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‘New agriculture’ for sustainable development? Biofuels and agrarian change in post-war Sierra Leone*

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A B S T R A C T

In sub-Saharan Africa, commercial bioenergy production has been hailed as a new form of ‘green capitalism’ that will deliver ‘win-win’ outcomes and ‘pro poor’ development. Yet in an era of global economic recession and soaring food prices, biofuel ‘sustainability’ has been at the centre of controversy. This paper focuses on the case of post-war Sierra Leone, a country that has over the last decade been consistently ranked as one of the poorest in the world, facing food insecurity, high unemployment and entrenched poverty. Following a recent government strategy to secure foreign direct investment in biofuels production in agriculturally rich regions of the country, the largest foreign investment in Sierra Leone since the end of its civil war has been secured: a Swiss company is to invest US\$368 million into a large-scale biofuels project over the course of

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3 years, and promises to simultaneously stimulate an enabling environment for investment, provide job opportunities for youth and increase food production. For multiple actors involved in the project, the concept of 'sustainability' is crucial but accordingly there are varying interpretations of its meaning. Such differences in interpretation and the complex contradictions within discourses of sustainability are in turn framed by the various scales within which these actors are situated. While attempts have been made to manage these contradictions through global sustainability standards, the unequal power relations between different actors will ultimately determine the ways in which they are likely to be resolved. The paper concludes by reflecting on how these processes may be contributing to a changing governance landscape and wider global political economy within which bioenergy is being produced, processed and consumed.

INTRODUCTION

In recent years, biofuel production in sub-Saharan Africa has reached unprecedented levels. But in an era of global economic recession and rising food prices, the sustainability of policies that have supported the growth of the biofuel sector is increasingly being questioned. Although long hailed as a panacea for mitigating climate change and reducing fossil fuel dependence, biofuels' 'green credentials' have come under attack: the land grabbing associated with their production is now being linked to increased food prices and hunger, incidences of land conflict and rising CO₂ emissions. In response to growing socio-economic concerns over an emerging global 'agroenergy complex', multinational companies engaged in biofuel production in sub-Saharan Africa have adopted comprehensive corporate social responsibility (CSR) strategies. Nowhere has this been more evident than in post-war Sierra Leone, an impoverished country which, despite facing acute food insecurity, is pursuing a liberalised path to development, including the promotion of foreign direct investment in biofuel production.

Sierra Leone's emerging biofuel industry has been praised as a potential 'pathway to development' for the rural poor. However, a 'food vs. fuel debate' now overshadows production, highlighted by concerns over how 'sustainability' is interpreted by various stakeholders at different scales. This paper critically explores these issues in further detail in the context of a recent major bioenergy investment by the Swiss company, Bovid Agroenergy.¹ The company aims to develop a greenfield integrated agricultural and renewable energy project in the heart of Sierra Leone's 'bread basket' region in Bombali and Tonkolili Districts, to grow sugar cane for the production of fuel ethanol

and electricity. While all stakeholders in the investment – the company, government and the affected communities themselves – agree that ‘sustainability’ is a crucial condition for operations, the investment raises important questions around how sustainability is being interpreted by different groupings of actors, how such interpretations differ and are shaped by diverging underlying agendas, and what this ultimately means for implementation. This paper explores how such contentions shape the decisions that may be taken by such operators, and in turn how they are framed by the governance landscape and the wider global political economy within which bioenergy is being produced, processed and consumed.

A primary concern of the paper is to shed light on how Bovid Agroenergy has interpreted sustainability standards and incorporated them in its operations. The analysis is informed by interviews with a wide range of actors, including the Deputy Managing Director of Bovid based in Switzerland, the company’s HSSE Manager based in Sierra Leone, a variety of stakeholders involved in formulating and implementing the Roundtable on Sustainable Biofuels (RSB) Standards (RSB 2010), a range of local and national politicians in Sierra Leone, as well as people living in project-affected communities. Our ‘actor-oriented’ approach therefore incorporates an interest in understanding how different perspectives, obligations and power relationships across different scales have shaped decision-making around the project, and, in particular, how these have been framed by wider discourses around sustainability.

Following this introduction, the first section of the paper contextualises the wider global political economy that is shaping the on-going and rapid expansion of bioenergy investments in developing countries, and locates Sierra Leone within this process. In exploring the political and economic drivers that have fuelled global biofuel expansion, it becomes evident that the pursuit of ‘sustainable’ biofuels is a complex and contradictory process, framed by powerful discourses and practices. This discussion sets the stage for the second section, which briefly reviews global efforts to manage sustainability, arguing that these same discourses are instrumental in constructing different interpretations of what sustainability actually entails in practice. The paper then moves on to a more detailed analysis of Sierra Leone in the third section, providing the context for Bovid’s bioenergy investment, and outlining how ‘sustainability’ has, on the surface, been aligned with the agendas of the government and of project-affected communities. However, it is also apparent that a disconnect between interpretations of biofuel

sustainability has resulted in increasing tension between different actors. In the fourth section of the paper, these tensions are further explored through an analysis of the project and its impacts from the perspective of the company. While it is clear that Bovid must acknowledge the positions of a multiplicity of project stakeholders, it is also evident that the company's main approach to sustainability through the certification process has become an important mechanism for protecting both the project and its investors from social and financial risk. In the final section, we conclude by reflecting on the different positions of stakeholders, as they are framed by the various scales within which different actors are situated. A better appreciation of this disconnect is important for developing a more nuanced understanding of how different actors and their widely varying agendas define sustainability, and how contradictions in interpretations might ultimately be resolved.

THE GLOBAL POLITICAL ECONOMY OF BIOFUELS EXPANSION

Over the last two decades, there has been a dramatic growth in the production of bioenergy across the globe, with some estimates suggesting that commercial biofuel production has increased five-fold (Earth Policy Institute 2010). Such an expansion of high intensity industrial agriculture into energy feedstocks is the latest development in the on-going expansion of globalised agricultural production. More broadly, recent research considering the impact of globalisation on food production and the attendant proliferation of industrialised agriculture worldwide has singled out a number of key drivers that have been fuelling such change. These include: favourable terms of trade and macro-economic policies, growing competition between industrialised agricultural exporting countries and 'new agricultural countries', and the incorporation of agricultural production into global commodity chains that have become increasingly vertically coordinated, with greater concentrations of power in their 'leading agents' including retailers and in particular supermarkets (Friedmann 1993; Friedmann 2000; Raikes & Gibbon 2000; Dolan & Humphrey 2001; Ponte 2002; Dauvergne & Neville 2009).

