

Case Study No. 1: Cookswell Enterprises "Save Money, Save Energy, Save our Forests and Eat Well"

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Introduction

Cookswell Enterprises markets and sells innovative energy saving charcoal and wood fuelled stoves and ovens to customers across Kenya and internationally. It operates in tandem with the production company Musaki Enterprises, and the products are Kenya Bureau of Standards Diamond Mark of Quality approved. Cookswell and Musaki enterprises' stoves and ovens are available for purchase in supermarkets across Kenya, and in Rwanda and Uganda. In Kenya they are also sold at smaller stockists like Chardust Ltd Nairobi and the Olerai Ltd. Tree Planting Advisory Centre (TPAC). Cookswell's motto is "*Save Money, Save Energy, Save our Forests and Eat Well*". The company aims to pioneer clean, affordable, alternative energy cooking technologies for use by all people.

Cookswell products are designed to reduce charcoal use in cooking, saving customers money, whilst also helping to reduce tree cutting and preserve Kenya's forests. Cookswell is also active in tree planting and related forestry activities as part of its commitment to a sustainable "seed-to-ash" cycle of cooking in Africa. Cookswell has begun selling indigenous multi use tree seeds, marketed under the brand name "Kenya Seeds of Change", with the seeds sold in small packets with an emphasis on household and Base-of-the-Pyramid (BoP) customers. Tree seeds are included in every purchase of a Cookswell stove or oven. Through this inclusion, it is hoped that customers will plant the seeds creating a sustainable long term 'green' energy source for their personal use, and also potentially for sale. Cookswell is also active in forestry related consultancy, research, planning and education activities, working with clients and partners in the private and NGO sectors.

History

The Cookswell story began in 1982 when Dr Max Kinyanjui started work designing energy efficient stoves (jikos), with support from the World Bank and national organisation Kenwood. As part of the funding for this project, there was provision for the setting up of a company, Wood Energy Technologies, and the training of technicians (fundis) in jiko making. The success of Dr Kinyanjui's work in Kenya, led to him undertaking similar activities with the World Bank in Malawi during the late 1980s, and in Tanzania in the early 1990s. In both cases this involved training technicians in jiko making, but also working to improve business capacity.

The business in Kenya evolved over time, with Wood Energy Technologies giving

way to Musaki Enterprises, which was operated and owned by Dr Kinyanjui's business partner. Through this arrangement Dr Kinyanjui was able to focus on product development, with a reduced role in day to day operations and management. In the 1990s and 2000s Musaki enterprises secured contracts to supply major Kenyan and regional supermarkets, while the range of products sold also expanded to include charcoal ovens, and charcoal making drum kilns. The complementary relationship between Dr Kinyanjui and his business partner was crucial in the overall development of the enterprise. It allowed Dr Kinyanjui to focus on product design and development, while improving management capacity. In the early 2000s Dr Kinyanjui's son, Teddy Kinyanjui returned from overseas study and began working in the business. Identifying limitations in company capacity relating to marketing and distribution, Teddy established Cookswell Enterprises as a separate company to address these deficiencies.

