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POLICY BRIEF

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Land acquisition for and local livelihood implications of biofuel development in Zimbabwe

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KEY POLICY POINTS

- There is need for biofuel development policies that consider the multiple livelihood benefits that communal land offers to local people.
- Stronger governance arrangements are required around large-scale acquisitions, to facilitate balancing of government and private investors' interests and the rights of rural people who are primarily dependent on land for survival.
- Initiation of a meaningful multi-stakeholder process could be one pathway to ensuring that biofuel development strategies are informed by insights from all interested stakeholders.

INTRODUCTION

In recent years, proponents of 'green and clean fuel' have argued that the costs of overreliance on fossil fuels could be reduced through transition to biofuels such as bio-ethanol. Global biofuel discourses suggest that any transition to biofuel invariably results in significant benefits, including energy independence, job creation, development of agro-industrial centres at local level and high revenue generations for the state with minimum negative impacts on the environment. With many risks and costs associated with traditional 'dirty' fuels, it is likely that many countries, particularly African countries, will move towards the 'green and clean fuel' alternative. However, until recently research has arguably paid limited attention to the local livelihood impacts related to land acquisition for biofuel development or the policy frameworks required to maximise biofuel benefits. With regards to biofuel benefits, some recent studies suggest that the much bandied potential for greater tax revenue, lowered fuel costs and wealth distribution from biofuel production have all been perverted with relatively little payoff in wage labour opportunities in return (e.g. Richardson, 2010; Wilkinson and Herrera, 2010). Based on work done in Chisumbanje communal lands of Zimbabwe (Thondhlana, 2015), this policy brief highlights the local livelihood impacts of biofuel development and discusses policy implications of the findings. By highlighting the justifications of biofuel development at any cost by the state, the study sheds some light on the conflicts between state interests and local livelihood needs.

THE BIOFUEL PROJECT

The Chisumbanje bio-ethanol plant (completed in 2011) is claimed to be one of the largest biofuel development projects in Africa (Chiweshe and Mutopo, 2014). Around 40,000 ha of land were acquired from local households to grow sugar cane for bio-ethanol production. Just 5112 ha were acquired under contract with the agricultural development parastatal organisation, the Agricultural Rural Development Authority (ARDA), and the rest came from communal farmers. In the study area, farmland is located away from peoples' homesteads, thus, most households were not physically displaced from their homesteads, but nonetheless lost access to their farming land. There are conflicting figures on the exact number of displaced households but according to the Chipinge Rural District Council, there were about 1733 displaced households as of June 2012 (Chiweshe and Mutopo, 2014). The ethanol plant, built at a cost of around US $600 million, is a public-private partnership. It is reported that once fully operational, the bio-ethanol project would, among other things: produce enough ethanol to meet 50% of Zimbabwe's fuel needs; generate 20 MW of electricity, with an excess of 15 MW to be sold into the national grid; trigger local-level development and create more than 5000 jobs. Hence, this project is, at the national level, viewed as one of strategic importance, with potential benefits that fulfill essential national economic and political priorities (Mutambara, 2012).

POLICY LESSONS FOR BIOFUEL DEVELOPMENT FROM THE CHISUMBANJE PROJECT

The advent of the Chisumbanje biofuel development project, like many other similar projects elsewhere in Africa, is considered by the state as a strategic investment at national level (Mutambara, 2012). Biofuel development in the study area is premised upon the development of 'marginal land' and 'unproductive' to generate benefits such as energy security and independence, efficient irrigation schemes, smallholder out-grower schemes, job creation, electric power generation and stimulation of downstream industries. Though the local livelihood impacts need to be re-examined over a reasonable timeframe since the biofuel project is just about six years old, evidence generally shows that the biofuel investment has not lived up to its promises.

