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A Mapping of Stakeholder Concerns and Some Implications for Governance

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WORKING PAPER NO. 2013-03

Biofuel Production and Its Impacts on Local Livelihoods in Tanzania

Stakeholder Concerns and Implications for Governance

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SUMMARY

Developing countries are increasingly looked to as potential feedstock growers for the international biofuels market. Foreign investors are lured by available land and cheap labour, and courted actively by governments. There are expectations about producing so-called "sustainable biofuels", and these expectations assume that effective governance mechanisms are in place to oversee production. However, in order to critique the performance of such governance measures there is a need for empirical data on the impacts experienced by people who live in or near areas targeted for biofuels production. Such data would help to establish how successful the ambition to produce sustainable biofuels is, both domestically and further along the demand chain internationally.

Tanzania is one of the countries in sub-Saharan Africa that is attracting growing interest from foreign investors as a location to cultivate biofuels. This paper highlights the experience of local people in the areas of Rufiji and Bagamoyo, and its main objective is to provide empirical data that can be used – along with data from other case studies – to critique how effectively different governance mechanisms ensure sustainable and responsible production of biofuel feedstock. 19 interviews were conducted in November 2011 with actors both directly and indirectly involved in the sector. The interviewees included representatives from five villages (three in Rufiji, two in Bagamoyo) who have had direct experience with companies looking to pursue biofuel production, as well as farmers, private investors, government officials at both the local and national level, and civil society organizations.

Main findings:

- To date, there have been a range of problems with the process of acquiring land and transferring it to biofuel companies, mainly associated with land use planning, negotiation and enforcement of agreements, and provision of legal protection. Furthermore, the formal channels available for resolving conflicts appeared inadequate for all parties.
- Although Tanzania's legislation on land acquisition indicates that companies should obtain land through the Tanzanian Investment Center (TIC), there were cases where private companies negotiated directly with village leaders and financed village land-use planning processes. Not only did this lead to conflicts of interest and lack of trust in outcomes, but also undermined the potential for investors to receive legal protection from the government.
- Out-dated compensation standards were used in those cases where land transfers were facilitated by the TIC. Compensation offers were made on a "take-it or leave-it" basis, meaning that individual farmers whose land happened to be within identified investment areas were unable to negotiate the compensation offer.
- Initially, village leaders generally welcomed investors, as well as the potential benefits on offer in terms of employment, infrastructure, health, education and support for community projects. However, investors allegedly did not always deliver on promised benefits for communities, and in some cases these agreements were made only verbally.

Overall, there are some considerable discrepancies between the stated national policy on local land use planning and the situation on the ground, which create ambiguities that are prone to exploitation. It appears that the national government's drive to encourage investors has run ahead of the capacity of local people and communities, and even the government itself, to implement the measures needed to ensure that local interests are protected, and a vastly different process is unfolding for village-led planning than the one envisaged under the TIC. Thus, the objectivity – and hence credibility – of the process is brought into question.

These circumstances present an urgent challenge to the Tanzanian government to improve its safeguards for citizen's rights and interests; clearly, more attention is needed to the effectiveness of current national policies and institutions. Furthermore, the lessons from this study also play into a wider debate on the extra-territorial obligations of governments in countries looking to import Tanzanian biofuels or feedstock, and in which corporations

operating in Tanzania are domiciled. The findings also evoke the important role that governments of the "home countries" of investors and foreign companies could play to encourage private sector actors to respect and support effective land use planning and resource management objectives in Tanzania.

It is as important for companies, investors and shareholders alike to consider the weaknesses in land use planning and acquisition that are documented here; not only from the perspective of corporate social responsibility, but also to ensure security for investments and that long-term efforts do not later backfire. It is instructive to note that the imbalances in knowledge and resources between villages and companies revealed in this study have not automatically guaranteed success for the investor; villages have in some cases been successful in pushing back when they feel their rights are not being respected, even after agreements have been made. This demonstrates that is important for both government and investors to engage local people in a meaningful way, and to build their capacity to understand and contribute to the planning process so that their interests are properly understood and respected. Not only would this benefit local people, it would also create a more stable environment for companies and investors wishing to establish responsible and sustainable operations.

1. INTRODUCTION

1.1 Growing demand for biofuels from developing countries

Concerns about energy security and climate change have motivated many countries to introduce policies designed to stimulate greater use of renewable fuels, including biofuels for the transport sector. Targets and mandates to boost use of biofuels have emerged in the EU and the U.S., as well as in non-OECD countries such as Brazil and China. In Europe, the demand for biofuels over the last decade has been stimulated and structured first by the *Biofuels Directive* (2003), and subsequently by the *Renewable Energy Directive* (2009) (EU-RED) and the *Fuel Quality Directive* (2009).[1]

Demand for liquid biofuels now comprises around 3% of global transport fuels, and the International Energy Agency envisions that by 2050 biofuels use will contribute around 27% of the world's transport fuel (IEA, 2011). This means increased production of oil crops such as rapeseed, soy, palm and sunflower (for biodiesel) and/or starch crops such as sugar cane, corn and wheat (for bioethanol).[2] Production has so far been concentrated in the U.S., EU and Brazil, which collectively account for around 90% of total world production of oil and starch crops for biofuels. The remainder is produced by China (3%), Canada and Argentina (2% each), and Thailand, Columbia and India (1% each) (Biofuels Platform, 2009).

Developing countries are increasingly being looked to as potential feedstock growers for the international market, particularly in sub-Saharan Africa and Latin America. In these regions available land and cheap labour have lured foreign investors, who are also actively courted by governments. The tropical and sub-tropical regions that may be suited to biofuels production are also characterized by high levels of deforestation and poverty, and economic development must be both sustainable and address the fundamental needs of poor people.

Where biofuels are being driven by an international market, there is little or no institutionalized feedback loop – no direct political connection – between policy at the international level that stimulates demand for biofuels (for example, the EU-RED) and the local actors in potential producer regions. Hence, it is necessary to review how these policies play out on the ground.