Activities

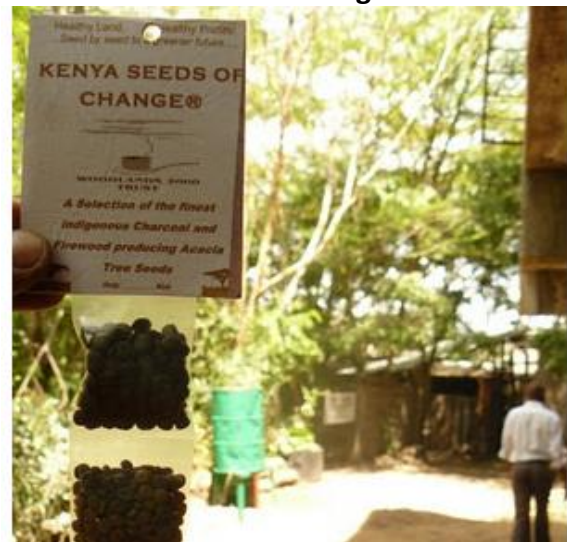
- Musaki Enterprises operates principally as a production company, fulfilling long term contracts with Uchumi and Nakumatt supermarkets. Musaki Enterprises is based at the Kitengela Arboretum, and also sells products direct through its factory shop. Musaki Enterprises operates at the nexus of the formal/ informal economy, and employs 12 staff paid per piece produced. A further member of staff works alongside the owner in sales and administration.
- Cookswell Enterprises is a marketing and distribution company, which emerged out of perceived weaknesses in these areas in Musaki Enterprises. Cookswell purchases cookstoves and ovens from Musaki Enterprises at a wholesale price. They are then sold on with a commission through its shop at the Woodfuel Resource Centre in Lower Kabete Nairobi, as well as door to door and through its wider distribution network. Cookswell works with Musaki Enterprises to arrange and fulfil all non-supermarket contracts with stockists. Through Cookswell, the stoves and ovens are sold at: Chardust Ltd Nairobi, Olerai Ltd. Tree Planting Advisory Centre (TPAC), the Kimana Jiko Shop in Kimana Town, the Kisima Farm Shop and Agricultural Field Centre in Nanyuki-Isiolo, and at Abudullah Issac and Co. in Mombasa Town, as well as some smaller retailers. Cookswell also sells direct through the internet and at market days and expos. Cookswell utilizes the M-Pesa mobile phone banking service, and Kenya's burgeoning transport infrastructure, in particular the proliferation and growing coverage of mini-van taxis, as a low cost distribution network for its products.
- Cookswell Enterprises and its founder Teddy Kinyanjui also engage in forestry related research, consultancy, education, training, and tree planting. Recent examples of such work include consultancy with the Woodlands Trust designing land-use and forestry plans, similar work for the African Wildlife Foundation and for farmers in the Greater Mara area.
- Cookswell also sells indigenous multi-use tree seeds predominantly from the Acacia family. Trees seeds from this family were selected because they are honey producing, nitrogen fixing, provide good shade, provide a habitat for birds and animals, have good rain

water retention and are a good source of charcoal and firewood. Marketed under the name 'Kenya Seeds of Change', these seeds are sold in small packets with an emphasis on small scale and BoP customers. All seeds are Kenya Forestry Research Institute (KEFRI) certified and each packet comes with easy to understand planting instructions. A packet of tree seeds is included with every purchase of a charcoal or wood fuelled stove or oven from Cookswell and Musaki enterprises, with the aim of encouraging long term energy self-sufficiency.

Charcoal ovens



Multi use indigenous tree seeds (Kenya) Seeds of Change



Products

Charcoal Cook Stoves (Jikos)



Land-use and forestry related

consultancy, education and research

Charcoal making drum kilns



Table 1: Economic Outputs and Impacts

		OUTPUTS	POSITIVE AND NEGATIVE IMPACTS			
			Economies	Markets	Institutions/Services	
ECONOMIC IMPACTS	Employment/Livelihoods	Direct	13 staff (including piece workers) employed by Musaki Enterprises plus owner; Owner and casual staff employed by Cookswell.	+ Wage spend in local and national economy	+ Reduction in unemployment	+ Increased ability to pay for services i.e. school fees
		Indirect	Employment through: Micro start-ups selling products; SMEs, NGOs and larger businesses selling products; Micro and SMEs using stoves and ovens; Suppliers.	+ Wage spending in local and national economy; + Multiplier effect purchasing by suppliers, purchasers and start-ups.	+ Reduction in unemployment	+ Increased ability to pay for services i.e. school fees
		Programme Related	Land-use planning and consultancy work can lead to forestry related employment and livelihoods; Livelihood opportunities related to tree seed packets.	+ Increased income and purchasing power leads to greater local and national spending	+/- Fall in demand and the price of charcoal affects buyers and sellers; + Livelihoods created; + Supply BoP seed market	+ Increased ability to pay for services i.e. school fees
	Payments	Government	Direct and indirect taxation paid by Cookswell/ Musaki Enterprises. and formal/informal economy buyers and sellers	+ Revenues used to encourage national economic development. Limited impact	+/-	+ Increased revenue for services
	Purchasing	Local	Musaki Enterprises purchasing from local businesses Kitengela including informal economy; Cookswell purchasing from Musaki	+ Procurement from local businesses supports local economies	+ Increased demand for local goods and services	+ Increased ability to pay for services i.e. school fees
		National	Purchasing from Kenyan businesses	+ National purchasing supports economy	+ Increased demand for goods and services	+ Increased ability to pay for services i.e. school fees
		Global	Limited international purchasing	+/-	+/-	+/-
	Investment	Infrastructure and Resources	Production facilities in Kitengela; 3 wood fuel security centres across Kenya	+/-	+ Supply market across Kenya	+/-
		Capacity	Skills training in how to make stoves and ovens	+/-	+ Skills in local labour markets	+/-

