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Understanding bioenergy conflicts: Case of a jatropha project in Kenya's Tana Delta

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ABSTRACT

In recent years, conflicts related to tenure, management and utilization of natural resources, in particular bioenergy conflicts, are becoming increasingly common. Many bioenergy conflicts are related to plantation projects seeking to capitalize on the opportunity to profit from a combination of factors, centred on the enabling environment for biofuel plantation establishment found in many developing countries. This study analyses these and other related issues in a conflict in the Tana Delta in Kenya. The conflict is centred on a proposed 65,000 ha Jatropha curcas plantation for biodiesel by the Canadian company Bedford. Ethical Analysis, a conflict management and research tool, was employed to better understand the underlying conflict causes. Shortcomings in the technical feasibility studies and participatory planning processes were revealed, including a poor understanding of the different interests and values with regard to land tenure and traditional rights. While the adoption of Free, Prior and Informed Consent (FPIC) is proposed, also capacities and the regulatory framework need to be strengthened to improve transparency, coordination, impact assessment and investment security. The study proposes ways to manage the ongoing conflict and discusses its implications for bioenergy governance.

Introduction

The nature of bioenergy conflicts

Bioenergy-related conflicts are on the rise, triggered by the increasing establishment of bioenergy plantations throughout the world (Eide, 2008; Smalley and Corbera, 2012). Among others, the issues of greenhouse gas (GHG) emission reduction, economic development and trade, and jobs and livelihoods are highly topical as little consensus exists with regard to the positive and negative impacts of increased bioenergy utilization. The establishment of these plantations, as with any large scale change in land use, inevitably results in conflict especially when the proposed change fails to address fundamental issues such as competing demands, and is set against a backdrop of weak governance and poor tenure security (Patel et al., 2013).

Bioenergy plantation conflicts have commonly played out in developing countries, involving foreign direct investments (FDI) that seek to capitalize on the increased global demand for green fuels (Smalley and Corbera, 2012). Factors contributing to the attractiveness of biofuel plantation projects include: (a) the perceived availability of large tracts of land often coupled with the need for FDI; (b) the drive for employment creation and poverty reduction; (c) the objectives of decreasing reliance on petrol and other fossil fuels and increasing the share of renewable energy sources; (d) the reduction of GHG emissions and climate change mitigation; (e) and the support schemes of many developed countries to meet renewable energy, particularly biofuel targets for energy production.

A large number of conflicts revolving around large-scale bioenergy projects have been reported in recent years, among claims by various non-governmental organisations (NGOs) of large-scale land grabs (e.g. Oakland Institute, 2011; Grain, 2013). Biofuel developments have also been shown to be drivers of deforestation. Latin America, South-East Asia and Sub-Saharan Africa are the major hotspots of deforestation linked to biofuel developments (Gao et al.,

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2011), and are forest conflict hotspots (Mola-Yudego and Gritten, 2010; Gritten et al., 2013).

Most land-intensive bioenergy projects worldwide have involved plantations of sugar cane and maize for bioethanol, and palm oil, soy bean and jatropha for biodiesel. While the production from most of these crops can be used as both foodstuff and energy, the oil from jatropha (*Jatropha curcas* L.) is not edible and typically produced for energy. Given that jatropha does not usually compete directly with food production as it can grow on marginal land, it has been one of the most widely planted species for bioenergy production. According to the NGO Grain (2013), there are over 9 million hectares worldwide planned or already under jatropha cultivation, while Brittaine and Lutaladio (2010) predict its coverage to be 13 million hectares by 2015. Nonetheless, the viability of jatropha biodiesel at industrial scale remains to be seen (Maltsoglou et al., 2013).

In this study, an Ethical Analysis of a bioenergy conflict in Kenya is conducted in order to better understand its origins and dynamics, as well as its implications for conflict management as well as bioenergy and land use policies. More concretely, our aims were: (1) to study the interests and values of the main stakeholders with regard to the resources at stake; (2) to explore the main barriers and bridges for managing the conflicts; (3) to propose ways forward towards conflict management; (4) to discuss the case's implications with regard to improving bioenergy governance and land use policy; and (5) to further develop the conflict analysis tool (Ethical Analysis) for use in conflict management.

Case study of a biodiesel project in Kenya

A jatropha project in Kenya was chosen to examine the complex nature of bioenergy conflicts, with implications for conflict management. The project proposes the establishment of a 64,000 ha jatropha plantation within a total leased area of 160,000 ha in the Garsen Division (Tana Delta District) in Kenya's Tana Delta County (Fig. 1). The project is undertaken by the Canadian company Bedford Fuels Incorporated through their local affiliate Bedford Biofuels Tana Delta 1 Limited (hereafter Bedford). The land, corresponding to wooded grasslands, has been sub-leased by ranchers to Bedford under an initial 45 year agreement (ESIASR, 2010). In addition to seasonal pasture land, and given its location between the Tana Delta and the Tsavo East National Park, the area serves as a corridor for wildlife. Some 87,000 people live in the Tana Delta District including so called "squatters" within the project area (ESIASR, 2010).

The project plan includes a Corporate Social Responsibility (CSR) programme of 3.6 million US dollars per 10,000 ha of plantation (ESIASR, 2010). In addition to the support from a majority of ranch owners, Bedford counts on the support of many of the local leaders and a section of the local communities (mainly Pokomo farmers) (ESIASR, 2010; Smalley and Corbera, 2012). On the opposing side are local communities (mainly Orma and Wardei pastoralists) and civil society organisations (CSOs) (Smalley and Corbera, 2012). The most vocal opponents have been environmental non-governmental organisations (ENGOs) such as Nature Kenya and the East Africa Wildlife Society (EAWLS), who oppose the project arguing its negative impact on the wildlife and on the communities' traditional livelihoods. The project is also questioned by ENGOs on the basis of an alleged lack of experience on the growth of jatropha and the absence of a market study. Despite Bedford's claims that initially the production would be consumed domestically (Bedford, 2010), Nature Kenya and its partners believe this and other similar on-going developments in the Tana Delta area are driven by the prospect of exporting the biofuel to regions like the European Union, where ambitious targets for transportation biofuels have been established [(10% by 2020 as per the Renewable Energy Directive (RED) of the European Union, (European Commission, 2009)] (ActionAid, 2011; Nature Kenya, 2012).