In relation to the recent expansion of biofuel investment in both the global North and South, the drivers have largely been the same, but with the important addition of binding targets and mandates relating to the use of bioenergy (Scarlat & Dallemand 2011). Both the USA and EU, as well as Australia, China, India, Indonesia, Malaysia, Philippines, South Korea, Taiwan and Thailand have recently adopted mandates

to blend biofuels (Scarlat & Dallemand 2011). In the USA, for example, the Energy Independence and Security Act 2007 mandates an increase in biofuel production to 36 billion gallons per year by 2022; and in Europe, the 2009 Renewable Energy Directive (RED) sets out that by 2020, 20% of energy used and 10% of each member state's transport fuel must come from 'renewable sources'. However, as pointed out by Hollander (2010), such mandates to *consume* support long-term capital investment by providing a degree of stable demand, regardless of whether or not bioenergy is cheaper than fossil fuels. These artificially inflated levels of demand for transport fuels far outstrip current domestic harvests of biofuels. Moreover, while biofuels do not, nor will not, drive the prices of transportation fuels, given their low relative contribution to them (Kojima & Klytchnikova 2008), linking energy and agriculture 'amplifies volatility in both markets' (Hollander 2010: 717–18).

In addition to mandates driving the expansion of biofuel production across the developing world, such drivers have themselves been underlain by four forceful motivations, each of which has been critically explored by scholars in a wide range of contexts. These are: (1) the need to mitigate climate change; (2) the rising prices of fossil fuels; (3) concerns for energy security; and (4) the need for rural development in the global South (FAO/GBEP 2008). The combination of these drivers have created powerful discourses supporting the growth of the biofuel industry, which have persisted in spite of the validity of each having been widely critiqued and challenged.

In the context of this paper, a detailed review of the first three motivating factors is beyond the scope of the discussion.² Instead, in the case of Sierra Leone, the primary motivating factor that has most frequently been employed to justify plans for the expansion of biofuel production has been the critical need for rural development. This position has been forcefully supported by biofuels proponents, who, in the aftermath of the country's decade-long civil war of the 1990s, believe that large-scale agriculture projects will provide a primary injection to kick-start both food production and the rural economy. While in recent years a critical counter-position that challenges the intensified commodification of farm land and labour has emerged,³ proponents of large-scale capital investments in agriculture believe that this will stimulate an 'agrarian transition' away from subsistence production and towards wage work on large farms, which will invariably lead to economic growth, and, by extension, poverty reduction for rural populations.⁴

In the context of other recent bioenergy investments across the African continent, proponents have often claimed that such investments will stimulate rural development by way of direct and indirect ‘trickle down’ effects to local communities (de Nie *et al.* 2009). For example, as summarised by Richardson (2010: 921), who specifically considers the sugar industry in Zambia, ‘agro-exports can make an *indirect* contribution to rural development by promoting national economic growth and resilience’, and investment in export crops for bioenergy can *directly* support rural development by ‘increas[ing] on-farm and off-farm employment and revenue’. This has led to a number of key international financial institutions, including the World Bank, encouraging developing countries, particularly in sub-Saharan Africa, to support directly or indirectly the expansion of the production of bioenergy both for domestic consumption and for export (World Bank 2007). In turn, trade agreements relating to feedstocks for bioenergy have been adopted not only between developed and developing countries, but also between developing and developing countries (Dauvergne & Neville 2009). However, the expansion of bioenergy ‘for development’, or rather the form of high-intensity industrial agricultural production and processing of crops that is supported by the specific combination of factors combining to produce this wider global political biofuels economy, has frequently come under intense criticism (Magdoff 2008; McMichael 2009a).

The nub of the biofuels controversy for many critics – and an issue that has direct relevance to the current state of food insecurity in Sierra Leone – has been the diversion of food crops from developing countries to ‘feedstocks’ to fuel over-consumption in the developed world. The scale and speed of this conversion has been unprecedented and is often cited as a contributing factor to rocketing food prices across the global South (Bailey 2007; McMichael 2009a). In 2008 and again in 2011, countering their potential contribution to rural development, were significant spikes in the prices of food commodities that had a considerable impact on poverty in the global South.⁵ Such spikes have been linked to the dramatic rise in the production of bioenergy feedstocks on land that formerly would have produced food (McMichael, 2010). When the rapid expansion of global agri-business into biofuels is underpinned by developed countries’ on-going over-consumption of energy, such a critique of biofuels is thrown into stark perspective.

Resulting from this proliferation of biofuels production has been a dramatic increase in foreign investments in land in developing

countries, land that might have been available for growing domestic food crops to ameliorate the situation (Cotula *et al.* 2008, 2009; GRAIN 2008). This is particularly the case in sub-Saharan Africa, which as McMichael (2009b: 243) notes, has now been dubbed the 'Green OPEC' because its extensive land reserves have attracted agrofuel capital from a vast range of investors from Brazil, Saudi Arabia, China, the World Bank, USAID, the European Commission, and various private companies. While a recent World Bank (2011) report entitled *Rising Global Interest in Farmland: can it yield sustainable and equitable benefits?* suggests that large-scale acquisitions in land can stimulate the employment of wage workers and contribute to poverty alleviation, such arguments have spawned a series of critiques within the global 'land-grab' debate (e.g. see Li 2011). Many land purchases have been controversial, even in cases where such land has not formerly been used to produce food but has been defined as 'idle', 'marginal' or 'degraded'. In the case of Sierra Leone, for example, claims that the Bovid project has been located on marginal land are highly contentious and do not demonstrate an effective understanding of land-use under smallholder farming systems. Upland rice farming—the main food production system in rural areas—is based on a system of rotational fallowing, whereby there is a need to frequently relocate to new 'idle' land. This decreases the willingness of landowning farmers to grant land to outsiders on a secure basis, due to the necessity of having those lands on reserve for their own fallowing needs (Unruh & Turray 2006). What may be perceived to be 'idle' land by the outsider is most often far from the case. Moreover, the local environmental consequences resulting from the continuously cultivated and mono-cropped plantation agriculture favourable to the commercial production of biofuels are that they adversely affect soil quality and fertility, biodiversity and water availability and quality (Magdoff 2008).