Table 2: Social and Poverty Alleviation Impacts

Social and Poverty Alleviation Impacts	Impact Areas	Stakeholders ¹				
		Employees	Shareholders	Distributers		
				Micro-sellers	SME and large scale retailers	NGO and Non-profit retailers
Assets, Income and Livelihoods	+ Income and assets from employment; + Livelihood creation and diversification; + Support to extended family	+ Income, assets, livelihoods for owners of Musaki Enterprises and Cookswell Enterprises	+ Business start-up selling products. Income for owners and households	+ SME and large retailers generate employment and taxation revenues	+ Income for NGOs. Profits reinvested for social purposes	
	- Insecure employment					
Mental and Physical Wellbeing	+ Ability to pay medical bills employees and families; + Emotional wellbeing self-worth	+ Ability to pay medical bills, food etc.	+ Increased ability to pay medical bills	+ Increased ability to pay medical bills staff and owners	+ NGO profits used for health interventions	
	- No medical support					
Opportunity and Choice	+ Gain metalworking skills; + Ability to pay for education; + Opportunities i.e. business start-up	+ Ability to pay for education for them and their families	+ Income for education; + Opportunities business start-up	+ Ability to pay for education staff and owners	+ NGOs use profits for education intervention	
Networks and Relationships	+ Standing in community; + Support extended family	+ Support for extended families	+ Community standing following start-up; + Support for extended families	+/-	+ NGO profits used for network interventions	
	- Few female employees					
Implications of Environmental Practices	+/-	+/-	+/-	+/-	+ Profits used for environmental initiatives	

¹ Stakeholders are understood to be groups that are impacted by the activities of a social and or environmental enterprise. We identify 10 potential stakeholder groupings, these are: Employees; Distributers; Customers; Shareholders; Partners; Communities; Service Users; Suppliers; Donors, Funders and Investors; and Others (i.e. the state, advocacy groups).

Social and Poverty Alleviation Impacts	Impact Areas	Stakeholders		
		Purchasers		Suppliers
		Household	Business	
Assets, Income and Livelihoods	+ Household income and assets from reduced energy bills; + Long term livelihood sale of charcoal; + Support to extended family; +Time particularly for women; + Women's assets and income	+Reduced energy bills enable further employment, business start-up, and viability. Increased income for owners and employees	+ Income for metal dealers many in the informal economy	
	- Rebound effects. No net increase in income; - No guarantee of improved female income	- Rebound effects. No net increase in income		
Mental and Physical Wellbeing	+ Ability to pay household medical bills; + Improved nutrition; + Reduced particulate and wood smoke exposure; + Soil fertility and food security	+ Ability to pay medical bills owners and employees; + Reduced exposure to particulates amongst employees	+ Income used for medical bills, food etc.	
	- Still some particulate exposure	- Employees still exposed to particulates		
Opportunity and Choice	+ Income for household education	+ Income for owners and employees education	+ Income used for education business start-up etc.	
Networks and Relationships	+ Potential for female empowerment	+ Community standing following start-up; + Support extended families	+ Income supports extended family networks	
	- Negative connotations of stoves, perception of something for the poor			
Implications of Environmental Practices	+ Potential for household energy security; + Household resources	+ Business and household energy security; + Business and household resources	+/-	
	- Household resources may still be degraded if no tree planted	+ Resources may still be degraded if tree planting does not occur		