Although foreign investment in the agricultural sector in Africa is not new, recent global changes – demographic, economic and climatic – are both intensifying and changing the character of land use competition (Friis and Reenberg, 2010). Gulf states as well as rapidly growing economies such as China, India and Korea are now joining western companies in the push for land resources. Although the total area of land acquired by large investors across Africa is difficult to determine, figures based on publicly available information from the 'Land Matrix Partnership' (Land Portal, 2012) suggest that since 2000 almost 17 million hectares have been transferred: 9 million hectares in East Africa, almost 4 million hectares in

[1] The 2003 *Biofuels Directive* introduced indicative targets for renewable fuels in the transport sector of EU Member States of 2% by 2005 and 5.75% by 2010 (as a proportion of overall transport fuel use). This was superseded by legally binding targets introduced via the 2009 *Renewable Energy Directive* (RED), which mandates that renewable sources will supply at least 10% of final energy consumption in the transport sector by 2020. In parallel, the EU's *Fuel Quality Directive*, amended in 2009, while limiting the volume of ethanol that can be used in petrol to 10%, introduced emission reduction targets for fossil fuels in the transport sector that motivate biofuel consumption.

[2] In 2009, just over 80% of global production was bioethanol (around 74,000 million litres), dominated by Brazil (from sugar cane) and the US (from corn). The remainder was biodiesel (around 18,000 million litres) of which the EU is the major producer.

West Africa, just over 3 million in Northern Africa and just over 1 million in Central Africa. This comprises 35% of the global total of around 48 million hectares.

1.2 Competing claims about benefits and impacts

The surge of interest in producing biofuels in developing countries has stimulated a corresponding surge in debate around the benefits and costs of doing so, particularly for local communities and the environment; and it is a debate that is characterized by competing narratives. One narrative strand emphasizes positive benefits for local economies and highlights the potential contribution the sector could make to mitigating climate change and energy security (e.g. Coelho 2005). In early 2007 the governments of Brazil, South Africa, India and China, along with the EU and U.S., set up the International Biofuels Forum, in the process extolling the benefits for poor people in developing countries and describing biofuels as an instrument for development (UN, 2007).

However, such arguments about the benefits for host countries and communities are contested. For instance, there is disagreement about whether *net* improvements are being generated by such activities (e.g. whether employment gains are additional rather than substitutive) or whether lands designated as "unused" are in reality unused, especially in Africa (FAO, 2009). UN data indicates that foreign direct investment (FDI) in agriculture in developing countries tends to be heavily concentrated toward large-scale industrial production of export crops, rather than toward activities that support local small-scale producers (UNCTAD, 2009). FAO (2009) argues that the pattern of creating enclaves of advanced agriculture that are detached from local realities will not improve smallholder production or generate additional incomes and employment opportunities. In a similar vein, Kojima and Johnson (2005) observe that subsidies provided for biofuels tend to primarily benefit agribusiness firms rather than smallholder farmers or landless workers. Reflecting on the Brazilian experience with bioethanol production, Hall et al. (2009) observe that increasing pressure on producers towards mechanized farming practices has the effect of excluding small farmers and thus reducing local benefits (and in some cases exacerbating poverty). Kojima and Johnson (2005) argue that because sugarcane degrades soon after harvesting and is expensive to transport, this can create monopoly-monopsony relationships between local growers and biofuels processors, which may affect community incomes, assets, and profitability.

German et al. (2010) find that in practice many of the promised benefits of biofuel cultivation for local communities have not materialized, and highlight deforestation, exploitation of labour and loss of access to land as key negative impacts associated with many projects. The potential for exploitative labour conditions to emerge in host countries has also been flagged by ODI (2009), particularly in countries where employment opportunities are otherwise in short supply and where insecure land tenure regimes may increase the vulnerability of poor farmers. A recurring theme has been the potential for conflict between food and fuel markets, and a particular focus of critique are macro-scale ramifications on food security associated with large-scale biofuel production – not only in developing countries (e.g. IFPRI 2008) but also in the EU, where for instance increased rapeseed oil prices have been attributed to a shift by growers from food to biodiesel markets. Intensive application of water, fertilizer, pesticides and herbicides has been linked to contaminated surface and groundwater around biofuel cultivation areas (Smeets et al. 2008; Berndes 2008; Kojima and Johnson 2005; Larsen et al. 2012). Concerns over implications for biodiversity and greenhouse gas emissions (the latter a consequence of soil carbon loss and fertilizer use) have also been raised in connection with EU biofuel policies (Eickhout 2008).

Within this burgeoning field of scholarly and advocacy-based literature some observers take the "middle road", accepting that there are risks associated with promoting foreign investment in biofuels, but also hopeful that these risks can be managed to ensure benefits outweigh costs (e.g. FAO 2009; ODI 2009). These perspectives rely on effective governance mechanisms being in place to oversee activities, and on intervention where unacceptable impacts on communities or the environment are identified.

1.3 Improving governance mechanisms to address impacts

Various levels of governance – from local to international levels – might be capable of managing and mitigating any negative impacts experienced by local communities. Certainly at the international level some interest in promoting "sustainable production" has emerged in various forums and through guidelines and certification schemes. National and sub-national government actors can also play an important role in mitigating any negative effects for local people and the environment. However, governance of investment, land use and biofuels is a complicated web of different government and non-government actors. This complexity could mean that management of transboundary environmental and development issues, such as the impacts of international biofuel demand on local livelihoods, might be split between different governance frameworks or missed altogether. Similarly, regulatory frameworks in many developing countries suffer from such severe resource constraints and institutional dysfunction that they may not be implemented in practice (e.g. Ravnborg et al. 2013). This raises questions as to how to allocate differentiated responsibilities for sustainable investment and production along the investment and audit trail, for instance as located with investors, corporate actors, and import region governments such as in the EU.

There is a need to compile empirical data on the impacts experienced by people who live in the environs of areas targeted for biofuels production in developing countries. Such data would inform the development and implementation of adequate governance measures, both domestically and further along the demand chain internationally. While production in developing countries is still – with a few notable exceptions – at an early stage, considerable growth is expected over the coming decades. This fact, combined with the emergence of various nascent efforts by both public and private actors to develop guidelines and other schemes to support "sustainable" production, offers an opportunity to help shape the development of the industry in a way that improves outcomes for both local people and the environment. To do so, there is a need to better understand and articulate the concerns and impacts associated with biofuel production that have been experienced on the ground.

2. OBJECTIVES AND METHODOLOGY

This paper highlights the experience of local people in two case studies in the areas of Rufiji and Bagamoyo in Tanzania, one of the countries in sub-Saharan Africa that is seeing a growing interest from foreign investors. Drawing on stakeholder insights, it brings to light claims about impacts arising from early experiences with biofuels in Tanzania. The central question of the data collection component of the paper is: *What impacts from biofuels activities have stakeholders observed and experienced?*

The main objective is to provide some empirical data that can be used – along with data from other case studies – to critique how effectively different governance mechanisms ensure sustainable and responsible production of biofuel feedstock. This contributes to the wider aim of ensuring that local livelihoods and the environment do not suffer as a result of the world's growing thirst for biofuels.