In summary, it is apparent that the political-economic drivers that have fuelled global biofuel expansion are complex, contradictory and framed by multiple discourses. Bioenergy feedstocks, such as sugar cane or oil palm, are typical plantation crops of the colonial era, and critics point to the danger of neo-colonial processes of accumulation and dispossession simply being reproduced in a new context (Bernstein 2010; Li 2010; Hall *et al.* 2011). Consequently, for some scholars, the global political economy that has emerged around biofuels over the last decade appears set to intensify inequalities in developing countries and 'reinforce and extend previous waves of livelihood displacement' (Dauvergne & Neville 2010: 632). Other observers, on the other hand,

seem more optimistic, pointing out that emerging biofuels alliances will allow some actors to reap considerable benefits, although these will undoubtedly be unequal and mediated by power relationships. In the next section, this dichotomy is explored in further detail as the discussion turns to the challenges linked to global efforts to manage the 'sustainability' of biofuels, particularly as they are applied in governing standards.

MANAGING SUSTAINABILITY

While the above-mentioned drivers shaping the wider global political biofuels economy have proved to be highly controversial, these controversies have, in turn, contributed to numerous endeavours to incorporate such concerns into the wider governance structure that has shaped biofuels investments. Efforts to manage and govern these controversies have been attempted at different scales including inter-governmental, regional and national, and non-governmental (Scarlat & Dallemand 2011; Lin 2012). For example, the Global Bioenergy Partnership (GBEP) is a global intergovernmental initiative led by the FAO, but the USA's Renewable Fuel Standard, the EU Renewable Energy Directive (EU RED) and the UK's Renewable Transport Fuels Obligation (RTFO) have all incorporated some form of sustainability criteria as mandatory requirements into policy. Non-governmental initiatives include standards and certification schemes, whether initiated by industry or NGOs, that include schemes covering particular commodities that provide 'feedstocks' to biofuels processors, such as palm oil, soy and sugar⁶ (Fortin & Richardson forthcoming), or endeavour to regulate the biofuels production process more generally.⁷ Some of these schemes have in turn become indirectly incorporated into public regulatory efforts—for example, both the International Sustainability and Carbon Certification (ISCC) and the Roundtable on Sustainable Biofuels (RSB) have been approved by the EU Commission whereby biofuels production that is certified under one of these schemes is deemed to satisfy the EU sustainability criteria.

Such initiatives have been criticised from a number of quarters. In relation to voluntary standards and certification schemes, Dauvergne & Neville (2010) have argued that such voluntarism in sustainability initiatives is limited. Furthermore, they have argued that, 'for landless and non-agrarian rural peoples', such initiatives 'do not solve, and may even exacerbate, the problems that industrial and globalised biofuel

production cause for land rights and land tenure' (2010: 653). Mol meanwhile warns that such standards are likely to incorporate the environmental issues and problematisations of the 'cosmopolitans (such as climate change) rather than those of the locals (who are concerned with water and soil degradation)' (2007: 307). Furthermore, he recognises that such standards can be seen as 'green imperialism', restricting developing countries' ability to participate in production (2007: 309). Moreover, McMichael adds that 'poverty alleviation serves as a proxy for an 'agrofuels project'... [which] gains currency by appealing to an urgent need for alternative, sustainable energy sources... [and] the criterion of sustainability... legitimises this project' (2010: 615).

Drawing on the case of the Swiss biofuels company Bovid Agroenergy operating in Sierra Leone, this paper aims to consider the incorporation of sustainability standards in their operations, and to explore how these become shaped and operationalised by a range of underlying agendas. Although our research on multi-stakeholder sustainability standards (e.g. see Fortin, 2013 forthcoming) has led to a particular interest in the RSB, the analysis is applicable to a wide range of sustainability initiatives. Indeed, according to Bovid, in addition to the RSB, the company has also committed itself to comply with a long list of international ethical business standards, including the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the Equator Principles and the International Finance Corporation's (IFC) Performance Standards on Social and Environmental Sustainability. This also includes the African Development Bank's environmental and social safeguards policies, the International Finance Corporation's performance standards, and the EU bio-energy environmental and social sustainability standards. According to the company's official public engagement literature: 'The Project will be a ground-breaking initiative in that it integrates environmental and social criteria at all levels of its business model, combining a profitable financial investment with a truly sustainable operation'.⁸

While particular forms of knowledge have been incorporated into the sustainability standards against which production processes will be measured and validated, the operational conditions of their incorporation are also important. Not only do such standards endeavour to 'set... the bounds on the legitimate and illegitimate exercise of power' (Miller 2007: 333) but, in their implementation, they will also be shaped by that operational context which will together give rise to new practices amongst new networks of actors and, in turn, new

power relations. In comparing how the company has incorporated sustainability standards into its operations with the environment-development agendas of other 'stakeholders', such as the government or project-affected communities, it becomes clear that both the interests and priorities, and how these are translated into interpretations of sustainability, vary considerably. Such an appreciation is vital for understanding the ways in which such powerful actors are drawing upon, and themselves shaping through the application of a variety of operational technologies, the knowledge and the governing practices produced by such sustainability standards. In turn, this is contributing to a changing governance landscape and wider global political economy within which bioenergy is being produced, processed and consumed.

Mol (2007: 309) notes the increasing 'global mobility' of standards and the shift 'towards further harmonisation and uniform standardisation of biofuel products, markets and regulatory regimes'. Certainly for those companies that are endeavouring to certify their products through the application of regional or indeed global sustainability standards, such standards can be said to be increasingly globally mobile, but whether such mobility is being achieved through harmonisation and uniform standardisation in practice needs to be interrogated. And while it is important also to question how such standards define 'sustainability', the question becomes more complicated, however, as the standards become interpreted by different operations, in different places at different times, and then re-interpreted by auditors in a certification process that involves assessing the extent to which such standards have been appropriately applied.

In the next two sections of the paper, we turn our attention to this complex and, at times, contradictory process, as we focus in more detail on the case of Sierra Leone to unpack different interpretations of sustainability and critically explore how these are applied, whose agendas may be represented and why. The following section provides the context for Bovid's bioenergy investment by presenting a brief overview of poverty and agrarian change in Sierra Leone's post-conflict period, focusing primarily on the perspectives of the government and project-affected communities. The next section then goes on to provide a more detailed account of the project from the position of the company, and more specifically how sustainability initiatives are conceived and operationalised in terms of risk to company operations and its investors.