Table 3: Environmental Impacts

	NATURAL CAPITAL	IMPACT CHANNELS		
		PRODUCTION/ OPERATIONS	PRODUCTS AND SERVICES	PROGRAMMES
ENVIRONMENTAL	AIR AND CLIMATE	+ / -	+ Forestation. Carbon capture and storage; + Reduction in particulates; + Reduced household and business energy use reduced carbon emissions	+ Education work encourages forestation leading to carbon capture and store; + Household and business energy saving.
			- Tree cutting still occurs. No guarantee of trees planted, deforestation; - Encourages energy saving cookstoves over alternatives i.e. solar cookers, deforestation; - Rebound effects no guarantee of reduced household and business emissions	- Encourages energy efficient cookstoves over alternative energy i.e. solar cookers. Deforestation; - Rebound effects households and businesses use more energy elsewhere.
	WATER	- Water use in production	+ Trees planted or retained have positive impacts on controlling dryland salinity and waterlogging	+ Trees planted or retained have positive impacts on controlling dryland salinity and waterlogging
	LAND (MINERALS, SOIL, LANDSCAPE)	- Waste created in production; -Minerals used in production	+ Increased soil fertility from tree planting; + Retain soil fertility; + Combat desertification; + Minimize impacts of tree cutting on landscape	+ Increased soil fertility from tree planting; + Retain soil fertility; + Combat desertification; + Minimize impacts of tree cutting on landscape
			- Disposal of products	
HABITATS (FLORA AND FAUNA)	+ Tree planting at production site, sustainable energy use	+ Forestation; + Reduce deforestation; + Wildlife habitats	+ Forestation; + Reduce deforestation; + Wildlife habitats	
		- Tree cutting still occurs. No guarantee of trees planted, deforestation; - Encourages energy saving cookstoves over alternatives i.e. solar and gas cookers, deforestation;	- Encourages energy efficient cookstoves over alternative energy i.e. solar and gas cookers. Deforestation	

