the biofuel guidelines. Any civil society advocacy should be promoting positive administrative and policy changes, such that the practice of transferring village land to general land for investment purposes ceases and a suitable framework for direct leasing by villages

of village land to investors is developed. In order for this to benefit local communities, civil society groups also have a key role to play in intensifying efforts to train and educate local people on land law and administration and the basics of contract negotiation. If community members were more aware of their rights and of the processes involved in investments in natural resources, they would be better positioned to protect their assets.

9.2 Government

The key recommendation for government is to restore the customary land rights of the affected villages in Kilwa District. More broadly, the practice of transferring village land to general land for allocation to foreign investors should be re-evaluated and ideally discontinued through the necessary administrative and policy measures. This does not seem like a suitable way of managing land for investment purposes. Rather, simple changes could be made to the Village Land Act so that villages may lease village land to foreign investors, subject to appropriate safeguards developed through a consultative process.

The biofuel guidelines should explicitly prohibit the transfer of village land to general land as part of the process of allocating land for biofuel projects; at present the existing provisions in the biofuel guidelines do not address local communities' chief concerns. Similar provisions need to be established for all commercial agricultural investments, which are continuing to proliferate in Tanzania.

9.3 Private Sector Investors

The private sector should work to develop and promote positive frameworks for local communities and private investors to enter into joint venture agreements for biofuel projects. Other sectors such as tourism have numerous examples of such local-private joint ventures that could further inform the biofuels sector and the commercial agriculture sector more generally. The private sector should also work with government and civil society groups to end the practice of transferring village land to general land, and rather work to develop investment models where land remains village land but is leased out to investors by the villages.

9.4 Development Partners

In the face of growing tensions over land in Tanzania, brought on by many of the same policy and governance issues as occurred in the Bioshape case, a critical challenge will be to ensure that poverty reduction objectives are not compromised in the face of large-scale investments of varying stripes. Unless preceded by collaboration to secure land rights, improve resource governance and ensure transparency, for example as the Land Transparency Initiative aims to do, new efforts that focus on attracting greater private investment into Tanzanian agriculture could well replicate the kinds of problems identified in the case presented here. Investments need

to be made in large-scale efforts to strengthen local land administrative capacity, legal knowledge and access to information and support networks. Efforts to make strategic reforms to existing land policy and law should also be supported as appropriate, but addressing wider governance and power relations disparities that fuel inequitable land outcomes is the critical need at present.

END NOTES

¹ Institute for Poverty, Land and Agrarian Studies (PLAAS)

² Maliasili Initiatives

³ Phone conversation with Pius Cheche, former Assistant Managing Director for Bioshape Tanzania Ltd.

⁴ 'Jatropha' refers to the plant *Jatropha curcas*, a member of the Euphorbia family native to Latin America. The plant's seeds contain an exceptionally high proportion of oil (~35 percent), which can be processed into biodiesel. *Jatropha* has long been used as a crop in hedgerows in Tanzania but its use as a fuel stock is recent and coincides with the surge in global demand for alternative (non-carbon) fuel sources.

⁵ Interview with the Kilwa District Commissioner, August 2011.

⁶ See: <http://www.limburger.nl/apps/pbcs.dll/article?AID=/20100615/REGIONIEUWS01/100619778/1030>

⁷ Nainokwe Village Assembly meeting minutes, September 6, 2006.

⁸ Kilwa District Executive Office letter to Bioshape, August 17, 2007, Ref No. HWK/AR/225/54.

⁹ TIC letter to Bioshape Tanzania Ltd. Managing Director, September 7, 2007, Ref No. TIC/PP.10/010240/6.

¹⁰ Interview with Councilor for Kikole Ward, Kilwa District.

¹¹ Interview with the Councilor in Kilwa Masoko and Dar es Salaam, August 2011.

¹² Using an approximate exchange rate for 2008 of 1200 Tshs = \$1.

¹³ Note that the figure of the land allocated to Bioshape varies from 34,000ha to 38,000ha between the figures obtained in the villages and district officials and various research reports.

¹⁴ Other accounts refer to the amount retained by the Kilwa District Council as 60 percent of the total compensation, although the figures provided in Table 1 as paid to the villages add up to 50 percent of the total payment reported by Bioshape.

¹⁵ Interview with villagers in Mavuji, Migeregere and Liwiti villages.

¹⁶ Interview with the Acting District Natural Resource Officer and Forest Officer, August 2011.