In Kenya, jurisdiction on the approval of the required Environmental Impact Assessment (EIA) resides with the National Environmental Management Authority (NEMA) under the Government of Kenya (GoK). In May 2011 NEMA issued a conditional licence to the project for an initial 10,000 ha as a "pilot" plantation (NEMA, 2011). The first hectares of jatropha were planted in that year, and the first crop of oily fruits harvested by March 2012. However, in May 2012 a cease trade order was issued in Canada preventing the company from raising funds in the company's home province given a faulty Offering Memorandum (Alberta Securities Commission, 2012), and the possibility of abandoning the project due to "political instigations" was quoted in a newspaper article in November (Edmonton Journal, 2012). By the time of the primary data collection for this study (December 2012), the project was at a stand-still. A timeline with the main events in this conflict is presented in Table 1.

National and international influences on the biofuel project development

The conflict should be understood in the context of underdevelopment and pressure for land in the Tana Delta. For example, 76% of the population in the area live under the poverty line (national poverty rate is 30%) (Ministry of Lands, 2012b). While the ecological balance of the area was historically maintained by traditional land uses of subsistence agriculture, pastoralism and fishing (Terer et al., 2004) that had a low level of demand over resources, recent droughts, rapid population growth and land allocations on the basis of ethnicity have exacerbated conflicts between farmers and pastoralists leading to clashes. The pressure on the land is aggravated by the increased number of proposed agricultural projects in the Delta: up to 12 projects, ranging from 20,000 to 65,000 ha (Ministry of Lands, 2012a). Some of the proposed projects have been declined by NEMA on the basis, for example, of feared negative ecological impacts (RSPB, 2013).

Land in Kenya is classified as private, public or community owned (GoK, 2010). Within a process thought to give greater control to local communities, group ranches can be established under a private leasehold and title by the Commissioner of Lands. However, this process has seldom taken into account the complexity of land tenure regimes with respect to, for example, customary rights. According to FAO (2002, 2012), poorly defined land tenure – with tenure being the relationship, legally or customary, among individuals or groups with respect to land – puts communities at high risk of exploitation, in addition to implications for sustainability of resource management. Land tenure issues in Kenya are further complicated by ethnic politics, and a long history of politically allocated land rights in which different Kenyan leaders have favoured their own ethnic groups (Boone, 2011). Furthermore, the new Constitution is expected to impact on governance as well as natural resource management, for example, declaring equal rights for women and men regarding land ownership, and will give counties a bigger role over resource management (GoK, 2010).

Wood fuel supplies 68% of Kenya's energy needs (GoK, 2004). The need for reducing the reliance of Kenya's rapidly growing population on inefficient traditional biomass as well as fossil fuels has been long acknowledged by the government. Although the current National Energy Policy (GoK, 2004) and the 2006 Energy Act (GoK, 2006) encourage wider adoption of renewable energies, biodiesel and energy crops, no significant support measures have been put in place, and no specific targets set. Currently the national energy policy is being revised so that it is aligned with the decentralisation objectives of the new Constitution. Additionally, Kenya

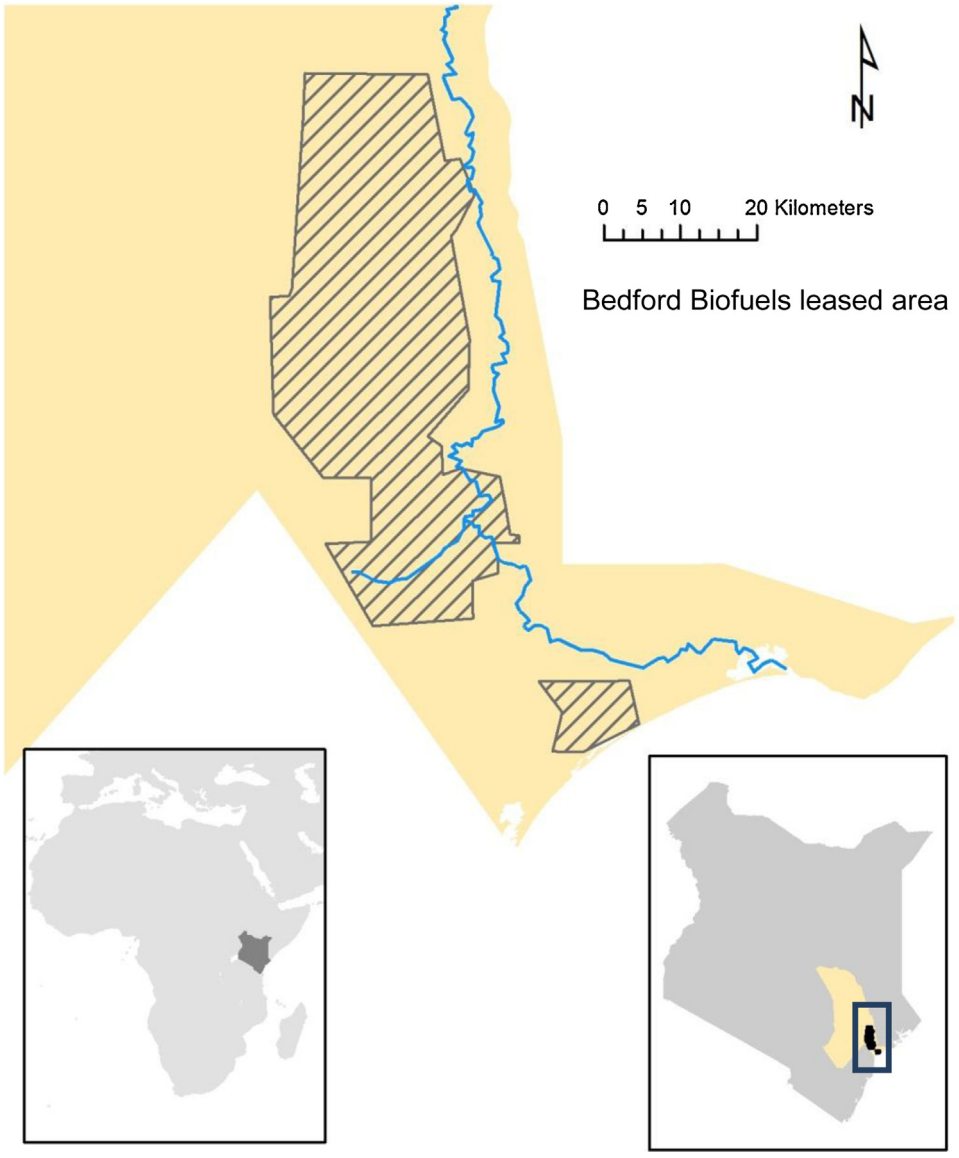

Fig. 1. Location of the 160,000 ha (hatched area) leased by Bedford Biofuels within Kenya's Tana River County (in yellow).