2.1 Selection of case study areas

Although large-scale production of biofuel crops has not yet taken off in Tanzania, growing interest from both the private sector and the national government has resulted in initial efforts to obtain land and establish operations. These early efforts provide useful test cases for observing how well different governance processes address potential concerns about local livelihoods and environmental impacts. The Tanzanian case is also interesting because it points up the kinds of issues that emerge early on in the planning process, as well as those that may not be apparent to stakeholders at the outset (but which experiences in other countries suggest may emerge later).

In both Rufiji and Bagamoyo, plans for large-scale bioethanol production from sugar cane have been proposed, though to date neither has proceeded far in terms of production. The early phases of operations have begun in Bagamoyo (e.g. seedling development) to develop a sugarcane plantation at the former Razaba farm. In Rufiji, however, activities have not yet begun, and there are reports that negotiations over land have stalled. Although there are other areas in Tanzania where biofuel production is already under way, we chose to do this study in Rufiji and Bagamoyo because, according to Sulle and Nelson (2009), the proposals for biofuel production in these districts are the biggest that have yet been put forward, in terms of requested land area.

2.2 Methodology

This paper brings together field data on the perceived impacts and/or concerns of different stakeholders in the case study areas. We made no attempt to prove or disprove the claimed impacts; instead we map the claims and direct experiences of individual actors, presenting these as legitimate perspectives that should be considered in assessments of the performance of governance mechanisms to ensure sustainable production.

This approach is inspired by qualitative case-study methodologies used to examine complex questions with a high degree of uncertainty or controversy (Larsen et al., 2012a). A total of 19 consultations were conducted with a range of actors involved in, or interacting with, the sector during November 2011. These included representatives from five villages (three in Rufiji, two in Bagamoyo) who have had direct experience with companies seeking to produce biofuels in the districts, as well as farmers, private investors, government officials at both the local and national level, and civil society organizations. A semi-structured interview format was commonly used, although in some cases focus groups were held in which several interviewees were involved at the same time.

Interviews covered a range of questions intended to bring to light the process by which resources for biofuel production (specifically land and water) had been allocated or obtained, as well as any benefits and/or negative impacts observed as a result.

It should be noted that this study has some limitations. In addition to being modest in scope, it is also an exploratory exercise. We were only able to interview representatives from two private companies pursuing biofuel production in the area, both of which were domiciled in Sweden. These were SEKAB, which was one of the first companies to initiate activities in Rufiji and Bagamoyo, and EcoEnergy, to which SEKAB's projects, including offices and staff, were transferred in 2009 (SEKAB, 2013). In order to further understand the challenges investors have faced, we also rely to some extent on information from various government representatives.

3. BIOFUELS ACTIVITY IN TANZANIA

According to the Food and Agriculture Organisation (FAO), around 40% of Tanzania's land is cultivated for agriculture, which plays a crucial role in the national economy (FAO 2009). The Tanzanian government describes the sector's importance not only in its overall contribution to Gross Domestic Product (GDP) (25.8%), exports (34%) and employment (74%), but also as a source of raw materials for industry and a market for industrial products (Ministry of Agriculture, Food Security and Cooperatives, 2011). Around 70 to 75% of rural household incomes are gained from the sale of agricultural products, which means that agriculture is a critical factor in levels of poverty. Estimates for the portion of total employment generated within the agricultural sector are around 75 to 82%, of which the majority are women (e.g. UN 2013).

Food crops account for around 65% of Tanzania's agricultural GDP, of which the most important are maize (which accounts for more than 20%), followed by rice, beans, cassava, sorghum and wheat. Although cash crops for export presently make up around 10% of agricultural GDP, they are experiencing higher annual growth rates compared to food crops and livestock production. The most important in terms of export value are coffee, cashew, cotton, tobacco and tea. Although biofuels do not currently contribute significantly to export earnings, their potential to do so is high: the Tanzanian government estimates that more than 30 million hectares of land (out of the total 94.5 million ha) are suitable for cultivation of energy crops, including sugarcane, palm oil, jatropha, sweet sorghum, coconut and sunflower (ESD, 2008).

Interest in biofuels production in Tanzania has by and large come from foreign investors, though sometimes in partnership with local affiliates, which raises the question of how investors might access the lands needed for crop production. As Section 4 shows, this has indeed been a difficult and contentious process in both case study areas. During the second-half of the 2000s the Tanzanian government implemented several institutional and economic reforms aimed at facilitating FDI into the agricultural sector, and into biofuels specifically, recognizing that gaining access to land was among the major challenges that investors face. These reforms ranged from the Village Lands Act in 1999, which required among other things the preparation of village land-use plans, through to the establishment of the Biofuels "One Stop Shop" within the Tanzanian Investment Centre (TIC). Section 3.1 summarizes how Tanzania's current land-use planning system evolved into its current form, and some efforts by the government to more easily facilitate foreign investment. These changes were intended to create a coordinated process of land transfer, first from local villages to the government, followed by lease of the land to investors.

3.1 Tanzania's current land-use planning system – origins, procedures and outcomes

Origins

Current land tenure systems in Tanzania are to a large degree the result of nationwide policy reforms implemented during the 1960s and 1970s. In the early 1960s about 86% of Tanzania's population lived in scattered homesteads. With independence, Tanzania established a socialist republic, in the process abolishing private property and placing all land under the custody of the president. A policy of "villagization" was adopted in 1967 as part of a national strategy for development known as *Ujamaa*, the Swahili term for "familyhood". The intention of the villagization policy was to promote collective agriculture and nucleated settlements (each of around 250 families), because it was believed that these conditions could

better provide equipment, facilities and other materials for the rural population. Village areas were demarcated, each consisting of between 200 to 600 households, and administrative and organizational structures were set up for each village. The state allocated land to registered villages, and the act that established the *Ujamaa* villages gave corporate personality to Village Councils to take responsibility for all legal issues relating to land in the villages (NLUP, 2010).[3] The Village Councils in turn allocated land to households, ideally every household was granted a homestead plot of about 0.5 hectares. Villages may also hold communal agricultural land, grazing areas, forest and sometimes "un-utilized" lands that are reserved for future allocation. The fact that the Village Councils have a strong legal basis and are part of the country's formal governance structure gives them a direct stake in decisions about land resources. Around 70% of Tanzania's total land area is categorized as "village lands" under the ownership and management of Village Councils (Neville and Dauvergne, 2012), and these lands are the primary targets for agricultural investors.

