Inclusive business models in agriculture? Learning from smallholder cane growers in Mozambique

Amidst the increasing corporate investment in African farmland the term ‘inclusive business model’ has become a catchphrase touted as an opportunity for incorporating smallholder farmers alongside large-scale commercial farming projects. Inclusive business models require an enabling institutional and regulatory framework. Such frameworks now exist at the international level: the African Union Framework and Guidelines on Land Policy in Africa and FAO Voluntary Guidelines on Responsible Governance on the Tenure of Land, Fisheries and Forest in the Context of National Food Security provide a starting point. If translated and implemented, these guidelines can help develop transparent and accountable mechanisms that enable and strengthen the participation of smallholder farmers in the process of commercialisation, such as in the sugar industry in Mozambique.

To enable equitable partnerships between corporate investors and small-scale farmers, governments need to prioritise public investment in agriculture, including research and development, that helps smallholder farmers increase and diversify their agricultural produce. Smallholders’ access to, ownership of and control over land and other resources should be secured. Based on our analysis of current large-scale sugar estates and milling companies, as well as smallholder involvement as outgrowers in the Mozambican sugar industry, this policy brief interrogates policy and suggests mechanisms for enabling and strengthening smallholder farmers’ participation in and securing returns from large scale investments.
Policy priorities

- **Secure smallholder farmers’ access to and ownership of strategic resources** such as land and water to enable them to access guaranteed credit and certainty of the use of such resources.

- **Practically implement inclusive business models** such as hybrid, block and contract farming to enable secure and fair ownership of resources and distribution of risks and rewards amongst the mills and the outgrowers.

- **Implement a fair and equitable payment formula** that rewards cane growers for all sugarcane outputs, instead of rewarding them for only the amount of sucrose obtained from delivered cane.

- **Invest in the provision of public goods and services by both the state and the mills**, specifically research and development that meets the needs of smallholder farmers, including the means to increase and diversify their productivity; improve water use and management; conserve soil and the environment; access post-harvest storage infrastructure; rural communication networks and electricity.

- **Promote available, reliable and affordable technologies to smallholder farmers** to improve the quality of their cane produce, such as low cost drip irrigation.

- **Develop and strengthen cane farmers’ associations and representation** at the grassroots level and at the national level. This will improve their participation, strengthen their voice and reduce risks they face in the production and marketing of cane and sugar.

- **Strengthen legal and institutional frameworks** for both local and central authorities to ensure that public service is delivered in a transparent and accountable manner. This can be achieved by improving the nation’s governance structure.

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**AU and FAO frameworks and guidelines on the governance of land**

To address the negative impacts of large-scale agricultural investments, international organisations such as the African Union, FAO and the World Bank have produced frameworks and guidelines to guide such investments. The AU Framework and Guidelines on Land Policy in Africa aims to articulate some of the principles which should inform the development, content and implementation of land policies in African member states, while FAO’s Voluntary Guidelines on Responsible Governance on the Tenure of Land, Fisheries and Forest in the Context of National Food Security aims to strengthen the governance of these natural resources. These guidelines encourage the adoption of inclusive business models and even suggest that governments should consider a land ceiling on the area to be allocated for a particular land-based investment. The World Bank (2010) provides principles for responsible agricultural investment that respects rights, livelihoods and resources. However, these guidelines remain soft laws, and for effectiveness each country has to translate them into their domestic laws and regulations.
Inclusive business models

Inclusive business models have been defined by different scholars in different contexts. In this policy brief, we adopt the definition by Vermeulen and Cotula (2010):

Business models are considered as more inclusive if they involve close working partnerships with local landholders and operators, and if they share value among the partners. More inclusive business models encompass a wide range of arrangements. Some models involve large-scale farming but with closer involvement of local landholders. Others bring smallholder farmers into the value chain... None of these models is perfect... (Vermeulen and Cotula, 2010: 3)

The emphasis on the inclusiveness of the business is made to ensure that smallholder farmers have a voice in the business decision-making processes, are able to reduce risks of doing business and maximise benefits through a wide range of rewards (Sulle 2010). However, effective inclusive business models require business partners to operate within legal frameworks that clearly stipulate the ownership of resources and sharing of risks and rewards. This means governments need to play a central role in creating an enabling environment.

Types of business models

A range of business models are used in the production, processing and marketing of sugar. Below are brief descriptions of models practiced by sugarcane growers in Mozambique and elsewhere in sub-Saharan Africa. As illustrated by our case studies, in the current context, none of these models can be precisely described as inclusive.