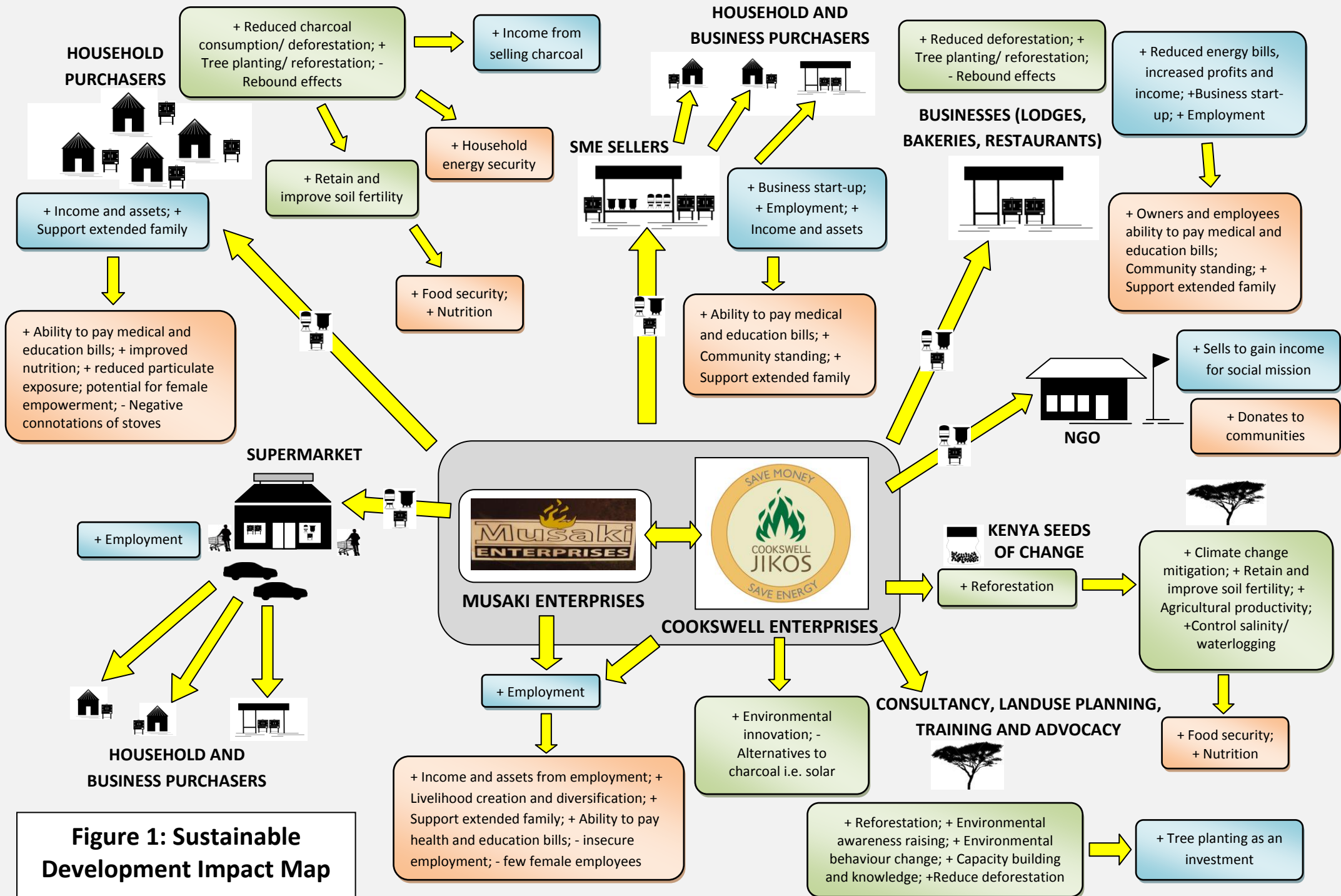


Figure 1: Sustainable Development Impact Map

Sustainable Development Impacts

Economic Impacts

Various economic impacts, and the potential for such impacts, are identified stemming from the activities of Cookswell and Musaki enterprises. Economic outputs and impacts are identified in Table 1, with the latter also mapped in Figure 1. At present Musaki Enterprises operates at the nexus of the formal and informal economies, employing piece workers and supplying formal and informal businesses. Cookswell Enterprises operates more formally albeit with fewer employees. These operational dynamics, coupled with the small size of the two companies, limits their contribution to government revenues and related state development activity. Nevertheless as the two businesses expand and further formalise there is potential for a greater contribution to be made. Indirectly, businesses selling and purchasing Cookswell products also potentially contribute to national development through taxation.

Musaki and Cookswell Enterprises employ 13 staff or pieceworkers, while also providing income for the owners of the two businesses. These earnings are predominantly spent locally in the town of Kitengela and in Nairobi, resulting in a small net positive impact on local economies. Employees are drawn from low income backgrounds with the job offering a significant improvement on previous circumstances. Indirect employment creation impacts can also be

identified stemming from local and national purchasing by Cookswell and Musaki enterprises, and also businesses, NGOs and social enterprises selling their products, including SME business start-ups. These indirect outputs can also have positive effects on local economies, labour markets, service provision and economic inclusion.

The potential for long term programme and product related livelihood opportunities is also identified, for example the sale of charcoal after tree planting. Furthermore an increase in household disposable income resulting from lower energy bills may result in greater local spending with positive impacts on economies. Finally market related impacts are identified including Cookswell's innovative supply of tree seeds to BoP customers, and its historical pioneering role in creating a market for energy efficient charcoal stoves and ovens. This has led to a proliferation of competitors and imitators as illustrated by the following interview quotation:

"When we came back here you know other people had copied, although they don't make the quality of jikos that we make. They copy from Max's designs. They come and look at it and then they go and copy and there is nothing you can do because this is Jua Kali² businesses ... Max was the first person to introduce the ceramic jikos in Kenya' (Interview Owner Musaki Enterprises)

Jua Kali meaning "hot sun" refers to informal economy businesses which have traditionally operated outdoors often lacking permanent premises.