Procedures

The official procedure for investors seeking land access in Tanzania can be summarized as follows (see also ESD 2008; Sulle and Nelson 2009). The investor first presents a general business plan to the Tanzanian Investment Centre (TIC) for approval.[4] If approved, the investor must next apply for land, usually also to the TIC, which in theory can allocate land from its Land Bank. The Land Bank was set up as a mechanism to consolidate the land resources made available by different villages through village land use planning.[5] The investors are then introduced to the village, normally via the District Land Officer, where they present their investment proposal to the Village Council. If the Council agrees, the wider Village Assembly is requested to consider the proposal. If the investor's request is considered favourably and approved by the Village Council, a process of land mapping is undertaken to identify, demarcate and value the village's land.

The land valuation process is intended to form the basis of a compensation mechanism for the village, and includes perennial and annual assets available on the land such as cash trees and crops grown on the land. Ultimately, land that is approved by the village for use by investors is formally transferred to the national government, where it becomes part of the "general land category''. The TIC then administers future use of the land via the Land Bank. An important consequence of this process for the village is that once their land has been transferred to the national government, local people no longer have any legal rights pertaining to it until ownership rights are returned to the village, normally after a lease of 99 years.

[3] Village Assemblies are made up of all adult members resident in a village (typically 500 to 600 adults), and elects a Council of between 15 and 25 members in which legislative and executive powers are vested. These are required to operate within the national policy and legal framework, and are responsible for social development and public service provision within their areas of jurisdiction, as well as maintaining law and order and promoting local development (NLUPC, 2010).

[4] Established in 1997, the TIC is tasked with promoting and facilitating investment and attracting FDI in all sectors, including agriculture. It is supposed to "coordinate, encourage, promote and facilitate investment in Tanzania and to advise the Government on investment related matters" (TIC 2008). It issues investment licenses and tax exemptions (including duty-free imports of agricultural equipment), and is also responsible for granting derivative access rights to investors who are interested in land. The One-Stop Biofuel Centre under the TIC is specifically created to facilitate investments in biofuels. The TIC essentially helps to match investors' land needs with land availed by villages across the country; and, hence, connecting the local people (through their Village Council) with the investors.

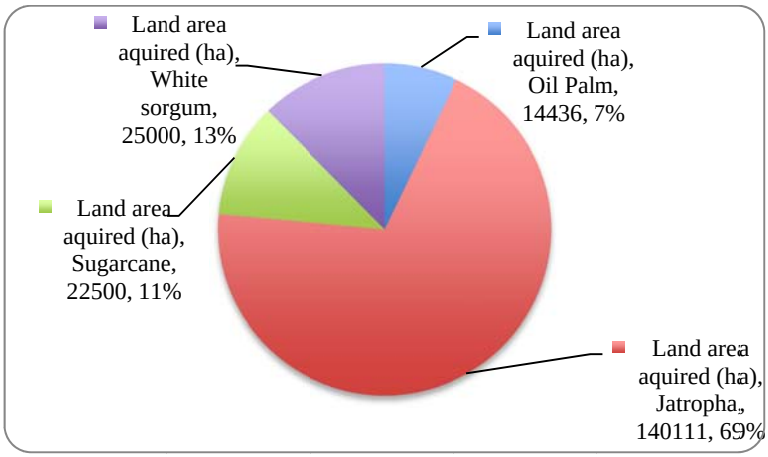
[5] According to the National Village Land Use Planning Guidelines (introduced by the National Land Use Planning Commission in 1990), all villages (of which there are approximately 11,000) are supposed to undertake a process of land mapping (irrespective of whether there has been any known investor interest) and to identify lands that might be transferred to the government's Land Bank.

Outcomes

There are signs that the government's efforts have met with some initial success: according to data compiled by Sulle and Nelson (2009), by 2009 investors had requested over four million hectares of land for biofuel projects, although other sources indicate that by then only 640,000 hectares had actually been allocated (Cotula et al, 2009).[6]

Martin et al. (2009) classified different types of biofuels projects in Tanzania by noting variations in scale, production methods and orientation (i.e. local use versus export markets). *Micro-* and *small-scale* initiatives tend to focus primarily on producing energy directly for villages or for local operations such as mines. Projects in Tanzania most commonly fall into the *medium scale* category, which involves production in the range of 2000 to 50,000 hectares, and where production may still involve smallholder farmers through out-grower schemes, and which typically have plans to expand their market. One notable example is Diligent Tanzania Limited, which aimed to produce biodiesel from jatropha and involved more than 1500 out-growers. At the large-scale end, there have been companies that proposed plantations based around industrial production methods, among them EcoEnergy and Sun Biofuels. Larger scale projects tend to be located closer to the coast where there is better infrastructure (Martin et al. 2009). Figure 1 shows the area of land in 2009 where biofuels were already grown and for which there were proposals to cultivate them.

Figure 1: Existing and proposed land area in hectares for biofuels in Tanzania, by crop type



Source: Sulle and Nelson, 2009

In terms of *foreign actors*, Gordon-Maclean et al. (2008) list several companies that have actively sought land for biofuels investments, among them SEKAB, BsioShape, Sun Biofuels, Diligent, Africa Biofuel and Emissions Reduction Company, PROKON and CAMS Agri-Energy Tanzania. Songela and Maclean (2008) estimate that a total of 23 biofuel projects had been registered in Tanzania by 2008. Further biofuel developments were previously halted under the national moratorium until the release of the biofuel guidelines in 2010.

Much of the early investor interest in new projects has either withdrawn or remains stalled at an early stage of planning and development. This situation has been attributed to various factors including changes in international energy prices and the global financial crisis (Sulle

[6] There is no formal consolidated data available regarding land under biofuels production, however a detailed overview of current activities can be gleaned from other reports including the following: Cotula et al. (2009), Sulle and Nelson, (2009); Martin et al. (2009), Songela and Maclean (2008), Gordon-Maclean et al. (2008).

and Nelson, 2009), though the interviews in this study suggest that conflict between investors and local communities has in some cases been a factor.