Plantation/Estate model: This model is preferred by large corporations, and lately some governments have been facilitating these kinds of models under the banner of ‘agricultural commercialisation’ or ‘modernisation.’ Under this model all activities of production, processing and marketing are carried out by the estate. The proponents of this model consider it a bankable project, easy to control in quality, quantity, the outbreak of diseases, etc. Nonetheless, the establishment of large-scale estates is likely to add pressure on land, water and other resources, and in land-scarce areas it is difficult to establish them. In addition, the model has less broad-based growth impacts to the local and national economies. Its benefits may only flow to a few shareholders in major cities around the globe, thus not necessarily impacting the host country’s economy.

Outgrowers scheme (contract farming): Under this arrangement, smallholder cane growers maintain control of their resources such as land and water but supply cane to the miller. If well executed, this model can potentially empower the local communities that are organised to make decisions on where to sell their produce, and at what price. However, due to poor arrangements and existing monopsonies, the cane growers in many places remain weaker partners in the sugar business.

Block farming: This is the farming system whereby the interested local farmers put together their small plots to form a block. The members cultivate, irrigate, fertilise, harvest and manage the production collectively. For cane growers, the model also allows members to supply cane to the mill using a single transporter. The main advantage of this model is that it reduces the transaction costs to be incurred by individual farmers while enjoying
economies of scale. However, if not well run, it risks submerging individual control to those of group leaders and powerful farmers.

**Hybrid business model:** This model combines production from large plantations and small-scale farmers. It is considered effective in balancing trade-offs between the interests of rural outgrowers (contract farmers), investors and national development. It is further termed a ‘sustainability-driven model which seeks to generate mutually-enriching connections between business, and the community and the supporting natural environment’ (Haigh and Hoffman 2012). Nonetheless, smallholders remain marginalised from decision-making unless there are mechanisms to ensure their participation in decision-making, for example through holding equity in the larger entity. Since the model requires the establishment of an estate, it is subject to land availability and associated acquisitions processes, and is hence difficult to adopt in areas with limited land.

**Experiences from the rest of Africa**

Smallholder participation in sugarcane production varies in Sub-Saharan Africa. Mozambican smallholder cane growers are well placed to learn from the experiences of smallholder cane growers in neighbouring Malawi, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. In Tanzania, for instance, smallholder farmers and sugar mills have equal representation at the Tanzania Sugar Board, giving them a platform to represent their interests, exercise their voice and influence decisions which the Board takes on a consensus basis (Sulle 2010). Nonetheless, cane outgrowers in Tanzania still depend on rain-fed farming and on their own sources of income to finance farming. In South Africa, smallholder cane growers share the revenues generated from the sale or use of molasses, bagasse, ethanol and alcohol. All of these are benefits that the Mozambican smallholder cane growers are yet to fully enjoy.

**The sugar industry in Mozambique**

Sugarcane is among the leading export crops in Mozambique, and the state protects its agricultural sector with an average tariff of 12.4 percent (ISIC 1 in Dias 2013). Currently, 67 percent of sugar in the country is produced in large estates found in Maputo Province, while the rest is produced in Sofala (25 percent) and Gaza (8 percent) (Dias 2013). One of the reasons for the dominance of production in Maputo Province is the availability of irrigation infrastructure in Xhokwe (*Regadio do Xhokwe*) and transportation network (roads and railways), with additional funding from the European Union for irrigation infrastructure around Maragra Plantation for outgrowers. Following the reconstruction programme, the area planted with sugar increased from about 4,000ha in 1992 to more than 40,000ha in 2011 (Dias 2013; WTO 2009; see also Figure 1), while the share of cane produced by outgrowers has been increasing over time.