has an Energy Regulatory Commission and an Energy Tribunal (established by 2006 Energy Act), as well as a Strategy for Developing the Biodiesel Industry 2010–2015 (GoK, 2010). Though there is a National Biofuels Committee (created in 2006 with the participation of the main bioenergy stakeholders) and a dedicated Ministry of Energy, their influence in these large-scale energy crop developments have been limited. Therefore the approval of the EIA by NEMA is the main instrument for governing these developments.

Bioenergy-related policy processes in Kenya are also influenced by international actors and processes. Over 65 bioenergy sustainability initiatives, systems and regulations have been launched in recent years (van Dam et al., 2010) either at international, regional or national levels. In particular, bioenergy promotion policies such as those from the EU, the USA or the United Nations Framework Convention on Climate Change (UNFCCC) are having the biggest global influences. Evidence of the global influence of EU's renewable energy policy is supported by a recent study requested by the European Commission that found a clear link between such policy and company investments in developing countries, particularly in Africa (Diop et al., 2013).

Theoretical background

Among the various frameworks under which natural resource conflicts can be analysed Ethical Analysis (EA) was chosen as it allows for the development of an understanding of the underlying causes of a conflict, as both a research and conflict management tool.

Ethical Analysis has been used to understand and facilitate the resolution of ethical dilemmas in various fields such as business (e.g. Hartman, 2005) and health (e.g. Roberts and Reich, 2002). The starting point is to have ". . . a reasonable decision procedure which is sufficiently strong. . . to determine the manner in which competing interests should be adjudicated, and, in instances of conflict, one interest given preference over another. . ." (Rawls, 1951:177). A key impetus in the process is to ensure that decisions are just, therefore helping to ensure their sustainability. This is partly built on having competent moral judges (Rawls, 1951) to conduct the EA, understanding that transparency is fundamental (Rawls, 1972), as is addressing the emotional component of people's decision making (Gaudine and Thorne, 2001), and following a process that increases the mutual understanding among those involved (Rest, 1994).

Table 1
Timeline of relevant events on the conflict; events affecting the broader Tana area are in brackets.

Date	Event	Source
2007–2010	(Up to 12 large agro-investments are planned within the Tana Delta area)	Ministry of Lands (2012a)
November 2010	Bedford presents EIA report, announces 133,161 ha lease in five ranches	ESIASR (2010)
January 2011	Bedford organizes a public hearing at Tana. Newspaper reports the welcoming of the project by locals. ENGOs accuse Bedford of paying people to show support	The Star (2011a) and RSPB (2013)
February 2011	(Community members demonstrate in Tana and Nairobi against projects, attracting nation-wide attention; Prime Minister visits Tana, promising to investigate land grab claims)	RSPB (2013)
May 2011	NEMA approves a conditional 10,000 ha EIA; Nature Kenya and EAWLS accuse NEMA of betraying their mandate	NEMA (2011) and Hunter and Munguti (2011)
July 2011	NEMA suspends 2 directors for illegally awarding Bedford's license (Inter-ministerial group starts developing strategic framework for Kenyan deltas) Bedford starts clearing land for nursery	The Star (2011b), Ministry of Lands (2012a) and Bedford (2012)
September 2011	(NEMA advises GoK to halt jatropha planting within Coast Region) Death threats to opponent of Jatropha plantation reported (Prime Minister's Office hosts a stakeholder meeting, concluding with Communiqué to launch Tana Delta Planning Initiative) Bedford meets Nature Kenya, with heated debate and no agreement. Nature Canada requests Canadian government to intervene	Birdlife International (2011) Interview – Matiku (NK) Nature Canada (2011)
November 2011	Establishment of jatropha plantation begins	Bedford (2012)
February 2012	First successful jatropha crop announced	Online PR Media (2012)
May 2012	Alberta Securities Commission issues cease trade order to Bedford	Alberta Securities Commission (2012)
October 2012	(Tana River Delta is added to Ramsar List)	Ramsar (2012)
November 2012	Bedford staff admit they consider abandoning the project due to "political instigations"	Edmonton Journal (2012)
December 2012	Only security personnel remains at the plantation, with no apparent activities at the site	Authors' observation
February 2013	(High Court rules in support of communities over other developments in Tana Delta) Bedford's website offline	Ngugi (2013), Authors' observation

Within the area of natural resource management, EA has also been applied as a research tool for conflicts in places as diverse as Finland (Gritten et al., 2009) and Brazil (Kröger and Nylund, 2012). As a conflict management tool Ethical Analysis can, for example, be applied in conflict mediation in the pre-mediation phase of the mediation process. The EA's value at this stage of the mediation is that it helps in analysing the conflict, and improves the conflict parties' mutual understanding (Engel and Korf, 2005; Dhiaulhaq et al., 2014), particularly of their interests and values, the drivers for their being involved in the conflict.

The theoretical underpinnings of EA in conflict management start from the position that conflict is based on the relationship between two or more parties with incompatible interests (Krott, 2005) and values (Nie, 2003), resulting in restricting or imposing behaviour (Deutsch, 1973). This incompatibility determines the goals of the stakeholders, how they frame (Gray, 2003) and perceive (Bolman and Deal, 1997) the conflict, all of which coming together, to a large extent, determines the intensity and outcomes of the conflict (Gritten et al., 2009; Gritten, 2009), other issues being, for example, capacity to manage the conflict (Dhiaulhaq et al., 2014). The ethical aspect originates from the fact that the interests and values of the actors, determine how they frame the conflict and as part of this what they see as being right and wrong.