3.2 Description of the case study areas

The Rufiji River basin in southern Tanzania covers an area of 177,000 km^2 (around 20% of the country's total land area), and its tributaries drain around 30% of the country's surface run-off. Approximately 13% of the basin is covered by forest reserves (23,000 km^2). Traditional agricultural systems, including livestock herding, irrigation systems and smallholder agriculture, are practiced in this region. The livelihoods of inhabitants' in the area are based primarily on cultivating rice, maize and cotton, though some that live in the central part of the basin also practice pastoralism. Inhabitants typically also rely on fishing in the district's numerous waterways and lakes (Charnley 1997).

According to government officials at the Rufiji Basin Development Authority, different social and geographical features distinguish the upper, middle and lower parts of the basin. The upper areas are characterized by high population densities and a hospitable climate (with mild temperatures and lower risks of malaria), and land use is dominated by smallholder farming systems that produce mainly cassava, banana, cashew nut, maize, rice and pineapples. The middle part of the basin has typically been under pastoralist land use, although increasing competition for land has pushed pastoralists to the lower part of the basin. Some of the oldest large-scale commercial plantations are found in this area, as are various out-grower schemes, through which smallholder farmers grow sugarcane on their own land and sell it to a processing company. One example of these schemes is the Tanzania Sugar Out-Growers Association in the Kilombero area, where around 20,000 farmers cultivate some 16,000 hectares of sugarcane. The lower part of the basin is relatively sparsely populated, and although infrastructure is poor compared with other parts of the region it is this area that currently attracts most interest from investors for potential large-scale land acquisition.

Three biofuels companies have been active in Rufiji to date.

- *African Green Oil* is a British and Tanzanian joint venture that proposed the production of biodiesel from palm oil plantations in the area around Nyamatanga, Rungungu, Nyamagati, Ruaruke and Nyanjati. The company had a modest start, establishing nurseries and planting, but has now ceased operations.
- *SEKAB* is a Swedish biofuels company that proposed bioethanol production from sugar cane plantations around Chamwage, and in 2007 began a process to acquire 19,000 hectares of land.
- *EcoEnergy* is another Swedish concern that subsequently took over SEKAB's operations, although it withdrew in 2010 due to complications and conflicts with local people.

Bagamoyo district is located about 70 km north of Dar es Salaam and stretches inland from the Indian Ocean. Two major catchments drain this region, the Wami River and the Ruvu River. Tanzania's first large-scale bioethanol and bioelectricity production project is planned for the Bagamoyo region. In 2006 the national government allocated to SEKAB an area of state-owned land called the Razaba Farm, which was used for ranching between 1976 and 1993. The land had previously been given to the government of Zanzibar to operate a cattle ranch (Gordon-Maclean et al. 2008). EcoEnergy is now preparing to establish large-scale sugarcane-based sugar and ethanol production. SEKAB initially established a seed cane nursery of 240 hectares, and by 2014 it is expected that EcoEnergy (who continued the SEKAB operations) will use around 18,000 hectares of sugarcane to produce annually

approximately 25 million litres of ethanol, 125,000 tons of sugar and 100,000 megawatts of electricity. The Razaba Farm site is located by the coast, immediately adjacent to the point where the Wami River runs into the Indian Ocean, and, to secure sufficient water for irrigation, plans to divert water from the river into a dam of with a holding capacity of two million cubic metres.[7]

The other biofuel proposal to have emerged in the Bagamoyo area was put forward by Wami Sugar Company Ltd, which also aims to produce bioethanol from sugar cane. It requested 7000 ha of land in 2007, and its plan was to produce bioethanol from sugarcane. Wami Sugar initiated dialogue with local people living around the Razaba Farm to secure land, but, according to the Kidomole Village Council, which was involved in the negotiation, the company suddenly stopped the negotiation process. According to villagers, the main reason for this was that company was not able to secure the 7000 ha of land it requested, because the village was only able to grant 3000 ha.[8]

4. RESULTS

4.1 Discrepancies in land use planning

In Rufiji, the land that biofuel companies have sought to use is mainly village land. As a result, complex negotiation processes have been necessary in order to agree access and compensation arrangements with villages, involving not only the village administration but also local people and district councils. In many cases, the companies were directly involved in such processes, even though according to the formal process put in place by the government they are not supposed to be engaged at the village level. As explained by a government officer, "*We have procedures to follow for both domestic and foreign that investors had to first come to the TIC not only to get investment licenses, but also to get land from the Land Bank… There are cases where investors directly negotiate with local people to get land.*"[9] According to an officer at the district office, "*The budget is limiting in our work. In cases where there is shortage of funds, we may ask investors to cover the costs. This is, however, on the condition that this is not a guarantee to get land.*"[10]

From this perspective, companies became directly involved because the villages had not been able to prepare and submit a land-use plan to the TIC prior to corporate interest in their lands. Of the 93 villages in the area of Bagamoyo, only 34 had a land use plan by the end of 2011.[11] In the case of those villages in Rufiji where the villages where SEKAB and Africa Green Oil initiated land negotiations, there were no village land use plans. Instead, the companies were financing and executing the planning processes. As pointed by the village leadership, "*the village land use plan was included in the agreement… that SEKAB should conduct the land use plan and SEKAB recruited a private consultancy company to do the job*".[12] According to SEKAB, its approach was seen as compliant with the national legislation: "*[we] followed the law, which required negotiation with local villages, to ask 'is there land you would be willing to allocate for biofuel production?'*"[13]

[7] Interview with two staff of EcoEnergy, Dar es Salaam, 17 Nov. 2011.
[8] Interview with Kidomole village leaders and local farmers, Kidomole, Bagamoyo, 16 Nov. 2011.
[9] Interview with an officer at TIC (Tanzania Investment Centre), Head Offce in Dar Es Salaam, 17 Nov. 2011.
[10] Interview with officer at the District Office in Rufiji, 9 Nov. 2011, Rufiji.
[11] Interview with a staff member at the Agriculture Department of the Bagamoyo District, Bagamoyo. 14 Nov. 2011.
[12] Interview with village leaders, Nyamwage village, 9 Nov. 2011.
[13] Interview with Former SEKAB official, 7 Nov. 2011, Stockholm.