Social Impacts

A variety of social and more specific poverty alleviation impacts can be identified resulting from the activities of Musaki and Cookswell enterprises across a range of stakeholders. These impacts are outlined in Table 2 and mapped in Figure 1. Staff employed by Cookswell and Musaki enterprises, are a key stakeholder group, and it was found that their employment was often the primary source of income for them and in their households. As illustrated by the following interview quotations, the majority of technicians were the principal breadwinner and often supported not only immediate but also extended family members in an economic 'trickle out' effect. Money from employment was also often an important source of start-up capital for alternative livelihood activities, and for household income diversification:

"For now I have put for my wife a business for clothes so we usually help one another but I don't rely much on the clothes business, I am the one they rely on most."
(Interview Technician)

"I have another business, a jua kali business. I sell things like clothes, my wife runs it, I used the money from my wages to set it up...we send the money from that upcountry" (Interview Technician)

"It is the main source of income. She brings some money in sometimes but this is the main source of income... my parents are getting on so I and my brothers help them." (Interview Technician)

For the staff of Cookswell and Musaki enterprises wage employment increases personal and household income and can be linked to potential improvements in health and education outcomes, to better nutrition, to income and livelihood diversification, household asset accumulation, and to resilience in the face of shocks both financial and social. It can also be linked to improved standing in communities, enhanced ability to support extended family networks and greater choice and opportunity i.e. money for business start-up. However some limitations in current approaches must also be recognised. Musaki Enterprises technicians are paid per piece produced, they lack formal contracts, and do not receive paid holiday. They also gain no pension contribution and there is no wider support for things like medical bills. For most there is furthermore no paid sick leave and their employment position is inherently insecure. While recognising that the conditions of employment offered by Musaki Enterprises are an improvement for many staff compared to previous work, that they are preferable to alternatives or in many cases a lack thereof, and also that they offer employees flexibility in income generation and livelihood activities. As the business expands, and becomes more formalised, these insecurities will need to be addressed.

Cookswell aims to reduce charcoal use saving its customers money on their energy bills. However understanding the social and poverty alleviation impacts of its products on customers, first

necessitates a separation of the market from business users and from own use household purchasers. For the former the impact can be quite variable between small and larger businesses. Additional income for small business owners and those they employ, which is gained through purchasing the products, can increase household incomes and assets with related improvements to quality of life and living standards. Indeed Cookswell energy efficient products may play an important role in the overall viability of these marginal often survivalist businesses. Conversely for larger businesses the products may simply be an added bonus, a useful mechanism for lowering costs while also having Corporate Social Responsibility (CSR) benefits in terms of reducing negative environmental impacts. This contrast is illustrated in the interview quotation below:

“Because so many of our buyers are so different, they are a very big company they make a lot of money. So OK saving a couple of hundred thousand shillings is great, but it is not make or break the company for them by any means. For many other companies, that is the whole idea. I can only do a bakery because I bought this jiko.” (Interview Owner Cookswell Enterprises)

Similar variation in impact can be identified amongst domestic own use purchasers. For affluent buyers the primary impact of the products may be that they can ‘barbeque more happily every Sunday’, whereas for a low income family the extra money saved may enable

them to pay school fees or medical bills, this difference is illustrated in the following interview quotation:

“I mean of course I am very happy that the people who buy these it does change some lives outstandingly and others it just sort of touches, maybe one rich person can barbeque more happily every Sunday but of course then for some people maybe this will mean they can send their kids to school and this really makes their lives absolutely different” (Interview Owner Cookswell Enterprises)

The financial savings made by domestic purchasers through reduced charcoal use and energy bills in the short term, and tree planting and energy self-sufficiency in the longer term, has the potential for socially desirable outcomes and positive poverty alleviation impacts. Potential health benefits may also be identified in terms of improved nutrition and reduced exposure to particulates. These potential impacts are discussed below:

“It is cooking the ladies’ life in the kitchen, and the amount of fuel they use in doing it, the type of cooking they are doing, the food they are eating and all of those impacts it has from there. That translated into just about any MDG you can possibly put a label onto. What are people cooking? How are they cooking? And how much does it cost them? I think that touches every single aspect of human social development ... then health because using less fuel means less exposure to particle matter and indoor air pollution” (Interview Owner Cookswell Enterprises)

However it must be highlighted that there is no guarantee that these developmental benefits will accrue, as the following quotation acknowledges:

“Yeah and where things conflict, so what I always think about say the stoves they save a bunch of money, and do it really rapidly and suddenly a household sees a really big boost in their income and dad already had a teetering drinking problem and suddenly really starts drinking I try to not think that is happening, but you know perhaps everyone once in a while. You know a manufacturer has no control on user habits” (Interview Owner Cookswell Enterprises)

Furthermore in both affluent and low income households there is the potential for rebound effects to occur, whereby a perception of money saved through reduced energy bills leads to more wasteful and costly environmental behaviours and resource use elsewhere, negating the overall economic impact of products like Cookswell’s stoves and ovens. This effect can also occur in business purchasers.