Production of sugarcane rose from 27,000ha in 2000 to 215,000ha in 2010, constituting almost four percent of the 5.6m ha cultivated area in Mozambique (TIA 2008 in Dias 2013). As indicated in Figure 1, the production of sugar reached a peak of 4.5mt t in 2012 (Zacarias and Esterhuizen 2013). Despite rising demand in local and international markets, the Mozambican sugar industry is dominated by the export of raw sugar to European markets and the import of refined white and brown sugar from South Africa. One reason this trend exists is the fact that companies make greater profits by exporting raw sugar to Europe than by processing it for the local markets (Dias 2013).
The sugarcane industry is among the major employers in the country. In the early 1970s, the six sugar estates employed about 45,000 workers on a formal basis. However, after the outbreak of the civil war in 1977 most of the sugar estates and mills were shut down (Buur et al. 2011). Only two companies kept up operation at low capacity, and only 17,000 workers were still under formal contract in the six sugar estates, though most of them were only paper-based redundant staffers (Ibid). In 2010, in an effort to promote the industry, the Government of Mozambique introduced a production subsidy consisting of a ten percent reduction in the electricity price per kilowatt-hour, aiming to incentivise the sugar industry, which is one of the country’s largest electricity consumers (Dias 2013). Sugar remains among the leading agricultural export crops in Mozambique, and the agricultural sector is protected with an average tariff of 12.4 percent (ISIC 1 in Dias 2013; GAIN 2011). We investigated the current state of the sector through two case studies: the existing sugar mill and sugarcane plantation of Maragra, and Massingir Agro-Industrial, a planned sugarcane and ethanol production plantation.

**Maragra sugar estate**

In 1996, Illovo acquired and rehabilitated Maragra, a sugar estate of 6,000ha. In 2006, Associated British Foods acquired a 51 percent share in Illovo. The first production was 6,000t of sugar in 2000. This grew to 67,000t of sugar in 2006 and 75,000t of sugar in 2009. The company

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**Figure 1: The area harvested and production of sugarcane in Mozambique since 1992**

Source: Adapted from Zacarias and Esterhuizen 2013
works closely with four registered associations of cane growers, currently supplying more than 250,000t of cane. The joint venture between outgrowers and Illovo is envisaged to produce around 400,000t of cane per annum (Macauhub 2009) which, combined with further cane supplies from the development by local growers of other land close to the factory, will provide enough cane for Maragra to reach its sugar production targets (Illovo 2012 in Paradza 2012).

Resource ownership

Land and sugarcane milling machines form key components of the sugar business. The Mozambican Land Law of 1997 clearly put land in the hands of the State. The law allows private leaseholders to own assets and any other development over the land under a given lease. Given this situation, sugar companies hold leases over their estates, mills, processing and marketing facilities, while the local communities own their land, mostly under customary ownership. In recent years, a few farmers have started to secure Certificates of Use and Improvement Rights (DUATs)¹. A DUAT accords the right to use, develop and invest in land and benefit from its products. There are different DUATs for plots of land to be owned and used by the citizens (communities) and foreign investors. Under the current business model, Maragra holds a 50 year DUAT for the nucleus estate, which is surrounded by small plots of land owned by smallholder cane growers. The company also owns all sugarcane processing machinery. The company produces the bulk of cane from its estate, and smallholder cane growers supply their cane to the company under various agreements. In recent years, the number of cane growers around the Maragra estate has increased significantly, contributing up to 30 percent of the crushed cane.

Returns accruing to smallholder farmers

Currently, Illovo pays its outgrowers 40 percent of the value of the delivered cane on delivery. The balance is determined and paid to the producers after the cane has been processed and sold to both local and external markets. The proceeds from the sale of the final produce (sugar) are shared in the ratio of 40 percent to the mill and 60 percent to the farmers (Illovo representative, pers. comm. 2013). Smallholders are remunerated for sugar, but not for the other products such as molasses, bagasse and ethanol – all of which are included in the proceeds received by South African outgrowers (Sibiya 2013). In addition to providing a market for the outgrowers’ cane, the company provides extension services and training to outgrower associations. The company recovers the costs of the support from the smallholders before they pay for the sugarcane. Smallholder farmers in Maragra were not very clear on the variables and methods that Illovo uses to calculate their payments.

Risks

The major challenge facing both sugar cane estate and outgrowers is vulnerability to weather. Main estates and areas used by smallholder farmers are in flood-prone zones, and sometimes get too dry during times of rainfall shortage. This not only undermines their productivity but also affects the cane quality, all of which has an impact on the income accruing to outgrowers and the estate alike. Nonetheless, outgrowers are more vulnerable to these weather vagaries as they lack financial capital to invest in water management technologies. They mostly depend on rainfed farming, while the estate is equipped with irrigation and flood control facilities.
Sugar prices depend on global markets, and it fluctuates from time to time depending on the level of production among the major producers such as Brazil and India. It also depends on the use of sugar in the production of ethanol in Brazil and now in other countries. Lower prices hurt the emerging farmers in developing countries like Mozambique. In addition, sugarcane production poses a significant threat to local food security due to the fact that cane production is carried out by the same labour force and competes for the same land and water as production of food crops. The ever-increasing expansion of sugar producing farms not only has an impact on food security, but also on income distribution among the different groups of society such as women.