Sierra Leone has recently emerged from a long period of political instability and civil war and is currently ranked 180th out of 187 countries on the UN Human Development Index (United Nations Development Programme 2011). The country's economy and quality of life deteriorated rapidly during the protracted conflict of the 1990s, when many rural people were forced to flee their homes due to attacks from warring factions. More than 500,000 farm families were displaced during the conflict, and agricultural production was so severely dislocated that by 2001 only 20% of the annual rice requirement (the staple food) was produced domestically (Economist Intelligence Unit 2002). In the immediate aftermath of the war, some 543,000 displaced persons returned to their villages of origin (United Nations 2004) and, as rural communities have embarked on the long process of rebuilding their mainly farming-based livelihoods, many individuals are now once again growing food crops for the first time in many years.

While the legacies of the war undoubtedly continue to have a profound impact on present-day rural society in Sierra Leone, the factors responsible for the erosion of the agrarian economy go back much further. Most notably, during the 1970s and early 1980s under Siaka Stevens' APC government, an over-valued currency, subsidised food imports and under-pricing by government marketing boards suppressed the agricultural economy, which had always employed more than three-quarters of the national workforce (Sellies & Wanders 1996). At that time, the conservation of chieftaincy and customary law structures had become a primary strategy for maintaining indirect political control over the countryside, while at the same time insulating central government from popular accountability. In the face of acute economic decline during the 1980s, the oppression of the country's burgeoning youth population by rural elites and the erosion of rural moral economies based on patron–client relationships further compounded rural poverty. These conditions, it has been argued, left large numbers of youths responsive to recruitment by warring factions and were 'easy prey for unscrupulous forces who exploited their disenchantment to wreak vengeance against the ruling elite' (Truth & Reconciliation Commission 2004: 27). The implications of this crisis, Bolten (2009: 79) further adds, have been profound:

... dissatisfaction with the critical state of farming was one of the main reasons many young people were so angry about their poverty that they were

willing to join the RUF in the first place . . . The further draining of labor, destruction of tools and seed stocks, and bush encroachment on farms caused by ten years of war have dealt crushing blows to the already fragile remnants of agriculture in Sierra Leone.

In Sierra Leone's present post-war period, concerns for food security, rural unemployment and the so-called 'crisis of youth' are thus particularly sensitive issues, all of which have returned to centre stage on policy agendas. The present APC government is desperate to encourage international investors who will finance initiatives that address these key issues, and President Ernest Bai Koroma has made it well known that he believes foreign investment under a market-led approach to be the panacea for meeting the country's challenges. This strategy was formalised in Sierra Leone's long-term National Sustainable Agriculture Development Plan (NSADP) in 2009, and it is thus unsurprising that the government has shown overwhelming support for Bovid Agroenergy's recent bioenergy investment in Bombali and Tonkolili Districts. In a recent keynote address on 9 February 2010, during the signing of a Memorandum of Understanding (MOU) at the project site, President Koroma was quoted as saying:

. . . this is the biggest agricultural project ever in the history of Sierra Leone with an approximated investment of \$400 million in a couple of years: When we talk about diversifying and investing in agriculture, this project sends a clear message to all that we back our intentions with actions. (Turay & Conteh 2010)

The Bovid project builds on the opportunity presented by a growing market for bioenergy and biofuels in Europe and Africa as well as preferential trade agreements and suitable climate and lands in Sierra Leone. Bovid ultimately aims to produce 90,000 m³ of ethanol per annum, primarily for export to the European Union market, but 15 MW of power will be fed into the national grid. Supporters of the investment have high expectations for operations, which they claim will simultaneously stimulate an enabling environment for future investment, provide job opportunities for youth and contribute to food security by increasing local food production. Such aims fit squarely within the government's 'business-friendly approach' to investment, through which it aims to attract large companies with big projects and in turn promote commercial agriculture through private sector participation. It also reflects the agenda of the country's second and most recent PRSP (2008–2012), which identifies the encouragement of agribusiness as a strategic pillar of development because of the possibilities that it supposedly presents for simultaneously promoting

food security, poverty reduction and employment creation. In short, the Bovid investment satisfies the government's desire for large agriculture and industrial projects that have the potential to mesh closely with the seven key strategic priorities of its social investment policy, as follows:

- To provide job opportunities for Sierra Leoneans at all skill levels.
- To provide significant foreign direct investment.
- To be export-oriented.
- To make extensive use of local raw materials.
- To ensure the development and transfer of a variety of skills and technology.
- To produce a surplus of electricity for commercial purposes.
- To make use of renewable energy resources.

While the government has also made food security one of its main priorities, at the forefront of this agenda is the promotion of foreign investment, with large land leases for export-oriented plantation agriculture. This approach, shaped by Rostovian discourses around 'modernisation' and 'progress', is embedded in the strongly held development narrative that African countries are destined to experience an agrarian transition similar to that of Europe in the eighteenth century (Li 2009), if they pursue the right path to development. A central aspect of this trajectory, according to the World Bank, is for governments to stimulate the transition by removing the barriers to investment. Such a market-led approach for private sector development of commercial agriculture is based on the assumption that the private sector drives the organisation of value chains that bring the market to smallholders and commercial farms, a model that the World Bank has referred to as 'Agriculture for Development' (World Bank 2007).

To send the right signals to foreign investors such as Bovid, the government has established the Sierra Leone Investment and Export Promotion Agency (SLIEPA) with the direct assistance of the World Bank's International Finance Corporation (IFC). Amongst the many incentives offered to foreign investors, including tax holidays, low agricultural labour rates, and 'flexible' labour regulation, one of the major pillars of SLIEPA's marketing strategy is that Sierra Leone can offer investors vast areas of 'available', 'unused' or 'under-utilised' land at low lease rates. As noted by Li (2011), for international companies, who are driven by the goal of maximizing profit, access

to cheap and abundant labour and land are essential elements of their investment:

In most cases...land acquisition takes the form of an investment by a corporate actor bearing capital, and seeking profit. Such an investor operates in a competitive context that compels it to seek maximum profit on the capital it deploys. The attraction for investors is vast areas of free and virtually 'empty' land on which they can install the optimal technology-labor regime for profitable production. (Li 2011: 282)

Bovid has leased 57,000 ha of prime agricultural land for a period of 50 years and sugar cane plantations will cover 10,100 ha, in addition to 2,000 ha which will be developed as part of the project's Farmer Development Programme (FDP). In discussions with Bovid's HSSE Manager based in Sierra Leone, it became clear that the company believes that this latter investment will impact positively on food availability, as this surface will be divided into 60 community fields to be established and sown by the company and dedicated to staple food production (mainly rice and cassava) to the benefit of the local population. There are some 13,617 people that live in areas affected by the project (Anane & Abiwu 2011), and in line with the *RSB Principles and Criteria for Sustainable Biofuels Production*,⁹ official company literature states that Bovid is 'actively engaging with those whom the project may affect, the project affected people, and has structured the project in a manner designed to ensure that the views of the local population are accommodated and taken into account so far as possible and ensured that the local communities have been engaged in the project from the beginning'. Considering the project-affected population as a homogeneous group, however, as most definitions of 'community' tend to do, is problematic given that the local population is highly socially differentiated and characterised by conflicting values and unequal power relationships. Vermeulen & Cotula add that although community consultation is now a standard component of negotiations around projects that involve large-scale land acquisitions in Africa, the voices of marginalised actors often become stifled: 'local people's capacity to bargain or give free consent to investments is limited by their lack of access to economic and institutional alternatives' (2010: 899).