The EA's origins are a reflection of the often intractable (e.g. Nie, 2003; Putnam and Wondolleck, 2003) and complex (e.g. Gritten et al., 2009) nature of conflicts, and how this impacts on their management. For example, conflicts based on incompatible values are more likely to be intractable than those based solely on interests (Rowley and Moldoveanu, 2003; Gritten, 2009), this is based on the fact that conflicting interests are more readily resolved through, for example, negotiation and mediation than values. The complexity and intractability also reflect the moral or ethical dimension of conflict whereby the conflict issue is invariably perceived to be based on perceptions of right and wrong, hence the title Ethical Analysis.

EA follows six steps that are iterative in nature:

1. Identify the problem(s). For example, conflicting interests and values, and structural issues (power over resources, procedures, time, geography).
2. Identify the stakeholders (those who are directly involved in the conflict, affected by the conflict or dependent on the resources concerned).
3. Identify their interests, values (and perceptions).
4. Explore how the stakeholders perceive the difference between their interests, values and those of other stakeholders.
5. Identify the interests, values that are bridges or barriers to meaningful dialogue.
6. Make the stakeholders aware of the "ethical assessments" and give them possibilities to comment. The aim of which is to increase the mutual understanding of the conflict actors.

Material and methods

Primary data for the case study was obtained from a total of 26 informants (20 male, 6 female), through either face-to-face semi-structured interviews (23) or questionnaires when interviews were not possible (3). 17 respondents were key informants selected through a purposive sampling strategy given their involvement or expertise in the case. Key informants were from NEMA (4), Ministry of Energy (1), ENGOs (3), Bedford (1), universities (3), the Kenya Forestry Research Institute-KEFRI (2), non-environmental NGOs (2) and local authority (1). The remaining 9 informants were Tana Delta residents from the main ethnic groups (Pokomo, Orma and Wardei) using a convenience sampling strategy.

The questions largely followed the Ethical Analysis protocol as developed by Gritten et al. (2009), which included identification of: (1) ethical problem, (2) stakeholders, (3) stakeholders' interests and values, (4) stakeholders perceptions of each other's interests and values, (5) bridges and barriers to meaningful dialogue, and (6) stakeholder comments on the preliminary ethical assessments compiled by the authors (follow-up query).

Furthermore, respondents were asked to evaluate the perceived impacts of the project (5-step scale, ranging from significantly negative impact to significantly positive impact) on 10 socio-cultural, 6 economic and 13 environmental issues, with mean values calculated within stakeholder groups. Data analysis was completed with the transcription and analysis of interview data following the EA protocol, as well as in consideration of secondary data from a literature review.

Results

Identification of the ethical problem

The bioenergy plantation conflict originating in the large-scale agrofuel project planned by Bedford in the Tana Delta is centred on conflicting land uses. The plantation plan constitutes a major land use change from the traditional uses (mainly livestock herding, with some subsistence farming), with ecological impacts (on biodiversity and wildlife) on the wider Tana Delta system. It clearly emerged from the data analysis that, from an ethical perspective, there are four prominent issues in this conflict: land tenure, trade-offs between economic and environmental benefits, stakeholders' representation and power relations, and approaches to development and sustainability. The standpoint of the two most antagonized stakeholders, Nature Kenya and Bedford, on these four main issues is summarised in Table 2.

Regarding land tenure, Bedford's approach only acknowledged the statutory tenure held by ranchers, and dismissed customary rights by denominating others squatters. On the contrary, Nature Kenya – as shown in the excerpt below – challenged not just the ranchers' power of decision on land uses – understanding that this power rests in the whole community – but also the legitimacy of the land allocation processes by the authorities:

> "*There is an issue of double standards, because the ranch owners who entered into agreement with private sector [Bedford] are not necessarily rightful owners. Because land-grabbing takes different forms in Kenya; a few people come together and decided to do the lease, go to the council, use their influence, and the land is allocated to them as individuals, while everyone else is on the land. So only on paper it belongs to those individuals, but ethically, traditionally, belongs to the entire community*" *(Nature Kenya informant).*

Nature Kenya saw also a deeper ethical issue on the project's trade-offs in that environmental impacts hardly acceptable in developing countries would be accepted in the project area because of poverty. From the standpoint of representativeness, both Bedford and Nature Kenya claimed not just to have the backing of the majority of the community but actually to be acting in representation of some other stakeholders (local communities and other ENGOs in the case of Nature Kenya, and local communities, ranchers and local leaders in the case of Bedford). As became apparent during the interviews, little efforts had been made to provide locals not just with an understanding on the project and its consequences but with a say and possibility to influence the project. On development and sustainability, the different view held by these antagonistic stakeholders broadly aligned themselves with discourses of the global debate of large commercial farms versus smallholder systems, and aid versus trade.

Stakeholder identification

Primary and secondary data were used to recognize the key stakeholders and classify them under five broad categories: (a) private sector organisations, (b) civil society organisations, (c) government institutions, (d) local communities, and (e) other stakeholders. In order to facilitate further analyses, 13 stakeholder groups were formed (Table 3). Stakeholder grouping used as criteria both the stakeholder category as well as their general attitude (favourable or negative) towards the project. In the cases where a clear majority of members within the stakeholder group had a given position, the entire group was assigned such view. An example of this is the case of the ranch members, among which 93% were in support of the project (ESIASR, 2010). Where greater heterogeneity existed, such as in the case of local communities, different stakeholder groups were considered (e.g. local communities supporting and opposing the project).

Following Freeman's (1984) understanding of what constitute a stakeholder, the group of other stakeholders included those that, although may not be considered as directly involved in the conflict, are affecting it, such as researchers, the news media and – given the influence of EU-RED as noted by some stakeholders – the European Commission.

Stakeholders' interests and values

The interests and values of the stakeholder groups were identified through the analysis of the collected primary data as well as other documents related to the stakeholders (Table 3). While the main differences in values and interests among stakeholders are detailed in "Stakeholders' differing perceptions", selected excerpts are shown to illustrate them in the stakeholders' own words. As shown below, among Bedford's self-proclaimed values are human development, while their interests range from profit making to environmental and socio-economic development:

> "*Bedford will help people to a better life and a greener planet, that is the business model. It's a unique investment that reaches beyond the scope of simple monetary gains and into the realm of environmental and humanitarian contributions. Trees will act as carbon sinks, and provide employment. We want to fund large-scale operations in places like Kenya and Zambia to provide clean oil for Africa and beyond. Bedford stands as the voice of the people who will be employed by us, whose land we are leasing*" (Bedford, 2010, Mediaplanet 2010)

From the perspective of the livestock sector, views from a pastoralist and from a representative of the Kenya Livestock Marketing Council (KLMC) are shown below. For the latter, keeping pastures accessible for livestock-producing communities is its main interest in this conflict, with declared values focusing around the sustainability of the livestock sector.