The tree planting Cookswell encourages through the sale of tree seeds and forestry related outreach activities can furthermore have long term positive social impacts in terms of household fuel security. These impacts may be particularly significant for low income groups. Indirectly, tree planting can also improve or help to maintain soil fertility particularly in marginal areas with benefits for agriculture production, livelihoods and food security. The sale of

charcoal from tree planting can also provide a long term supplementary source of household income.

Finally social and poverty alleviation benefits may also occur from the sale of Cookswell and Musaki enterprises’ products. Micro-businesses have set up selling these products, while for existing retailers the products offer a profitable line. For some NGOs and more mission-related businesses the products also represent a source of revenue, funding their development and environmental activities.

Environmental Impacts

Cookswell’s owner describes his business as a ‘*socially based environmental enterprise*’, and it is in the environmental sphere of sustainable development that the company’s impacts are most concentrated. Table 3 summarises these impacts, identifying three principal channels through which they occur: (1) Operations and Production; (2) Products and Services; (3) Programmes and Projects. These environmental impacts are also mapped in Figure 1. Cookswell promotes its stoves and ovens as using less fuel than traditional cooking methods, and the products of its competitors. This means fewer trees are felled potentially reducing deforestation. The ecological, and related social, ‘trickle out’ effects of decreasing deforestation in Kenya are manifold. As discussed previously trees play an important role in retaining or improving soil fertility with implications for large and small scale farmers particularly in marginal areas. A reduction in tree cutting also helps to

arrest declining soil fertility and processes of desertification, which in Eastern Africa are linked to a host of development problems in rural and urban areas. For example declining soil fertility can lead to reduced agricultural productivity, land abandonment and ultimately migration to urban areas. Authorities in urban areas are then often unable to cope with, and provide services for, this influx of rural dwellers.

Cookswell's decision to include packets of tree seeds with every purchase of a stove or oven, to sell tree seeds directly and to engage in education regarding tree planting represents an important development in its environmental engagements. This activity reflects a more holistic approach and understanding of the potential positive and negative environmental impacts of the company's products, and a desire to create virtuous 'seed to ash' cycles in cooking and wider energy use. Prior to this, a case could be made that while the company was slowing the rate of deforestation, its products were still environmentally destructive. While recognising this view, Cookswell's owner argues that pragmatism dictates fuel wood will be Africa's principal source of energy for many years to come. As illustrated by the following interview quotation, he suggests that it is readily available, that its use and the use of cook stoves is widespread and understood even in rural areas, that it is low tech and proven, and that with the addition of tree planting represents a sustainable solution to Africa's energy needs:

"What do we say when there is no charcoal in Kenya, you can't buy the jiko if you don't have the charcoal you know, and it is going to be the only fuel. Honestly after reading endless reports on biodiesel and bio ethanol and solar panel and wind and this and this and this, charcoal and firewood is the fuel for Africa....this is something that is here, this is something that works absolutely fantastically for this country, now let's just let it get bigger and more people planting the trees".
(Interview Owner Cookswell Enterprises)

The energy efficient stoves and ovens produced and sold by Cookswell and Musaki enterprises are rugged, straightforward to build and repair, and are already present in communities across Kenya and regionally. When used in conjunction with household and wider commercial tree planting, they offer an appropriate, context specific response to problems of deforestation and fuel wood overconsumption.

Cookswell's activities encouraging tree planting and reduced wood fuel use and deforestation also have wider potential environmental impacts in terms of helping combat global climate change through carbon capture and store. Within Kenya the owner of Cookswell also acts as an advocate for tree planting, and for sustainable fuel wood use. Through advocacy and education work the company seeks to encourage positive environmental behaviour change in urban and rural areas.