Our discussions with project-affected community members revealed that their underlying agendas and expectations were vastly different from the positions of the government and the company. Indeed, focus group discussions and semi-structured interviews were carried out with a wide range of community actors (e.g. chiefs, youths, women, hired company labourers, displaced farmers) and it was apparent that

perceptions varied considerably. However, for many individuals in project-affected communities, the concept of 'sustainability' may be summarised as being fundamentally about reconciling livelihoods and the environmental resources upon which they depend. Field research carried out in the three settlements of Lungi Acre, Yankasa and Marokie in the project area in July 2011, confirmed that there were significant concerns about the 'sustainability' of the company's operations from many of those who were living in and around the project area. These ranged from contentions over land acquisition, to the disruption of traditional sources of income, to increasing poverty, and claims of failed promises by Bovid. However, while it was clear that even within communities there were 'winners' and 'losers' spawning from the project's activities, with some individuals having considerably better access to benefits than others, interviewees referred to two overarching issues that were at the forefront of concerns over 'sustainability'.

The first issue concerned land access and control. Central to the governments' promotion campaign to secure foreign investment in rural areas has been the message that there are vast tracts of 'unused' arable land available for agricultural development. For example, on the SLIEPA website, the abundance of available agricultural land and an ideal agro-ecological setting are highlighted as key selling points for potential investors:

Only 15 percent of the country's 5.4 million hectares of cultivatable land were being farmed as recently as 2003; growing seasons in most parts of the country exceed 260 days per year; annual rainfall averages 3,000 millimeters (118 inches); and irrigation potential of the country's nine major and three minor rivers is largely untapped.¹⁰

However, a recent report on land investment produced by the Oakland Institute (2011) suggests that SLIEPA's frequently cited notion that 85% of the country's arable land is available to investors is based on outdated land survey documents that are over 30 years old. Moreover, as noted earlier, such estimates do not reflect an accurate understanding of how the smallholder farming system in Sierra Leone works. Smallholder agriculture is heavily reliant on the bush fallow system, whereby farms are cultivated for a number of years until the soil's fertility is reduced, but are then left fallow for as long as 10–15 years to recover. Land that is left 'idle' remains vital for providing key environmental services, maintaining biodiversity and serving as a reservoir for essential livelihood resources for poor people, such as firewood, animal fodder or medicinal plants. As recognised by

McMichael (2010: 617), 'marginal peoples' often depend on 'marginal', or non-productive, land for their livelihoods and, with insecure land tenure, will be most vulnerable to its alienation.

In rural Sierra Leone, land is held under various forms of informal communal tenure, with the paramount chief serving as the ultimate custodian of the land. Unruh & Turray (2006) note that in Sierra Leone, there are as many different forms of customary tenure law as there are language groups, but in most places, male family and lineage heads representing the 'original' settlers of an area appear to have control over land. However, although the customary laws that regulate access to land may appear to be clearly defined, tenure systems have also been known to exhibit a certain degree of flexibility. In some cases, as an early study by Richards (1986) in the Mende region of the country suggests, land rights and even their associated family histories have actually been 'bought' and 'sold' in the past. In other instances, the physical 'ownership' of a piece of land may not actually change hands, but its possession or usufructory rights can change, as land is circulated through inheritance, loan, lease or pledge (Bassett & Crummey 1993).

The point being made here is that land 'ownership' is not always a black and white issue in Sierra Leone. When Bovid initially negotiated its project land leases through chiefs and landowners, 104 village boundary sites were demarcated by the company's surveyors in order to determine which land would be used and which families would receive compensation for the use of their lands. While the company appears to have made a concerted effort to ensure that it was adhering to Sierra Leonean laws and behaving in a socially responsible fashion, it is clear that the redistribution of land for biofuel production will make it next to impossible for local land-users to access the natural resources upon which their livelihoods depend, or to engage in traditional rotational fallowing practices. Moreover, even though the MOU signed by the company stipulates that landowners are to be compensated through lease agreements, critics warn that landless households who rent land on an annual basis could potentially be displaced (Andrew & van Vlaenderen 2011). In a number of cases, long-standing land disputes between families have also been exacerbated and in one case, the sensitivities of a local court case that goes back to 1967 have been re-ignited. These disputed claims have further been complicated by post-war return issues regarding land, where overlapping claims have come into question (Unruh & Turray 2006).

The more serious concern over land, however, involves the issue of how some individuals in project-impacted communities, who are now

landless, will gain access to food. While the company has committed itself to a Farmer Development Programme (FDP), which will prepare and sow more than 2,000 ha of fields for local food production and train some 2,000 farmers in improved farming techniques, it is apparent that not all those living within the project area will benefit. For example, as explained by one resident of Lungi Acre:

The problem is that all the farmland [around Lungi Acre] has been taken up by the company, and not everyone has been lucky enough to get a job. Here we are surrounded by the company's operations, but no community farmland has been provided for us. So I am very worried about how I will feed my family.¹¹

Moreover, in a recent impact evaluation of the project (Anane & Abiwu 2011), it was reported that in some cases, affected communities have been provided with alternative communal farmlands that are smaller than those they previously possessed. The distances between their homes and their new farmlands are often much greater, which has made it difficult for members of the affected communities to access their farms as they used to. While it is clear that the mechanical ploughing provided by the company has made it possible to prepare a considerable volume of land in a short period of time, Bolten (2009: 79) also points out that contrary to the beliefs of many, tractors are not well suited to the high clay-content of African soils in the Bolilands, and the disturbance of the gravel under the soil is not appropriate for rice farming. Reports also suggest (e.g. Anane & Abiwu 2011) that there have already been problems with the company's promises to provide ploughing, harrowing and seeds, which arrived too late for the planting season in 2010. As a consequence, there was less food produced in the communities as farmers were not able to plant on time.