> "*I have no personal gain from the project. My animals cannot get there, same for the people in my community, except perhaps 1 or 2 who may be employed. Grazing lands have been terribly reduced. I should be allowed to access that grass*" (pastoralist)

> "*Bedford project intends to utilize land that is for livestock production, and will affect negatively the livelihood and economy of pastoralists. We strive for the improvement of the livelihoods of livestock producing communities, that contribute to the economic development of Kenya, through sound use of natural resources and environmental conservation*" (KLMC informant)

Among the stakeholders supporting the project, the stated interests of the Tana Youth Federation Network (YTFN) are employment creation and qualifications for the local youth:

> "*Bedford project is of great importance as it will create revenue for national and local government, and 1,500 jobs for the youth were mentioned. I heard jatropha plant does not have harmful effects, and the project does not affect pasture land: is private land that has been idle*" (YTFN informant)

The analysis of the numeric evaluation given by key informants regarding the expected impacts of the project indicated that the

Table 2
Views of Nature Kenya and Bedford on the four main ethical issues.

Stakeholder	Ethical issues			
	Land tenure	Trade-offs	Representativeness and power relations	Development and sustainability
Nature Kenya (NK)	-Ranchers not rightful land owners; land belongs to communities. -Land to fulfil multiple roles -Current livestock use most viable	-Mostly negative impacts (seen as unacceptable)	-NK claims to represent the interest of local communities -NK is accused by Bedford of lying in order to raise funds	-Sustainable development through support of small-scale livestock, farming and other activities (e.g. nature tourism) -Large-scale project as bringing low-paid, non-qualified jobs perpetuating poverty -Policies supporting biofuels such as EU's RED having negative impacts, exacerbating climate change and incentivising land grabs
Bedford	-Land leases as legal, and as helping ranchers securing local ownership. -Some land uses by non-ranch members to be allowed; "squatters" not to be forcefully evicted -Land as underutilized	-Positive impacts override negative ones -To mitigate and compensate negative impacts (e.g. with CSR)	-Bedford claims to have widespread support -Bedford is accused by NK of not involving communities in planning, and gaining support through dubious means	-Big investments for production of commodities with CSR as only effective option -NGOs' strategy of aid not working

most frequently stated negative impact was on biodiversity (indicated by 65% of respondents). The most frequent positive impacts, however, were on employment (85%), poverty reduction (77%), national revenue (73%) and livelihoods (65%). As shown in Table 4 in a categorized view of some stakeholders' assessments, the impacts of the project on environmental, socio-cultural and economic issues differed especially among Bedford and the ENGOs. The very negative views from Nature Kenya emerge from the fact that they did not consider the project as technically feasible, and therefore did not expect any positive outcomes (e.g. from CSR) to materialise.

Stakeholders' differing perceptions

The greatest differences between stakeholders were Bedford and Nature Kenya's perceptions of each other's interests and values. Nature Kenya perceived that the interest of Bedford was purely economic, with issues such as stakeholder engagement or CSR just intended to increase the project's attractiveness. For Nature Kenya, the neoliberal economic approach of Bedford was unacceptable, since among other considerations, it would take advantage of the weak regulatory framework, illiteracy, poverty, low land prices and low salary levels in order to make profit for foreign investors. In addition, the jobs that would be created were seen as low-qualified, minimum-wage jobs that perpetuate poverty.

On the other hand, Bedford did not question the values of Nature Kenya, but saw that the defence of their interest – prioritizing of nature conservation over economic development – was condemning locals to poverty, calling this attitude "a crime against humanity" (Mediaplanet, 2011, citing Bedford's CEO). For Bedford, it was in Nature Kenya's interest to exaggerate the ecological value of the area and the negative impacts of the project, so as to be regarded a needed actor. According to a Bedford representative ENGOs used local and international press to spread false information (Mediaplanet, 2011). Bedford's reluctance to contribute to this research originated from their perception (as mentioned by the Bedford informant) that researchers were against the project.

NEMA saw the stakeholders' interests as compatible, and shared some of the criticism towards CSOs that opposed the project for not providing alternatives. In spite of seeing Bedford's project as reasonable, the fact that the licence was granted with conditions and only for a first phase of the project (10,000 ha instead of 64,000 ha) signals some reservations on their part. It was also NEMA's understanding that the Government of Kenya does not have a clear policy towards these developments, specifically on issues like benefit sharing or partnerships. From the side of the Kenyan Government – which did not have a defined position on the issue –, the Ministry of Energy felt that key stakeholders such as Bedford and NEMA had not adequately engaged the Ministry, and that the technical feasibility of the project was not proven:

> "*We simply don't have the adequate data to recommend the project, it seems that they [Bedford] have not done a proper feasibility study. NEMA is supposed to share the reports with us and other concerned ministries, but often they do not do it. They should consult us, but it is up to NEMA to put their house in order*" (Ministry of Energy informant)

The most critical voice against NEMA came from ENGOs like Nature Kenya, who believed that the decision of granting the partial licence was "a betrayal to NEMA's custodianship of the environment" (Hunter and Munguti, 2011). The legality of the decision was also questioned by other ENGOs. As a matter of fact, claims were made that two NEMA directors had been suspended over the licence decision (The Star, 2011b; Birdlife International, 2011). However, Nature Kenya and other ENGOs have praised past decisions by NEMA with respect to not granting similar licences and have a proactive view towards cooperating with the government and its agencies.

While the media presented the information on the project from the point of view of their informants, their selection of sources may be seen as a way in which they have positioned themselves within the case. Thus, from the analysed documents, newspapers like The Nation and The Star in Kenya and the Canadian Edmonton Journal offered both sides of the story, while The Guardian (UK) positioned itself as a critic of the project (naming it a "biofuel land grab") on the basis of the views expressed by some locals and Nature Kenya (The Guardian, 2011). With respect to the interviewed researchers, while they did not question the interests and values of other stakeholders, they saw a need for more adequate community involvement, as well of more research on the growth and productivity of jatropha in the area, and on the various ecological impacts.