¹⁷ Different figures on Bioshape's total investment in Kilwa are available from different sources and figures rarely match; all should be treated as merely indicative as no formal audits or public accounts are available.

¹⁸ Interview with the Acting District Executive Director.

¹⁹ Interview with the District Forest Officer and the evaluation report of the Bioshape nursery plot.

²⁰ Based on field work and LARRRI 2010.

²¹ This project was not finished.

²² This project was not finished.

²³ Interview with resident of Mavuji village.

²⁴ See: <http://www.mpingoconservation.org>.

²⁵ It should however be noted that these are for the most part potential earnings based on the timber assets in these villages' lands; at present about a half dozen villages have started limited timber harvesting, earning about \$20,000 in total in 2011 (MCDI, 2011).

²⁶ It is important to bear in mind that mpingo sells retail in Europe for up to \$10,000 per cubic meter.

²⁷ The communities were also initially sceptical of MCDI's REDD (Reduced Emissions from Deforestation and Forest Degradation) project despite their good relations with MCDI and positive experiences with sustainable timber harvesting, and cited the experience with Bioshape as a main reason for their reluctance.

²⁸ Interview with Kilwa District Council, August 16, 2011.

²⁹ Field visit and interview with the District Forest Officer.

³⁰ IPP Media, Oct. 17, 2011. Available at: http://www.ippmedia.com/frontend/functions/print_article.php?l=34481. Accessed on 17/10/2011.

³¹ Land Minister speech as quoted in the Citizen Newspaper available at: <http://www.thecitizen.co.tz/component/content/article/37-tanzania-top-news-story/15136-govt-issues-new-rules-to-guide-land-allocation.htm>. Accessed on 26/09/2011.

³² Interview with the Executive Director, Mpingo Conservation and Development Initiative.

³³ This is not a particular indictment of the class of investors involved in biofuels in Africa during this period; the entire world was consumed in a frenzy of unprecedented debt and speculation in all manner of questionable assets, a situation which continues to threaten the fiscal solvency of many countries and economies around the world.

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Annex 1: People interviewed

s/n	Name	Position	Institution
1	Jasper Makalla	Director	Mpingo Conservation and Development Initiative
2	Nurdin Babu	District Commissioner	Kilwa District
3	Abushiri Mbwana	DNRO	"
4		Ag.DED	"
5	Mr Malugu	Project Coordinator	WWF – Tanzania Program, RUMAKI Project
6	Mr Narongwa	Principal Land Officer	Tanzania Investment Centre
7	Njoki Tibenda	Principal Statistician	"
8	Honest Michael	Lawyer	Ministry of Lands, Housing and Settlement Development
9	Mr Mfangavo	DFO	Kilwa District
10	Miss Mariana	Community Development Officer	Kilwa
11	Husein Abdallah	Sub-Village Chairman	Mavuji Village
12	Mwanaisha Kalyona	Ag-Village Executive Officer/ Headteacher, Mavuji Primary School	"
13	Hassan Said	Carpenter and Resident	"
14	Salum Vyalolo	Member – Village Council	"
15	Moses Nwambe	Former Bioshape Employee	Mavuji Village
16	Rajabu Mpati	Former Bioshape Employee	Mavuji Village
17	Sadiki Mwakisangwe	District Land Officer	Kilwa District
18	Godfrey Japhari	District Lawyer	"
19		Councillor	"
20		Head Teacher	Migeregere Primary School
21	Halifa	Chairman	Nainokwe Village
22	Abdallah Said	VEO	"
23	Said Makele	Sub-village Chairman	Liwiti Village
24	Abdalah Issa	Resident	Liwiti Village
25		Chairman	Mavuji Village
26	Abdallah Mboli	Resident	Migeregere Village
27	Abdallah Mnomba	"	"
28	Selemani Mbori	"	"
29	Fatuma Said	"	"
30	Nami Mohamed	"	"
31	Abdala Abasi	Councilor	Masoko Ward
32	Mwl Haji Mulike	Councilor	Kikole Ward
33	Steve Ball	Adviser	Mpingo Conservation and Development Initiative
34	Bernard Baha	Research and Publication Program Officer	HAKIARDHI
35	Yefred Myenzi	Executive Director	"
36	Abdala Nalinga	Councilor	Mandawa Ward
		Councilor	Nainokwe Ward

This list doesn't include people interviewed during group discussions and those interviewed and filmed.

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