KEY FINDINGS OF THE STUDY

1. **Loss of land for food crop farming:** Displacement from agricultural land and the related loss of land-based livelihoods were reported by 98% (n = 311) of the surveyed households as the major negative impacts of the biofuel project. The calculated average land size for the surveyed households was significantly bigger (5.2 ha) before than after (0.3 ha) the onset of the biofuel development project. Though displaced households were promised irrigated land to grow food crops, only 26% of all the surveyed households said they received 0.5 ha plots of irrigated land. However, of these most (79%) said they had no access to irrigation water, which they say was partly behind the low crop productivity. Further, more than half of the households which successfully acquired irrigated land felt that these land parcels were too small to sustain their household needs. All the surveyed households reported annual food shortages but perceived this had increased with the onset of the biofuel plant.
2. **Loss of land for and income from cash crop farming:** All the surveyed households, as well as individuals who participated in in-depth interviews, agreed that cotton farming had been the traditional cash income, in an area where other economic opportunities are limited. Some of the displaced farmers (117 households) were local farmers who previously were sugar cane out-growers. Some of the interviewed households said they had stopped operations as their land was acquired by the biofuel company. Cash income was used to supplement food in times of droughts, pay for school fees, health costs and other day-to-day livelihood costs. However, the loss of land meant loss of important cash income from cotton and sugar cane farming. For example, one of the displaced cotton farmers said that "we used to take cotton farming as our backbone but now life seems to be getting harder by the day because we can no longer generate some income on our own". Another displaced farmer said "we do not have money for school fees because we can no longer grow cash crops". Most local people surveyed, particularly displaced farmers, felt they were worse-off than before the establishment of the biofuel project.
3. **Loss of access to natural resources:** Household surveys showed that nearly all households used fuelwood as a primary source of energy. Poles, thatch and reeds were also used as building material. However, the loss of land to the biofuel project means the local people are no longer allowed to harvest these resources. For instance, the surveyed households said they used to harvest cotton stubs in their fields and cut branches of trees from their fields for fuelwood, but now have to travel for return distances ranging from 4 km to 40 km to get fuelwood and other natural resource products as evident in the following statement: "thatching grass to roof our homes is now difficult to get, now we have to walk for about 20 km in search of thatching grass".

   Moreover, limited agricultural land meant limited fodder for livestock. Seventy-five percent of the surveyed displaced households (n = 237) owned livestock including cattle, goats, donkeys, pigs and poultry. Most (88%) of these households practiced unsupervised grazing soon after harvesting their food and cash crops, and also collected crop residues as fodder to be used during planting seasons. However, this practice was no longer possible, as most farming land was acquired for biofuel production. The ramifications of reduced access to land and natural resources include a substantial increase in the amount of time required to gather important natural resources, and changes in resource-use patterns. Conflicts with neighbouring communities were reported, resulting from increased resource use pressure in the area (natural resource collection, notably fuelwood and livestock grazing).
4. **Job creation and local development:** The creation of jobs, local development and land irrigation were cited as positive aspects by 33%, 15%, and 11% of the respondents, respectively. It appears that people who perceived positive benefits were mostly those who were not directly affected (displaced) by the biofuel plant. However, these respondents also indicated that some of these benefits were short lived, since ethanol production activities at the plant were temporarily stopped in February 2012 due to a combination of community-related disputes and technical and business-related issues (Mutambara, 2012). For example: "biofuel creates downstream employment, I used to sell chickens and so it was good business but now the plant has stopped operating". Most displaced farmers reported that despite the promises of job creation, they had not seen any substantial employment opportunities for local people. There was a perception that most workers at the plant were not locals but came from other places as reflected in the following statement; "we do not want the biofuel mill here. Our kids are not working at the mill - its only strangers. Local people are getting far away to look for work and our kids have no future".

All in all, there was a strong resistance to the biofuel project by locals (especially displaced farmers) which partly led to the cessation of production activities at the ethanol plant. There was a highly contested assumption about the desired change, progress and vision of biofuel development between the state and local communities – a clear

demonstration of collision of national interests and local livelihood needs. The resistance by the community emanates, in part, from a systematic lack of collaboration with local villagers in Chisumbanje area to allow them to prioritize their concerns. However, within the communities, some more powerful individuals with the 'right connections' or strong political ties tapped more from the benefits of biofuel development.