Other stakeholders tended to focus more narrowly on the defence of their own interests, siding with (e.g. ranchers) or against Bedford (e.g. Kenya Livestock Marketing Council). Local communities were generally uninformed and divided over the

Table 3
Ethical assessment: interests and values of 13 stakeholder groups in Bedford's project.

Stakeholder	Interests	Values
(1) Bedford	-Profit making -Production of commodity for national and global markets -Raise investment capital -Job creation, poverty reduction and local development -Environmental benefits of carbon sequestration and clean fuels (disputed)	-Business expansion -Human development (through CSR) -Respect to legality -Market capitalism/neoliberalism
(2) Ranchers	-Profit making -Creation of jobs (for ranch members and/or their families) -Safeguard land ownership	-Economic development -Jurisdiction over owned land -Respect to legality -Market capitalism
(3) Nature Kenya and partners	-Biodiversity protection of broader Delta system; -Defend communities' rights to traditional land uses -Increase visibility, fund raising	-Nature conservation -Promotion of sustainable benefits for communities -Integral land use planning -Ecological sustainability
(4) TYFEN (CSO supporting project)	-Generation of jobs for local youth -Qualifications for local youth	-Local youths' development
(5) KLMC (CSO opposing project)	-Keep pasture land accessible for livestock-producing communities	-Improvement of pastoralists' livelihoods through sustainable livestock production -Sustainability of livestock sector
(6) Local leaders	-Creation of jobs, economic activity, infrastructures	-Local development
(7) NEMA	-Minimize negative environmental impacts -Ensure social safeguards -Safeguard occupational safety	-Safeguard and enhance quality of environment while encourage participation towards sustainable development
(8) Ministry of Energy	-Generation of sufficient technical knowledge (prior to supporting large-scale developments) -Increase access to clean renewable energy and reduce oil imports -Be appropriately consulted	-Facilitate provision of clean, secure, sustainable and affordable energy services
(9) Local communities supporting the project	-Investments, jobs, training, infrastructures, economic activity, cheap fuel -Improved livelihoods	-Development of local economy -Right to decide on projects affecting them
(10) Local communities against the project	-Safeguard availability of land for current uses (seasonal livestock grazing, subsistence agriculture) - Safeguard (traditional) access to grazing lands, and for other cultural uses	-Land as a communal multi-use resource -Right to information and decision on projects -Right to continue traditional occupations or compensation
(11) Researchers	-Generation of scientific knowledge -Relevance (publications, citations) and funding -Inform policy processes	-Transparency; objectivity; replicable research
(12) Press	-Inform the public -Increase readers and sales -Denounce injustices, watchdog	-Transparency; accountability; freedom of expression; right and duty to information
(13) European Commission	-No direct interest in project -Indirect interests: mitigation of climate change through increased use of biofuels, conservation of valuable ecosystems	-Human dignity, freedom, democracy, equality, rule of law and respect for human rights

issue. Some locals also had conflicting views, as the case of an Orma pastoralist for whom the project was negative for his community as it would reduce the grazing lands, although he was hopeful that his sons could benefit from getting employment from the project. Nonetheless, the right to continue accessing and using the land – now leased to Bedford and partially fenced – by the pastoralist community was a clear demand by these communities.

Table 4
Perceptions of environmental, socio-cultural, economic, and overall impact of Bedford's jatropha project, as seen by selected stakeholders. Perceptions range from highly negative (– – –) to highly positive views (+++), with = indicating neither positive nor negative.

Impacts	Selected stakeholders			
	Bedford	NEMA	Researchers	NK and partners
Environmental	+	–	– –	– – –
Socio-cultural	++	++	+	– – –
Economic	++	++	+	– –
Overall	++	+	=	– – –

Barriers and bridges to meaningful dialogue

The main four ethical issues previously identified were used as a framework to identify the barriers and bridges to meaningful dialogue between stakeholders towards conflict management. The different views of Nature Kenya and Bedford on development and sustainability, on one hand, and on project impacts and acceptable trade-offs, on the other, constitute two major barriers that reinforced each other in various ways. Firstly, while Nature Kenya defends development that is based on ecological sustainability and promotes small-scale environmental-friendly interventions (e.g. development of nature tourism projects), for Bedford aid interventions such as the ones proposed by Nature Kenya are not effective, with large investments for production of demanded goods being the best way to generate wealth and tackle underdevelopment.

Secondly, Nature Kenya saw the area as fulfilling a key ecological role (biodiversity and wildlife corridor) within the Tana Delta system, and understood the project as negative for the local as well as global environment (with an overall negative carbon balance).

However, Bedford saw the area as a degraded and abandoned land which could be used to improve the environment (calling it "essentially a reforestation project", Mediaplanet, 2011, quoting Bedford's CEO). Nature Kenya in fact opposes all large-scale biofuel crops, and is against some global policies encouraging this such as EU's RED (Nature Kenya, 2012).

The other major barriers in the conflict originate from differences over the two other ethical issues (representativeness and power relations, and land tenure), and are reinforced by the views of Nature Kenya and Bedford over each other's actions. Against a backdrop of illiteracy and a poorly defined land tenure regime, these actions include the consultation and mobilisation of just a part of the local communities to claim either participation and support, or unawareness and opposition to the project. Any future attempts to dialogue are complicated by the negative dynamics that resulted from previous engagements, with Nature Kenya claiming intimidation and threats, and Bedford accusing Nature Kenya of falsifying facts (Mediaplanet, 2011). A recent history of failed projects and broken promises is certainly not favouring trust among locals on any upcoming proposals. Further identified barriers are the weakness of the regulatory framework (resulting in poor oversight, consultation and transparency) and the use of ethnicity as a dividing line in local and national politics, which have exacerbated ethnic disputes and strongly undermined the capacity of community elders to negotiate compromises.

Nevertheless some bridges for meaningful dialogue were seen. In this sense, there was certain willingness from both Bedford and Nature Kenya to address the needs and wishes of local residents, and from all stakeholders to accept some trade-offs between economic and environmental impacts. With regard to land tenure and the relations between ranch members and the surrounding community, ranchers had voiced the opportunity for other locals to become ranch members, therefore signalling certain openness to discuss land uses and rights. Notwithstanding recent ethnic clashes between the pastoralist Orma and the agriculturalist Pokomo communities, the long history of coexistence and the precedents of agreeable multi-ethnic ranch management indicate the potential for cooperation between the communities.