Discrepancies between the stated policy and the de facto evolution of land use planning have led to ambiguities, complicating the tasks of local government. According to an agricultural expert at the District Office, "*There seem to have been some contractions in the land allocation procedures in this country. Some investors come from above and arrangements are already done at the central government. When they come here we have very limited information and we cannot do much*."[14]

4.2 Risks of land dispossession

The Razaba farm in Bagamoyo was, as mentioned, formerly a state farm. The central government directly allocated the land to SEKAB, which subsequently transferred the titles to EcoEnergy. However, even this situation has become complex and given rise to competing interests. Some village leaders in the area had offered part of the land in the concession area for families to use on temporary basis. Farmers who formerly worked on the farm while it was operational (between 1976 and 1993) have since continued to live there, and other people from surrounding areas also use the land (newly cleared areas and recently established houses were observed during the field study), and there are now some 600 families who live inside the Razaba farm.[15]

One resident in the farm explained the origin of her claim to the land: "*The farm was actually taken from my parents by the Tanzanian government and given to the Zanzibar government in 1976. Some of the fruit trees planted by my parents are still visible today. There used to be plenty of coconut trees. My parents (like the other farmers at that time) were compensated 300 TZH for each tree. That was too little to match the value of the trees. But because it was a government order they had to accept… Now I believe that because the farm has been abandoned for so long and we have been living in the area since then, the land is ours and we are entitled to own it*."[16]

Another farmer shared how farmers in the Razaba farm have been trying to appeal to the local government to avoid eviction from the land. "*We reported to the District Council our situation in this area… They* [the district officials] *have not given us an answer so far. In the meantime, EcoEnergy has come with warnings and posters saying that we are not allowed to do any agricultural activities in this area*."[17]

EcoEnergy was aware of the situation but explained that the transfer of the land title had already been legally settled.[18] Thus, it was expected that the government would handle the issue of the farmers through its plans to resettle the people in the Razaba area. EcoEnergy perceived any encroachment on its newly secured land to be a major challenge: "*We hope the company, through its EcoDevelopment programmes* [aimed at sensitizing and awareness raising, establishing cooperatives and training potential out-growers] *will address the challenge… however, due to the nature of the project, it is uncertain as to when exactly the project will start and how much land … will be enrolled into the project*." [19]

[14] Interview with Agricultural Expert, Bagamoyo District, Bagamoyo, 14 Nov. 2011.
[15] Interview with farmers living at Razaba farm, Bagamoyo, 16 Nov. 2011.
[16] Interview with resident at Razaba farm, Bagamoyo, 16 Nov. 2011.
[17] Interview with farmer, resident at Razaba farm, Bagamoyo, 16 Nov. 2011.
[18] Interview with former SEKAB Official, 7 Nov. 2011, Stockholm.
[19] Interview with an EcoEnergy Official, Dar es Salaam, 7 Nov. 2011.

4.3 Issues with compensation and distribution of benefits

There are also concerns about how local villagers have been compensated and how benefits have been distributed from biofuels activities. The process of how land and livelihoods were valued by investors and consultants in their compensation packages was strongly criticised, particularly by local farmers. This criticism was aimed at a range of issues, from how community level projects were handled (indicated in Box 1), to accounting of on-farm properties of individual farmers (indicated in Box 2). A particular point of concern was that land valuations excluded the fact that people might lose access to customary land upon which they rely for livelihood. Criticism also pointed to how valuations undervalued important resources on the land, such as fruit trees, that provide additional income as well as food. Farmers also indicated that on-farm investments in, for example, soil and water conservation, were not fully considered. Furthermore, farmers stated that during relocation they were given land plots of smaller size and of lower quality.

It was a particular source of concern that the standards used to value properties were set in 1999 (when the Land Act was passed), despite the fact negotiations were taking place in 2010. An officer at the District Office stated that the "… *major loophole of the land policy is that it only sets a one-time compensation standard. Additional improvements done are not considered. In addition to this, land has a residual value that increases with time. The value of the land today is very different from that of 1999.*"[20]

Box 1. Farmers' views on negotiating benefits with biofuel companies

"In 2007, a company called Africa Green Oil came from the District Council's office saying that it wanted 1500 hectares of land. This whole process came as a top-down approach. It was not a discussion but an order [from the district authorities] that the investors should be given land. A village meeting was organized and in the meeting it was decided to give land to the company with the agreement of getting a school, a dispensary, a clinic and water supply constructed by the company in return. We were involved in clearing the area and in planting. We were paid wages for our daily works.

However, the company failed to construct the school, dispensary and clinic. We went all the way to TIC office in Dar es Salaam to appeal. TIC officials told us that they were aware that the company asked for land but they were not aware that it had started investing… Finally, the investor withdrew and the issue was solved. Since then we are very careful not to be cheated and lose our land. We will never accept an investor unless we are backed legally."

Source: Excerpts from an interview with farmers, Nyamatanga village, Rufiji, 10 Nov. 2011.

Box 2. Farmer's view on displacement compensation practice

"I had four acres of land and four mango trees. Apart from this land I had access to 10 acres of customary land resources. ... Since the transfer of this land to the company I have not been able to earn that much money. The loss of the customary land also had an impact. We used to collect wild fruits during stressful seasons to complement our income and nutrition. This benefit was also gone. I used to grow several crops... maize, rice, and vegetables. Farm investments (in soil and water conservation) were also not fully considered during the valuation process.

My farm property was valued. I had four mango trees and were valued 40,000 TZH. I refused [2010] to accept the offer. Regardless, all people were moved from our places to other locations in the village. We were give land, but of smaller size and of lower quality.

Source: Excerpts from interview with a farmer, Nyamwagwe village, Rufiji, 10 Nov. 2011.

[20] Interview with an Officer at the Agriculture and Natural Resources Department, Bagamoyo District, Bagamoyo, 14 Nov 2011.

4.4 Ambiguities in mandates and roles

While the formal process introduced by the national government requires villages to independently prepare land use plans and submit these to the TIC, and for investors to engage only with the TIC in the process of acquiring land, in reality the process to date appears to have been quite different. Farmers in Rufiji and Bagamoyo considered it biased and distorted, and questioned whether such plans reflect village-level decisions or rather give priority to the company interests. Box 4 describes an example from Rufiji.