Under effective inclusive business models, however, most of these risks can be minimised as the millers and smallholder farmers share both rewards and risks. These therefore can reduce the amount of loss that individual farmers may incur.

**Voice**

Maragra Outgrowers Association represents smallholder cane growers in the surroundings of Maragra estate. The association is also responsible for representing the interests of the smallholder cane growers to the national union of workers in the sugar and alcohol industries. It comprises four small associations of cane growers. Most of the cane growers’ associations have been formed by the company to encourage cane production, coordination and registration of cane growers, thus increasing supply of cane to the mill. Currently, however, smallholder cane growers in Mozambique lack a strong foundation from which to launch their own initiatives as well as demands and claims. The existing associations have been formed by

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*Figure 2: EU funded smallholder cane growers’ irrigation system in Manhiça District.*

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the private sector to assist them to produce sugarcane. In reality, for sustainability purposes as well as autonomy these associations need to be established by the cane growers themselves and stand on their own.

**Massingir Agro-Industrial**

Between 2007 and 2009, the Mozambican government allocated 30,000ha of the land adjacent to the Elephant River to ProCana, a subsidiary of the London-based Central African Mining and Exploration Company (CAMEC) (Borras et al. 2011). ProCana successfully secured the land under a 50-year renewable lease. The company aimed to provide the basis for ethanol-based plastics for South African industry. In November 2010, the Mozambican government revoked ProCana’s contract because the company had failed to develop its projects within the given three years specified in the country’s investments act (Burgess 2012). In October 2011, the Mozambican government allocated 31,000ha, mostly the same land previously allocated to ProCana to another company, Massingir Agro-Industrial (MAI) – a consortium made up of 51 percent shareholding by the South African company Transvaal Suiker Beperk (TSB) Sugar and 49 percent by a consortium of Mozambican businessmen known as SIAL (Limpopo Agro-Industrial Investment Company), chaired by the former Minister of Industry (Allafrica 2012).

MAI is expected to invest about US$740m over this period (aTSB representative pers. comm. 2012). The company plans to develop 27,000ha of sugarcane plantation, while the outgrowers and SIAL will develop and farm 12,000ha and the community will farm 2,500ha of sugarcane. In addition, MAI has promised to assist the community to develop food gardens on 1,000ha of land. The cane is to be processed into sugar, ethanol, molasses, animal feed and for the generation of electricity, of which 80 percent of the produce will be exported to Europe. The company considers the creation of an outgrower scheme as a key element of the company’s production model. According to TSB representative, this follows success stories of outgrower schemes elsewhere, for instance by Illovo in Tanzania and TSB in Swaziland.

However, the communities in Massingir are divided. There are those who are eagerly awaiting this company taking off and those who feel that their land is under threat. Raulina Baloyi, president of the local small-scale farmers’ association in Massingir, told the Pan African Land Hearings:

> As women, we don’t have access to the forest for firewood-collecting – we as women have to work harder, and walk further, to fetch water and firewood, because the company has taken all the land around us. Now a new company, MAI, has come to take over. We don’t refuse that private investors come to our community. We need investment so that we can develop as well, but we don’t want investment that brings more poverty to our community, because we don’t have land or food for our community. (Baloyi, 2013)

Ms Baloyi’s sentiment shows the importance of secured communities’ access to land and other natural resources attached to it. Stakeholders in land, land rights and agricultural development need to consider these as fundamental issues.
International agreements and sugar markets

Mozambique is a member of the World Trade Organization (WTO) and the African, Caribbean and Pacific Group of States (ACP), with preferential trade agreements with member countries introduced in 2009. This allows Mozambique to export raw sugar to the EU market through its share of the preferential tariff-rate import quota (TRQ), and earn higher price per tonne of raw sugar than the world market price. At the time of writing, the EU market price continues to be higher than the world market price, making it attractive for Mozambican sugar producers to prioritise exporting raw sugar to EU markets rather than selling locally-processed sugar. The country has a similar preferential trade agreement with the United States, which offers it higher prices than the world market, but lower than the EU market. All the exported raw sugar is tax exempted (MozSAKSS 2012). In addition, Mozambique is a member of the Southern African Development Community (SADC) which requires the removal of trade barriers among its member countries, thus smoothing sugar imports from South Africa, and sometimes Zimbabwe, as the recognised importing companies pay zero percent of the preferential tariff (Dias 2013).