The second main issue widely mentioned in interviews with project-affected people concerned the question of labour and employment. While labour relationships are clearly central to the success of the operations for all project stakeholders, there appeared to be contradictions in interpretations of the role that labour should assume in 'sustainability'. Interviews carried out with residents in the three project communities revealed that many individuals were initially supportive of the new labour regime being proposed by the company, in anticipation that a decent living wage would be offered. Indeed, other research carried out in and around Makeni by Bolten (2009) suggests that many young people in the area today are no longer interested in being subsistence farmers, but are set on entering the 'modern' world of consumerism as wage labourers. This position ties

into a wider body of literature on de-agrarianisation in sub-Saharan Africa (Bryceson & Jamal 1997; Ellis 1998), which argues that young people continent-wide are seeking an 'exit option' out of small-scale farming, with the hope of securing a better life through the off-farm wage economy.

However, those living in the project-impacted villages complained bitterly that, much to their disappointment, the salaries being paid by Bovid were not sufficient to live on, and there had been a number of misunderstandings concerning the promises made by the company. According to Bovid's HSSE Manager, the company will create 2,000 jobs for local people, which will inject an estimated US\$3.5 million into the local economy each year.¹² However, in discussions with individuals in the affected communities it was revealed that people hired from the villages tended to work as casual labourers, and often for less than three months at a time. Interviewees complained that the majority of local people employed were temporarily laid-off after two or three months. This pattern was confirmed in a project evaluation report which noted that '... workers are also laid off when the planting season is over and that means having to wait till the next planting season to continue with life as a farmer. This situation unleashes frustration, poverty and hunger on the unemployed casual workers who have families to feed' (Anane & Abiwu 2011).

For project-affected communities, obtaining a living wage is a necessary trade-off for relinquishing access to their land. However, securing a sufficient wage is unlikely given the very contradictions inherent in the global capitalist system, whereby profit maximisation is dependent on externalising costs and pushing down the price of labour. As Redclift (1987) argued many years ago, 'sustainable' development and global capitalism are incompatible, because the quest to accumulate capital always undermines the social and environmental resources upon which it depends. Li (2011: 289) further adds that

It is against prevailing capital-logic to expect private investors to take the lead in designing and managing schemes that reduce their profits in favor of the labor of their attached smallholders/suppliers. For this reason, poverty reduction cannot be left to corporations.

While the government's position is that foreign investment in large-scale agricultural projects is the key to 'sustainability' and will stimulate an agrarian transition based on a new wage driven economy, paradoxically, it is undermining this agenda and increasing poverty through the promotion of a cheap pool of labour. According to SLIEPA's

promotional material for investors, agricultural labour rates in Sierra Leone are exceedingly low at US\$2–3 per day, which is considerably less than in alternate locations in Asia or Latin America.¹³ For companies such as Bovid, profit largely depends on an abundant supply of cheap, disciplined labour, and for this very reason, neither poverty alleviation nor local concerns for ‘sustainable’ development are likely to be the most pressing considerations.

UNDERSTANDING APPROACHES TO ‘SUSTAINABILITY’:
THE BOVID PERSPECTIVE

Over the last three decades, Corporate Social Responsibility (CSR) agendas have become increasingly important business strategies for multinational companies, particularly for those operating in the global South. There is now a burgeoning critical literature that explores the role and impact of CSR in the developing world, and how the ‘sustainability’ agenda has become operationalised in business practices. These critiques of CSR have encompassed a diverse range of contexts including, for example, its analysis in relation to the extractive industries (Hilson 2012), its influence on labour practices in the textiles and garments industry (Miller 2004), how it has shaped the policies and practices of pharmaceutical companies in poor countries (Leisinger 2005), and how it has been strategically utilised to manage risk in agricultural supply chains (Teuscher *et al.* 2006). While a number of authors have pointed out that the principle of ‘sustainability’ works best in CSR agendas when it coincides with a company’s economic or regulatory interests (e.g. Porter & Kramer 2006), more sceptical observers have argued that most CSR agendas are little more than smoke and mirrors, allowing ample scope for ‘free-riding’ by economic agents who reap the benefits without bearing the costs (Utting 2005). Nonetheless, still others have maintained that with the advent of globalisation, CSR agendas have become increasingly attractive for global corporations because a significant shift in market power has increased the social risks of doing business in poor, developing countries (Kytte & Ruggie 2005).

In this final section of the paper, attention is turned to the position of Bovid, which has publically indicated that socially responsible business practices are of paramount concern to the company’s operations. More specifically, however, the analysis demonstrates that the company’s interest in the sustainability agenda goes beyond mere philanthropy – it

has become a key aspect of its business strategy for managing financial and social risk, and accessing regulated markets in the EU. According to official company literature, Bovid has a straightforward policy regarding CSR: 'be profitable, obey the law, be ethical and be a good corporate citizen'. As such, based on the law of Sierra Leone and the IFC Performance Standards, Bovid has conducted an extensive analysis of the environmental, social and health impacts of the project (ESHIA),¹⁴ which has been informed by 14 specialist studies. Stakeholder engagement and public disclosure have been integral elements of the execution of the ESHIA and the land lease process. In accordance with international standards, all draft reports were released for public review, and the key findings were presented to all interested and affected parties at the national, provincial and local levels.

According to the ESHIA, Bovid has developed a Social and Environmental Management Programme (SEMP) with the following objectives:

- To ensure the project is compliant with applicable national environmental and social legal requirements.
- To ensure the project is compliant with applicable environmental and social policies of its lenders.
- To outline the mitigating/enhancing, monitoring, consultative and institutional measures required to prevent, minimise, mitigate or compensate for adverse environmental and social impacts and/or to enhance project-related beneficial impacts.
- To address capacity-building requirements to strengthen its environmental and social capacities if necessary.

However, while the company presents the 'sustainability' of operations at the forefront of its practice, it is important to interrogate the underlying motivations that are driving this strategy. As is clearly reflected in the main objectives of Bovid's SEMP, adherence to the social and environmental concerns of project-affected communities and the agenda set out in the government's laws are central to anticipating and reducing potential sources of business risk, but in doing so, there are many actors that the company must satisfy. As will be illustrated in the discussion below, in protecting its 'social license to operate', Bovid's business strategy accommodates a multiplicity of sustainability agendas, and in doing so seeks to insulate the company from potential risks such as labour unrest, environmental disasters, potential government regulation, or damage to its reputation in the eyes of consumers.