Box 3. Villagers' views on land-use planning for biofuels

In 2007, SEKAB came directly to us in this village looking for land. Initially SEKAB followed the normal procedure for an investor looking to acquire land: first get permission from the Tanzania Investment Centre, then from the District Council and finally the Village Council. Initially, SEKAB requested 1600 ha of the Village Council. After the village committee meeting, it was suggested that only 1000 ha be given to the investor. In the meantime, SEKAB recruited a private consultant and conducted land-use plan for the villages. The plan indicated that the total village land was 21,107 ha, of which 19,000 ha were to be designated to SEKAB. When the Village Council saw the final plan, they realized that 18,000 ha more land was assigned to SEKAB than the Village Committee recommended. We went back to the District Council to cancel the whole process knowing that we were being cheated. The whole process took the village about one year just cancel the initiative. Later on the area was made a village forest reserve, and up till now villagers do not want to deal with or have anything to do with SEKAB

Source: Excerpt from interview with Sub-Village leaders, Utunge village, Rufiji, 9 Nov. 2011.

The discrepancy between the state policy on land-use planning and the actual implementation partly reflects conflicting views on land use, especially between villagers and the national government. As one interviewee observed of the national government's reforms to open up land access to foreign investors, "*the assumption was that land was available*",[21] and "*the government does not see the importance of land as an asset* [to the local people]".[22] Such incoherence can lead to detrimental outcomes, particularly given the difference in capacity between local villagers and project proponents, particularly in terms of financial resources. Private investors not only have greater access to government, but also more technical and financial muscle to support their work, including the ability to bring in legal advisors and other consultants. Such resources are rarely if ever available to villagers.

Amongst village interviewees, the involvement of investors in financing land-use plans was a concern not only because of perceived conflicts of interest in the outcome, but also because the roles and responsibilities of different actors became unclear. In addition, local people stated the processes for developing plans did not adequately involve villagers and lacked consultation. As a programme manager at WWF described: "*There have been a lot of conflicts associated with investments in biofuels in Tanzania... What is seen now is a clear mismatch between the TIC and the NEMC. It could be best if the TIC could link up with NEMC together with the sector ministries (land, energy and natural resources.*"[23]

A lack of clarity about roles and expectations may also affect prospective investors. Investors that financed a land-use plan normally expected to acquire some of the land, but this has not always been the outcome. In Rufiji, Africa Green Oil financed a village land-use plan with the

[21] Interview with an Officer at TIC (Tanzania Investment Centre), Head Offce in Dar es Salaam, 17 Nov 2011
[22] Interview with a Land Expert at Bagamoyo District, Bagamoyo, 14 Nov 2011.
[23] Interview with Program Manager WWF, Dar es Salaam, 17 Nov 2011.

expectation that it would gain priority access to any land identified for agricultural investment. However the District Council subsequently gave priority to another group of investors that had provided no finance for developing the plan. Despite a three-year legal process that followed, Africa Green Oil was not able to overturn this decision.[24] Another biofuel company, Alcadia, which also financed land-use planning, experienced a similar outcome; it expected to get the lion's share of the available land (the initial request was for 34,000 ha), but after the plan was ready the District Council favoured other investors and the Alcadia was offered only 5000 ha. The company spent five years looking for additional land until it finally withdrew.[25]

4.5 Other impacts: water and wildlife

Overwhelmingly, the major concerns raised by local stakeholders in both Rufiji and Bagamoyo were in various ways linked to land, particularly issues to do with fair compensation and conflict resolution processes; problems with water and wildlife were less emphasized. However, this may reflect the fact that biofuels projects remain at a nascent stage in the case study areas, meaning that significant environmental impacts are yet to emerge.

Interviewees raised concerns over water resources in the case study catchments that resulted from smallholder and large-scale agricultural systems, and road and infrastructure projects, among other things. A WWF study (2008) pointed to two key risks to water resources from biofuel projects: the amount of water used for irrigation and the effects of farm run-off on local water supplies and ecosystems. Respondents also suggested that planned biofuel projects in the Bagamoyo area would encroach into reserve buffer zones, migration routes and mangrove areas.[26] However, the investor at Razaba Farm, EcoEnergy, stated that water is abundant at the site's downstream location and that the main concern is negotiating storage infrastructure to regulate flows and reduce flooding, as well as to ensure irrigation needs can be met: "*The use of water at this location … is a benefit as the water would anyway have drained to the ocean*."[27]

Government officials outlined challenges in regulating and promoting formal water user rights and water use certification. The Water Officer in Bagamoyo indicated that, "*Not only commercial companies, but smallholder farmers are also required to get water permit. The problem is most do not apply for that. The investors who are already here concentrate much on the land issue and not on water. This is a challenge.*"[28] Furthermore, government officials pointed to existing conflicts over water supply between users, particularly in the water-scarce mid- and upper reaches of the catchment where agricultural production is also more intense. In addition, the District Game Officer at Bagamoyo described how large-scale land acquisitions had a negative affect on local wildlife (including antelopes, monkeys, and hippopotamuses) which was affected by noise from machines and drying waterholes. There are also indications that the activities disrupt migration routes, for instance in the bi-annual migration corridor between Saadani National Park and Selous Game Reserve. Wildlife-tourism provides important income for the Tanzanian economy and for local livelihoods, which may thus be detrimentally affected by the biofuels industry.

[24] Interview with Land Use Planning Officer, Dar es Salaam, 11 Nov 2011.
[25] Interview with an official at the National Land Use Planning Commission, Dar es Salaam, 11 Nov. 2011.
[26] Interview with WWF staff, Dar es Salaam, 17 Nov. 2011.
[27] Interview with officials of EcoEnergy, Dar es Salaam, 7 Nov. 2011.
[28] Interview with water engineer in Bagamoyo District, Bagamoyo, 17 Nov. 2011.

5. DISCUSSION AND CONCLUSIONS

Rufiji and Bagamoyo offer shared and contrasting contexts of land-use histories and land acquisition procedures. In Rufiji, village lands were targeted as sources of land for biofuels, and investors had to engage local people and their leaders to obtain this land. This often required negotiating with two or more villages to obtain a parcel of land of a reasonable size. To date, the process of securing land has not only taken a long time, but also faced critical procedural, institutional and legal impediments. The Bagamoyo case, on the other hand, constitutes a former ranch, which was formally owned by the government of Tanzania. In this case, the government's decision to allocate the land and its subsequent acquisition by biofuel companies were seen as unproblematic. However, some former farm workers who have settled in the farm claim that they have occupancy rights.