Stakeholders comments on the ethical assessments

Comments on the first draft of the paper and more specifically on the ethical assessments were received from four stakeholder groups: Nature Kenya, the Kenyan Ministry of Energy, KEFRI, and the Directorate-General for Energy of the European Commission (DG Energy). According to the response from the Ministry of Energy, there was nothing to be added as authors had "correctly reported the Ministry's views", with similar feedback received by the representative from KEFRI. Nature Kenya saw our analysis as "quite interesting", and requested some minor modifications in the views and statements attributed to their organisation.

The respondent from the DG Energy argued that no biodiesel imports from African countries have occurred or are expected, as EU supports energy production in developing countries to increase their access to energy and not for exports. Additionally she perceived that in fact "many developing countries complain that the EU sustainability criteria were too strict".

Discussion

The Tana conflict explained

The conflict developing over Bedford's project in coastal Kenya was found to be rooted in the differing views of stakeholders on issues that, extending beyond land tenure, include differences in understanding of development and sustainability, acceptable trade-offs, and representativeness and power relations. In an area where governance systems are weak and underdevelopment high, the proponents of the large-scale investment fell short in grasping these complexities, but yet obtained a licence despite presenting a plan and impact assessment that lacked key elements such as a proper community participation process or a market study.

It can be argued that a key controversial aspect of the project was the very nature of the investment: A for-profit set-up of what may be an over-optimistic investment opportunity with regard to project financing, monetary returns and social and development benefits. A cornerstone of the project's viability rests on the expected jatropha yield (a projected in 3.5 tonnes of dry seeds per hectare), which in the scale of the project would allow for investment returns as well as the CSR programme. However, this productivity figure is questionable, in the semi-arid conditions of the leased land (e.g. Kant and Wu, 2011; Kibazohi and Sangwan, 2011). For example in neighbouring Tanzania, Segerstedt and Bobert (2013) did not find large-scale jatropha profitable for neither domestic consumption nor trade.

Given the uncertainty regarding financing and productivity, the project seems to have certain speculative character and largely relies on an inexpensive land deal. Since such deal was secured only with those formally owning the land, it can be seen as a threat to the livelihoods of many community members, such as seasonal users. For Smalley and Corbera (2012), ranch establishment in Kenya has deepened or formalised access inequalities and given ranch officials a decisive role regarding who is included from their community. While diverging statutory and customary rights coexist, disputes over these unclear land tenure regimes are bound to surface whenever investment opportunities arise not just in the Tana area but elsewhere.

Signs of dysfunctional governance systems were detected, such as the double role of the Garsen Local Chief, also a ranch member and therefore receiving money from the proponent. At the national level, and despite the existence of structures such as the Ministry of Energy or cross-ministerial policies such as the Biodiesel Strategy, the only authority involved was NEMA, which approved the EIA despite its deficiencies. While some NEMA experts contributed to this research on condition of anonymity, no official position was given, signalling the highly politicised nature of the case.

Steps towards conflict management

There is a clear need for the GoK to take a more decisive role in this conflict, given the scale of the project and the historical sensitivity of resource management in the area. Also as to prevent similar conflicts, the GoK should revise the regulatory framework for the approval and follow-up of large projects, since the EIA has proven to be an insufficient tool. Guarantees should also be included, so that restoration operations can be carried out in case of project failures. Seeking the permission of all the relevant government agencies before engaging in such large scale investment would also help address some of the potential conflicts at an early stage. As pointed out by Cotula et al. (2010), strategic thinking instead of ad-hoc decision making is needed on the side of recipient governments to ensure that the contribution of these investments maximizes sustainable development.

Regulatory institutions such as NEMA need to be strengthened, and together with government institutions, operate in a more transparent manner, so that investment security is also safeguarded for projects that comply with regulations. In more immediate terms, the government should bring the proponent and other stakeholders to the negotiating table and demand further studies. The delays to the project constitute a good opportunity to de-escalate the conflict after having been nearly at a violent stage.

For Bedford, there is a clear need for an improved stakeholder engagement process to develop a better understanding of the needs, wishes and dynamics of the communities in the project area, such as the issues of tenure, and land and water conflicts. As with the biodiesel project studied by Amigun et al. (2011) in South Africa, developers making the key decisions without consulting local communities face public distrust. One tool that Bedford, and other companies involved in land use management should be encouraged to utilize is Free, Prior and Informed Consent (FPIC). FPIC would help to ensure that the stakeholders were informed of Bedford's proposed intervention, and given the tools to consider the implications, the result being that Bedford would have to address the concerns of, for example, tenure to the satisfaction of the communities in order to get their consent, and ensure that this continues to be addressed during the project's implementation in order to continue to get the communities' consent, thereby helping to address the sustainability issue. FPIC would help address the four main issues identified in the research. FPIC would also allow the identification of the interests and values of those involved, and ensure they are addressed before they give consent. The importance of FPIC is acknowledged in various certification schemes such as Forest Stewardship Council (FSC) and the Roundtable on Sustainable Palm Oil (RSPO). Bedford also needs to conduct trials to better understand the possibilities of jatropha, and could consider the enlargement of non-planted areas and corridors to diminish the project impacts.

Among other stakeholders, Nature Kenya could enter into these negotiations examining possible trade-offs and alternatives in the project, encouraged through the Ethical Analysis. Investments in eco-tourism, environmental improvements, reforestation or nature conservation activities would certainly benefit the local environment and economy, though whether to the same potential level as the proposed Bedford project is an issue. In Europe, Pilgrim and Harvey (2010) found that NGOs' attitudes towards biofuels were driven more by narrow political agendas than by more articulate policies to addressing climate change or economic development. Also here, a proactive approach rather than strong opposition could yield more benefits. On the whole, one can see numerous conflict barriers (Patel et al., 2013) when examining the conflict using the EA. These include access restriction, competing demands, participation and information sharing and tenure security, highlighting the challenges facing attempts to manage the conflict.

The European connection

It clearly emerged from the study that bioenergy support schemes such as EU-RED were perceived as drivers of the *biofuel rush* affecting the area. For Hamelinck et al. (2012), the time lapse between land deals and crop production makes it difficult to link such land deals with European biofuel consumption. Nevertheless, a lack of policy coherence was seen in the argument given by the European Commission representative on the biofuel policy towards developing countries. The argument – that EU promotes bioenergy in developing countries only for their own energy security – appears to contradict the data showing the growing imports of biofuels from a long list of developing countries including Brazil, Indonesia and Egypt (e.g. Hamelinck et al., 2012).