For example, when asked about how the company had interpreted the concept of ‘sustainability’, Bovid’s HSSE Manager first reported that the issue of food security was of key importance to company, but it later became clear that this was largely because it was such a major concern of the government and donors. This sustainability issue, it was explained, was primarily being addressed through the two main social development initiatives that were being directed towards the project-affected communities – The Farmer Development Programme (FDP) and the Farmer Field School and Life School (FFLS). However, it also became apparent that Bovid’s framework for delivering sustainable development was also nested within a broader set of structures at the global scale. The wider global political economy in which Bovid Agroenergy is operating – its head office is situated in Switzerland and it is producing biofuels in Sierra Leone predominantly for the European market – has a considerable influence on its approach to ‘sustainability’. To begin with, if its biofuels are to contribute to the EU mandates in relation to the consumption of biofuels, operations will have to meet the EU RED sustainability criteria.¹⁵ Although the EU Commission has approved certain private standards schemes, including the RSB, its own criteria incorporated into the Directive are not set in stone as has been seen recently, for example, in efforts by scientists to lobby the European Commission in relation to the incorporation of the calculation of indirect land-use change in those criteria. These wider politics in relation to biofuels and their sustainability requirements contribute to shaping biofuels producers’ approaches to sustainability.

Since sustainability standards are voluntary, a number of scholars have argued that for some companies, there may be a clear motivation to improve corporate reputations and influence the nature of global debates surrounding sustainability (Auty 1998; Blowfield and Frynas 2005). For example, the RSB certification scheme, just one of the sets of standards to which Bovid is seeking compliancy, is designed to be taken up by corporations through their adoption of a ‘risk-based’ approach to audit. This aligns with the wider CSR ‘win-win’ discourse that constructs ‘sustainability’ in terms of risk, a frame that positions sustainable development in the interest both of corporations and of its stakeholders who are affected by its operations. In the words of Bovid’s Deputy Managing Director:

It boils down to the fact that I am putting, or we are, the company, an enormous amount of money at risk. It’s our money, it’s our own money, so why would I not look at as many risks as possible? Why would I choose

to ignore very obvious risks which have to do with the quality of soil, or quality of water? ... how many people are living in an area, and where are they living? Why would I just ignore those kinds of fundamentals?¹⁶

However, regardless of how companies perceive the relationship between CSR and risk management, the reality for most biofuels operators who aim to access EU markets is that they need to be compliant with an EU-recognised sustainability standards scheme. In this sense, there is a danger that companies may place a disproportionate emphasis on meeting global performance standards, rather than actually focusing on addressing the specific social contexts within which their sustainability strategies are located (Gilberthorpe & Banks 2012). Moreover, in meeting performance standards, a company's operations must also be audited in order for it to become certified according to that scheme. Audit and certification costs are not insignificant, particularly for smaller companies, and if standards criteria change, the cost of addressing these must be taken up by the company. For example, as explained by the Deputy Managing Director of Bovid:

The health matters in IFC performance standards were changed and upgraded [with the result being that] ... we had to spend another £100,000 immediately. And that's not small money, you know, especially if you are a smaller company and you have good ambitions.¹⁷

Accordingly, for smaller companies such as Bovid, it may prove financially savvy to speculate on which sustainability proposals may eventually become incorporated at the level of policy, and endeavour to adopt these from the outset. Politically, this may also enable operators to position themselves more favourably with other actors, including consumers, but also investors, who will themselves also impose certain conditionalities over their investments. More than 60% of Bovid's financing is provided by public development banks and, for example, the terms of its 'Comprehensive Resettlement Policy Framework' were set down by the African Development Bank. For Bovid, the company's approach has been to consider the strictest sustainability standards proposals emerging from the European Parliament, with the aim of fulfilling these before they become law. The agenda driving this, according to Bovid's Deputy Managing Director, is more than just the desire to become a good corporate citizen – it is, once again, about protecting the company against risk, this time in the guise of enormous future consultancy and certification costs.¹⁸

For Bovid, it was thus deemed more cost-effective to 'design-in' sustainability principles to the company's 29 management plans

from the outset, than to meet the risks as they might have arisen. The strategy is clearly described by the company's Deputy Managing Director:

If you are fortunate like we were back in 2007–2008, and you start from scratch...from a piece of blank paper, you can simply design sustainability into your model. It is not an add-on, it is integrated and designed in. You sort of design-in or design-out whatever is considered to have a negative impact as much as you can, and that's how we have looked at this process.¹⁹

Accordingly, consultants were contracted to work on various aspects of the company's approach to sustainability from environmental, social, health, safety and security perspectives. In doing so, a variety of laws, regulations and standards were drawn upon, including the RSB. But this approach, no matter how proactive it may appear to be, does raise an important issue: when sustainability standards, and indeed sustainability as a risk defined by the corporation, are integrated into the company's operations from the outset, the question of whether these principles are destined to displace 'real' issues of sustainability that arise in people's day-to-day lives comes to the fore. Similar concerns have been raised by other researchers with respect to how extractive companies implement community development programmes with little knowledge of the socio-cultural contexts of the people's lives in which they operate (Hilson & Banchirigah 2009; Tschakert 2009). In short, the issues of sustainability that arise in people's day-to-day lives may be conceptualised in ways so different from those incorporated within business management plans that they simply become inconceivable within the terms conceptualised by the company. For example, whereas 'sustainability' for people affected by Bovid's operations may be defined according to their ability to sustain traditional farming practices in an area that has been farmed by their family for generations, 'sustainability' framed in terms of the company's perceived risks looks very different. Accordingly, as admitted by the company's Deputy Managing Director:

For our land take as a whole, we needed to prove that we were not taking land away from the local communities. We could only prove that... by really engaging with the local communities and making sure there's enough arable land. Because it can't be perceived that we are taking all the land away.²⁰

For Bovid, this was a prudent course of action that made good business sense and subsequently led to the design and implementation of the company's FDP, noted earlier. The risk identified was damage to

the company's reputation on the grounds that it was exacerbating food insecurity, and the solution to this was one that in turn fit with the wider plans of the project in terms of its land use in the local area. However, this approach does not incorporate other aspects of sustainability for local people that may be based upon considerations relating to their current state of poverty, or culture, or tradition. So while sustainability standards may offer hope to local people that they might achieve some kind of purchase in having their own framings of sustainability incorporated into the future actions of companies operating in their area, such risk-based approaches to certification adopted by the standards further entrench this powerful approach to sustainability.