The findings presented here point to key areas for policy action on biofuel development on communal land in Zimbabwe and beyond. More generally, the shift to biofuel production could yield benefits at both national and local levels if properly implemented, but there are crucial inadequacies that need attention. These inadequacies largely relate to broader conceptualisations of the uses of land, legal frameworks around benefit sharing and tenure issues, relations among the state, private investors and local communities and governance issues. The following policy recommendations may not be exhaustive but could form the basis for initiating inclusive biofuel policies that consider the livelihoods and values of local people. In practice, these key policy issues are not mutually exclusive.

KEY POLICY MESSAGES

1. **Widen understanding of the multiple uses of communal land:** The findings show that for most households in Chisumbanje area, land is crucial for land-based livelihoods. The findings generally add some weight to well-established evidence that lands perceived as 'marginal' from a commercial agriculture viewpoint, actually provide a vital basis for the livelihoods of rural societies. Thus, the biofuel policy direction in Zimbabwe should be informed and guided by the realisation that dryland communal farming systems have multiple production objectives to underpin livelihood security. Consideration of these multiple objectives and the various values of land may aid in framing and developing biofuel policies that can achieve a balance between national economic interests (e.g. energy security and independence, job creation) and local livelihood needs (e.g. food security, local energy needs and grazing resources).
2. **An inclusive biofuel development model and benefit sharing:** Given evidence on the negative impacts of biofuel development on local livelihoods in Chisumbanje communal lands, a shift towards an inclusive business model, such as inclusion of small-holder farmers as sugarcane out-growers is a desirable policy objective. Efforts could build on existing knowledge from the out-grower farmers (locally known as settlers) who previously had contracts with the Agricultural Rural Development Authority (ARDA). There is a compelling need for the rehabilitation of small-holder irrigation schemes in the area and access to irrigated 0.5 ha plots of land should be equitable to cushion people from food insecurity. The land size of irrigated land should also be proportional to the size of households and their livestock herds. However, this is more likely achievable with the existence of formal and legally binding agreements on social investments such as benefit sharing, guaranteed resource access or other arrangements between the community and the private investor. If there is no equity in the above, biofuel development programmes may be deemed as underachieving.
3. **Legal frameworks and land rights:** From a policy perspective, the extent to which the national policy legal framework provides an adequate safeguard for local land rights and an effective mechanism for local participation in decision making will frame whether increased biofuel investments and initiatives will translate into new opportunities or further marginalization of local communities. At the moment, Zimbabwe does not have a comprehensive policy specifically targeting equitable biofuel development, apart from a draft Biofuels Policy reportedly submitted for ministerial approval. It is not clear whether the draft policy meaningfully covers the social and economic rights of rural dwellers. Thus, there is need for ensuring that the final Biofuels Policy is all-inclusive. While legal frameworks that protect land rights may not be sufficient, they provide a framework within which the rights of rural people are negotiated and protected. Secure tenure rights could facilitate access to land and its natural resources and provide communities with leverage in land acquisition negotiations and deals.
4. **State, capital and community relations:** As already stated, the development of biofuel is shaped and constructed with massive economic and political interests, expectations and pressures. In a much politicised landscape like Zimbabwe, the diverse livelihood impacts of biofuel development are, in part if not largely shaped and influenced by a combination of patronage and partisan politics. This consequently breeds winners and losers. In this case the overall winners are the state and the private investor, while the losers are the local communities, as their livelihood resources are directly marginalised. The findings demonstrate that political and private interests may underlie the seemingly noble shift towards biofuel production (Shattuck, 2009). Thus from a policy perspective, it is important to understand the political configurations that construct and shape

pro-biofuel production narratives to understand its direction and livelihood implications at local level. There is need to develop a biofuel policy informed by consultation and in partnerships with other stakeholders such as