The evidence gathered in this study points to the following conclusions:

- The process of land acquisition and transfer to biofuel companies was problematic in terms of land-use planning, negotiating and enforcing agreements, and legal protection. Similarly, the formal channels for resolving conflicts appeared to be inadequate for all parties.
- While national-level legislation on land acquisition indicates that companies should obtain land through TIC, there were cases where private companies became directly involved in negotiating with village leaders and in financing village land-use planning processes. Not only did this create conflicts of interest and lack of trust in outcomes, it also undermined investors' right to legal protection from the government.
- Initially, village leaders for the most part welcomed the investment and its potential benefits: during the negotiations local people and their leadership made investment conditional on community development objectives such as building schools, dispensaries and clinics, and generating rural employment. However, investors allegedly did not always deliver the promised benefits for communities. In some cases these agreements were made only verbally, but the villagers felt that agreement had been reached.
- In cases where the TIC facilitated land transfers, the process used to determine compensation payments for villagers (which involved valuing land and assets) was inadequate and used outdated compensation standards. In individual cases the compensation offer was made on a "take-it or leave-it" basis; farmers whose land happened to be within identified investment areas were unable to negotiate the compensation offer.
- Village leaderships and the village assemblies negotiated on behalf of their rural constituencies. The emphasis on "collective needs" and community development objectives in these negotiations in some cases overshadowed the needs of individual farmers, particularly those that lost, or are set to lose, land to the companies.

The respondents' concerns in this study are skewed strongly towards the following issues: loss of land and access to land for local people; unfair and/or exclusive negotiation processes to decide compensation for villagers; companies not fulfilling commitments that villagers understood had been agreed; and the fact that the roles and responsibilities of different actors have been unclear.

Meanwhile, serious environmental concerns over water use and biofuel production in other countries (e.g. Larsen et al. 2012b; Polpanich et al. 2013) have not yet emerged on the ground

in Rufiji or Bagamoyo, which is perhaps because the biofuels industry is still in its infancy in these areas, and that large-scale production is yet to operationalize.

Yet this in itself is an important insight with implications for future governance: it means that even though community consultation might be institutionalized (through local regulation and/or through corporate good practice) into the planning and development of future biofuels projects around the world, this does not in itself ensure that all stakeholder concerns will come to the fore at the planning stage. For example, local stakeholders who are unfamiliar with large-scale biofuels (or other agricultural) activities might not appreciate potential impacts on water availability or quality; thus these issues will not be brought into consultation and planning processes.

Overall, the findings suggest considerable discrepancies between the stated national policies on local land use planning and its de facto evolution on the ground, which create ambiguities prone to be exploited by actors with the most resources. Some of the tensions observed between the local community, the government and investors, seem to stem from various inequalities, particularly in terms of information and financial resources. For instance, while private companies presumably are well aware of relevant legal arrangements and have good access to government institutions, local communities have a much weaker understanding of the implications for themselves and the environment of different contractual arrangements and production systems. At the same time, local communities are being pressured by the national government and investors to make land available.

To be sure, villagers were not fully aware of the consequences of agreements to transfer land to the TIC for lease to investors, which were that they would lose any use rights for the period of the transfer, which could be up to 99 years. Local communities also do not well understand the wider context, in which global forces are driving land investments, which puts locals in a weaker negotiating position when discussing compensation with private companies. Furthermore, villages have been unable to keep pace with reforms at the national level, as evidenced by the low implementation of village land-use planning required by national legislation. The TIC's investment guidelines stipulate that prior to the transfer of any land from a village, that village must have prepared a Village Land Use Plan. However, for various reasons including lack of funding, capacity, and/or political will, more than 90% of the roughly 11,000 villages in Tanzania have not yet prepared such a plan (Mwamila et al 2009; Deininger et al. 2010). Other studies have found similar weaknesses in the implementation of government legislation on issues such as land-use planning, water management, environmental protection, and enhancing economic and social development (Therkildsen and Bourgouin, 2012).

The results suggest that the national government's drive to encourage investors has run ahead of the capacity of local people and communities, and even government itself, to implement the measures needed to ensure that their interests are protected. As a consequence, villages are in a vulnerable position because companies interested in developing biofuels operations have been directly involved in key land-use decisions and planning, and in some cases have funded their own consultants to undertake village land-use plans. This situation has created distrust and has materially affected outcomes for some communities. Village Councils expressed that they are pressured by the District Commissioner and by different line ministries of the government to identify and transfer village lands. This is a precarious situation for local communities to be in, especially considering that they often have a low understanding of the consequences of land transfer. Thus, a vastly different process is unfolding for village-led planning than the one envisaged by the TIC. Naturally, then, the

objectivity – and hence credibility – of the results is questionable (see Purdon, 2013 on some ethical aspects on land acquisition in Tanzania).

5.1 Final remarks

While there is growing body of work on livelihoods and the impacts of large scale agro-industries in producer countries, relatively few studies have drawn on this evidence to analyse existing governance frameworks in terms of their efficacy and how they could be improved to mitigate such impacts. What is clear from the present analysis of stakeholders' insights in this study is that Tanzania's governance regime for taking land-use decisions is ambiguous, leading to unexpected and potentially undesirable outcomes.

In the first instance, this presents an urgent challenge to the Tanzanian government to improve its safeguards for citizen's rights and interests. Clearly, more attention is needed on the effectiveness of current national policies and institutions. In order to help protect and enhance local livelihoods and environmental outcomes, national as well as sub-national government should play a key role in helping local communities overcome the kinds of asymmetries in knowledge and resources highlighted in section 5. Furthermore, the lessons from this study also play into a wider debate on the extra-territorial obligations of governments in countries looking to import Tanzanian biofuels or feedstock, and in which corporations operating in Tanzania are domiciled. The findings also evoke the important role that governments in the so-called "home countries" of investors and foreign companies could play to encourage private sector actors to respect and support effective land use planning and resource management objectives in Tanzania.

It is as important for companies, investors and shareholders alike to consider the weaknesses in land use planning and acquisition that are documented in this study. This is so not only from the perspective of corporate social responsibility, but also to ensure security in investments and that long-term efforts may not later backfire. It is instructive to note that the imbalances in resources between villages and companies revealed in this study have not automatically guaranteed success for the investor. Villages have in some cases been successful in pushing back when they feel their rights are not being respected, even after agreements have been made. This demonstrates that it is important for both government and investors to engage villagers in a meaningful way, and to build their capacity to understand and contribute to the planning process so that their interests are properly understood and respected. Not only would this benefit the affected citizens, it would also create a more stable environment for companies and investors wishing to establish responsible and sustainable operations.

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