Challenges facing cane growers

There are a number of constraints facing the sugar industry in Mozambique, such as:

**Inadequate infrastructure:** Despite recent development in the investment climate in Mozambique, there are insufficient credit facilities due to underdeveloped banking and insurance sectors (WTO 2009). These are thus inaccessible to smallholder farmers. In addition, irrigation facilities remain poor and the sustainability of the currently financed maintenance of the existing systems is unclear.

**Poor delivery of public goods:** There are growing demands among smallholder farmers for agricultural inputs and extension services. Most of these are met by the private companies and mills. Unfortunately, due to limited capacity, the Mozambican government does not currently provide any extension services to sugarcane growers.

**Inadequate transparency in determination of sucrose content and division of proceeds:** Currently, the weighing of cane is done at the miller’s site by the transporting agency, and the growers get the details of the generated weight and sucrose level at the end of the process. Yet, the division of proceeds (DOP) which the company considers clearly indicated in the business agreement remains unclear to the rural farmers.

**Weak cane growers’ associations:** Mozambican outgrowers’ associations in Maragra are not fully organised to participate in decision-making processes in the country’s sugar industry. This undermines their capacity to present issues raised by association members, such as payment for other cane products they are not paid for at the moment. Associations lack strong, accountable and transparent leadership, as a result of which members complain of being marginalised and less informed about the associations’ activities and payment schemes.

**Border trade/sugar smuggling:** In the wake of the growing demand for sugar from both local and international markets, there is a growing trade by local retailers buying sugar from neighbouring countries such as Zimbabwe.
and selling it to wholesalers (Dias 2013). If not controlled, this has potential negative impacts on the prices for smallholder farmers’ produce.

Conclusions

The Mozambican government’s decision to reconstruct commercial sugar estates and mills was informed by the importance of this sector both to the national economy and to the lives of the rural poor. The government has an opportunity to further realise the potential of this sector by laying out strategies that would enable smallholder farmers not merely to participate, but to engage more profitably, in the production of sugarcane. For them to produce cane and supply it to the available mills through transparent and pre-negotiated contracts would enable them to access fair and higher revenue from this lucrative sector. This requires state legislation and regulations on the sugar industry, and ensuring that smallholder farmers are organised and fully represented in the industry decision-making bodies. Experience from other countries where smallholder farmers have for years managed to work side-by-side with estates and millers should inform these processes in Mozambique.

Other suggested solutions to address smallholder cane growers’ challenges are:

- **Secure smallholder farmers’ access to and ownership of strategic resources** such as land and water to enable them to access guaranteed credit and certainty of the use of such resources.

- **Practically implement inclusive business models** such as hybrid, outgrower and contract farming amongst the sugar mills/estates and smallholder cane growers in the country. This would enable the secure and fair ownership of resources and distribution of risks and rewards between the mills and smallholder cane growers.

- **Invest in the provision of public goods and services by both the state and the mills**, specifically research and development that meet the needs of smallholder farmers, including means to increase and diversify their productivity; improved water use and management; soil and environmental conservation; post-harvest storage infrastructure; rural communication networks; and electrification.

- **Promote available, reliable and affordable technologies to smallholder farmers** to improve the quality of their cane produce. These may include simple irrigation techniques, use of environmentally friendly pesticides, and harvesting and transportation machines.

- **Develop and strengthen cane farmers’ associations and representation** at the grassroots level and at the national level. This will improve their participation, strengthen their voice and reduce risks they face in the production and marketing of cane or sugar. Elsewhere (for instance in South Africa), smallholder cane associations are responsible for ensuring farmers receive appropriate research assistance, market information and other necessary support services the farmers may need to maximise their production and earn fair revenues from all of their sugar outputs.

- **Conduct thorough research to establish better ways of sharing revenue and risks amongst the smallholder farmers and the large-scale producers**. There is need to adopt a system that ensures that farmers are not only paid for the amount of sucrose obtained, but rather for the percentage of
extracted sucrose, non-sucrose and fibre. This payment system has been in place since 2000 in South Africa, for instance, and it provides substantial income to farmers.

- **Strengthen legal and institutional frameworks** for both local and central authorities to ensure that public services are delivered in a transparent and accountable manner. This can be achieved by improving governance on land rights, and ensuring coherence and alignment with agricultural, trade and investment institutions.

**End Notes**

1 DUAT is an abbreviation of the Portuguese Direito de Uso e Aproveitamento dos Terras. This is also translated as ‘Rights to Use and Benefit from the Land’

2 Outgrowers are assumed to use their own land to grow cane.

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