Due to the potential contribution of bioenergy policies to deforestation, climate change or food prices, many voices (including that of numerous ENGOs) support the prioritization of renewable energies other than biomass (e.g. WWF, 2013). The European Commission, aiming at minimizing these impacts, has put forward a proposal that reduces from 10% to 5% the biodiesel that is to be targeted from food crops (European Commission, 2012). However, further research on the measurement of these impacts, as well as on the operationalization of the sustainability clauses of EU-RED, is urgently needed so that the numerous benefits of sustainable bioenergy production are not missed.

Ethical Analysis as a tool in bioenergy conflict management

This study was the first to employ Ethical Analysis in a bioenergy conflict, and on the whole it proved to be useful. The main strengths of the tool are that it: (1) develops understanding of the underlying causes of conflict through views and analysis made by stakeholders including formulation of issues, stakeholders and their positions, thus reducing researcher bias; (2) allows stakeholders to reflect and develop awareness on their positions and those of other stakeholders, thus facilitating conflict management; (3) allows the validation of researchers' interpretations through consultation with stakeholders.

The final point, concerning its participatory nature is valuable regarding efforts to move onto managing the conflict. The EA is both a research and conflict management tool, with its particular value lying with it facilitating increased self-awareness and mutual understanding of the conflict parties. Based on this one suggestion is that when EA is applied in research, the researchers should try to work with conflict managers (e.g. conflict mediators). This would not only ensure the strengthening of the research findings, but also increase the impact of the research in its possible inclusion in efforts to manage the conflict. Also, when applying the tool one must keep in mind its iterative nature. For example, the identification of the conflict problem will be done continuously, including when going through the findings of the assessment with the conflict actors.

The EA's application in increasing mutual understanding is a cornerstone to successful conflict management increasing participants ethical sensitivity (awareness of the impact of the conflict on others) (Rest, 1994) and helping to manage the emotions in the conflict (Gaudine and Thorne, 2001). However, the issue of the appropriate "competent moral judge" (Rawls, 1951) needs further exploration. In the EA set out in Gritten et al. (2009) the proposed judge(s) were academics, with the safety net being the conflict partners having the opportunity to comment on the EA (stage 6), the challenge being that the academics have their own personal values that they bring to the process, which will, for example, influence how they present the findings in step 6. One way to address this is to have an independent advisory board overseeing the process.

Additional issues with the application of this tool need to be acknowledged. One is the difficulty to capture, within the short interaction of the interviews, the deeper meanings of the stakeholders' values. This is especially true when dealing with property relations, which can involve not just ownership but tenure, access and traditional rights, strongly affected by cultural considerations (Hellström, 2001). Secondly, interests are also difficult to gather given the complex mix of positive and negative impacts of developments. Thus, complementary tools such as the tested scale to evaluate impacts on listed ecological, environmental and socio-economic issues, may help understand these interests.

Limitations of the study

The results of this study need to be considered in light of some limitations. At the time of data collection, ethnic tensions were high in the area (with 52 people killed between August 2012 and January 2013) and a curfew was in place, which limited the possibilities of data collection. Given the limited number of informants and the non-probability sampling methods, we cannot claim to have collected the views of all stakeholders. These tensions may also have – in spite of the anonymity assurance – caused respondents to be more cautious in expressing their views. Although stakeholders' comments to the initial ethical assessment have somewhat validated our analysis, certain simplification over

the position of some stakeholder groups was made. Finally, the possibility of certain interviewers and researchers' bias (related to the researchers' own cultural pre-conceptions and backgrounds), despite the extensive cross-examination within multicultural research team, is acknowledged.

Conclusion

Bioenergy is seen as having the potential not only to combat climate change but to be an opportunity for development in places like Sub-Saharan Africa (e.g. Lynd and Woods, 2011). Nevertheless higher demands and expectations have prompted a bioenergy rush leading to numerous related conflicts. In Eastern Africa in particular, biofuel expansion constitutes an opportunity to stimulate growth and reduce poverty although better social protection mechanisms are needed (Arndt et al., 2011). With conflicts related to bioenergy plantations on the increase, there is a need to not only expand the understanding of the causes and management options for these types of conflicts, but also provide tools for their management.

The main findings of the application of the Ethical Analysis underline the importance of participation in any large scale land use changes, by enshrining participation project proponents would benefit in many ways, not least from having an improved understanding of positions and perceptions of the various parties in a situation that could easily become a conflict. The situation was exacerbated by the weak regulatory environment which made conflict even more likely. EA has proven itself to be a valuable research tool, however, it also offers significant potential as a conflict management tool, one that should be further explored in future research whereby the researchers work with conflict managers to identify steps to manage a conflict through the application of the EA.

Unsound feasibility studies (Patel et al., 2013), like the one from the analysed project, seem to be behind the numerous abandoned biofuel projects (according to Carrington, 2011 – at least 30 in 15 African countries). Strong feasibility studies need to be supported by adequate participatory planning process and effective oversight by the authorities. Development of technical know-how and support for sectorial policy developments – including land use planning – seem crucial to ensure these developments meet local needs and are sustainable also from a landscape and national perspective. The planning of such large-scale developments should evolve through a carefully designed process of community consultation and participation (e.g. through FPIC) which potentially would not only contribute to their success but also help resolving unclear land tenure settings for future generations (akin to social transformation).

As proposed by De Schutter (2011), the development of regional frameworks for addressing large scale land investments may help preventing the lowering of requirements by individual governments when competing for foreign capital. The endorsement of the Land Policy Initiative – with guidelines for the formulation of land policy – by the African Union is an encouraging step in this direction. Furthermore, while numerous bioenergy sustainability initiatives are emerging, there is an urgent need for tools that can be operationalized at project level and minimize conflict occurrences. Key aspects in bioenergy developments (e.g. life-cycle assessment of GHGs, land tenure, direct and indirect land use change, market development, cross-cutting effects such as on gender, poverty or health) should be further investigated in parallel to the development and testing of frameworks and theories within the emerging field of bioenergy governance.

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