CONCLUSION

In exploring the context of Bovid Agroenergy's recent biofuel investment in Sierra Leone, it is apparent that the concept of 'sustainability' is crucial to all project stakeholders. However, differences in interpretations of sustainability, and, more specifically, how such interpretations are shaped by conflicting interests and underlying agendas, have increasingly resulted in mounting tension between different groups of actors. For grassroots actors living in and around the project area, the sustainability of the company's operations is framed around key livelihood questions that primarily concern land, labour and food-security. The government, on the other hand, appears more concerned with nurturing an environment that will put agribusiness at the centre of the country's development trajectory, and thereby send the right signals to future bioenergy investors. While the agendas of both project-affected communities and the government must, to a certain extent, be embraced by Bovid in the design of its operations, the company's core consideration in implementing sustainable practices is in its ability to mitigate social and financial risk to the company's operations and its investors. The outcomes of struggles between these stakeholders, and the way that the rhetoric of sustainability is ultimately reified in practice, is a process that is shaped by power relationships that are conditioned by the wider political economy of bioenergy.

While considerable efforts have been made by biofuels producers to manage sustainability through global standards, the effectiveness of these has been challenged on multiple fronts. On one level, as we hope has become clear in our analysis of the Bovid case, the attractiveness of many standards schemes is that they provide their compliers with

a 'green light' to access specific regulated markets. So for some companies, the underlying motivation for certification may therefore have little to do with addressing the needs of communities or governments, but may, in fact, be driven by desires to target external export markets. On another level, the analysis also raises the question of whether or not the pursuit of 'blueprint' sustainability standards schemes might actually play a role in decontextualising local development needs. In the case of Bovid's investment, it is evident that the company's risk-based approach to certification has primarily become a mechanism for protecting both the project and its investors. In extreme cases, as other scholars have pointed out in other contexts (e.g. see Gilberthorpe & Banks 2012), an over-emphasis on meeting global performance standards has led to inappropriate and ill-conceived development outcomes at the local level, which have generated further fragmentation and inequality.

In short, power plays a central role in reinforcing the most commanding interpretations of 'sustainability', as they become conditioned to serve particular interests. As has been pointed out by Mosse (2005: 8), '... power lies in the narratives that maintain an organisation's own definition of the problem ... [and] success in development depends upon the stabilization of a particular interpretation...'. Dauvergne & Neville (2010) add that in weak states such as Sierra Leone – where governments often lack the power required to influence the underlying agendas of transnational companies – an absence of state regulatory oversight and control makes it even more unlikely that voluntary corporate initiatives will lead to meaningful environmental and social outcomes. The authors note that the track record for the failure of CSR initiatives in related sectors such as the agrifoods industry is well documented in the literature (see Utting & Clapp 2008; Clapp & Fuchs 2009) and should serve as a warning for designing and implementing sustainability initiatives within the biofuels industry. In order for sustainability standards to become effectively operationalised, and therefore a potential vehicle for positive change, standards organisations such as the RSB – despite their commitment to multi-stakeholder governance – must seek acceptability, credibility and ultimately legitimacy, from multiple and competing sources. At the very core of this task is a more explicit appreciation of the unequal power relations between different stakeholders, and a recognition of their varying agendas, which will determine the ways in which the contradictions of sustainability are resolved.

NOTES

1. Bovid Agroenergy is a pseudonym, used because of the researchers' confidentiality agreement with the company in question when undertaking their research.
2. For a critical discussion on how bioenergy expansion has been shaped by its perceived potential for mitigating climate change see Franco *et al.* (2010), Dauvergne & Neville (2009), Searchinger *et al.* (2008) or Gillon (2010). For elaboration on how the rising price of fossil fuels and concerns for national energy security have driven biofuel production see Kojima & Klytchnikova (2008), Franco *et al.* (2010) or Dauvergne & Neville (2009).
3. For example, for good critiques of this perspective see Li (2011), McMichael (2009a) or Watts (2009).
4. This trajectory is most notably embedded in the narrative that the World Bank refers to as 'new agriculture for development'. See the World Bank's World Development Report 2008 (World Bank 2007) for elaboration.
5. While the relative impact that biofuel markets have on commodity and food prices is highly debated, the International Monetary Fund (IMF) has estimated that biofuels were responsible for 20–30% of the food price spike in 2008 when 125 million tonnes of cereals were diverted into biofuel production (cited in Vidal 2010).
6. For example, the Roundtable on Sustainable Palm Oil, Roundtable for Responsible Soy Production and the Better Sugarcane Initiative (Bonsucro).
7. For example, the Roundtable on Sustainable Biofuels (RSB) and International Sustainability and Carbon Certification (ISCC).
8. Page 3 of Bovid Agroenergy 'Fact Sheet' received from HSSE Manager, Makeni, 15.7.11.
9. See especially Principle 2 on *Planning, Monitoring and Continuous Improvements*. <<http://rsb.epfl.ch/files/content/sites/rsb2/files/Biofuels/Version%202/PCs%20V2/10-11-12%20RSB%20PCs%20Version%202.pdf>>, accessed 3.8.12.
10. SLIEPA website, <<http://www.sliepa.org/investment>>, accessed 1.8.12.
11. Personal communication, farmer, Lungi Acre, 16.7.11.
12. Personal communication, Bovid HSSE Manager, Makeni, 15.7.11.
13. SLIEPA, <http://www.sliepa.org/downloads/sugar-opportunities-sierra-leone>
14. See: <<http://www.afdb.org/fileadmin/uploads/afdb/Documents/Environmental-and-Social-Assessments/Addax%20Bioenergy%20-%20ESHIA%20summary%20-%20Final%20EN.pdf>>, accessed 4.8.12.
15. See Fortin and Richardson (forthcoming) for further elaboration.
16. Telephone interview with Managing Director of Bovid, Geneva, 30.1.12.
17. Telephone interview with Managing Director of Bovid, Geneva, 30.1.12.
18. For smaller companies, such as Bovid, that lack sufficient in-house expertise to deal with the extremely complex requirements set out in the array of standards, regulations, legislation and mandates demanded by investors, there is effectively no choice but to turn to international consultants in order to meet them. These enormous consultancy costs, according to Bovid's Managing Director, are the 'other side' of meeting global sustainability standards – the hidden, unspoken costs for biofuels companies that become part and parcel of the adoption of standards schemes (personal communication with Managing Director, 30.1.12).
19. Telephone interview with Managing Director of Bovid, Geneva, 30.1.12.
20. Telephone interview with Managing Director of Bovid, Geneva, 30.1.12.

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