Finally several areas of negative environmental impact and potential

negative impact are identified stemming from Cookswell's operations, products and programmes. These impacts are not unique to this case study, and reflect the impacts that many businesses have, for instance the potential for local impacts on air and water quality and the creation of waste in production.. However to determine the existence and extent of these impacts a more in-depth analysis of the production process would be required. As discussed previously there is also the potential for rebound effects to occur, whereby positive environmental behaviour change in one area is mitigated for by an increase in consumption elsewhere, this idea was recognised by Cookswell's owner:

"OK for me and my idea it is a change for the better. But you know what I am seeing a lot is that for a lot people they want to have a very efficient stove with like LED lights and stuff so then they think I don't need to turn it off, it is hardly using any electricity, you know I have already saved my electric bill by 100 pounds a month. So I will just leave that one on, walk back up stairs, oh and it is nice to sit around and keep warm, maybe they would not have done that when it was really expensive"
(Interview Owner Cookswell Enterprises)

Lastly there is no guarantee that customers will plant their tree seeds, raising the question of whether it would still be better to encourage uptake of other forms of cook stoves and ovens i.e. solar, gas, liquid fuel cookers.

Conclusions

- Cookswell and Musaki enterprises operate at the nexus of the formal and informal economies. The flexibility afforded by this positioning allows the company to supply major formal sector businesses like supermarkets, while also taking advantage of benefits associated with informality. This interaction with the informal economy is central in how the businesses operate, and may be a more common feature of social and environmental entrepreneurial activity in developing world environments.
- Cookswell and Musaki Enterprises work in tandem for mutual advantage using an unconventional operating structure. In their business they are working to take advantage of developments in mobile telephone banking, the internet, and transport in Kenya and across the region.
- Musaki Enterprises is a for profit environmental enterprise which operates in a similar fashion to a traditional enterprise, with limited engagement with an environmental or social mission. Cookswell Enterprises is also a for profit environmental enterprise, however in interview with its owner the importance of an underlying environmental and social mission and motivation was suggested, albeit still very much located within a business and private profit making ethos. This is illustrated by the interview quotation on the following page:

“So the profit thing is very very high on the list. It is probably the list itself at the end of the day because without the profit I would have to go and get a job in a bank or something you know (laughs) ... I mean I suppose if I had to be technical about it I would describe it as a socially based environmental sort of enterprise geared towards how we have an industry that creates avenues for people to be less detrimental to the environment while uplifting them. But I don't like saying that because then I start sounding a lot like an NGO and really we are a business selling jikos and selling people on the idea of tree planning” (Interview Owner Cookswell)

- Poverty and development concerns are part of the operating environment for businesses in the Global South. In such environments, for profit eco-businesses like Cookswell and Musaki enterprises often engage with development issues and may have substantial poverty alleviation impacts.
- Cookswell and Musaki enterprises are small businesses. As such economic impacts stemming from their operations are limited for example in areas like taxation revenue and employment, and furthermore impacts on local economies. However their contributions through innovation can be substantial, for example the pioneering work done disseminating the idea of energy saving stoves and ovens across the East Africa region. While the sale of tree seeds to BoP customers has similar innovative potential.
- It is difficult to conclusively determine the social and poverty alleviation impacts of the two companies and their products. Saving money on energy bills has great potential for improving household incomes, assets and livelihoods, and enabling better health and education outcomes particularly amongst poor groups. There is also the potential for change in relationships and standing within households and communities. However in other instances these benefits may not accrue. Money saved may be used frivolously, while for affluent purchasers it may have little significance. Finally rebound effects may occur. A variety of other potential social impacts are identified from business start-up to NGOs revenue making which can be used for social and environmental purposes.
- It is in the environmental sphere where the impacts of the two companies are greatest. We recognise the potential for some localised negative production related impacts, and also concerns about whether wood fuel cooking should be encouraged. However, we believe that the products sold by the two companies represent an appropriate and practical response to challenges of deforestation, particularly when accompanied by the sale of tree seeds.
- We identify trickle out processes whereby the social, economic and environmental benefits of Cookswell and Musaki enterprises activities and products disperse out into communities and along value chains.

An example of this is the potential social benefits of money saved on energy bills and how this can impact on purchaser households but also the extended family members they support. It is important to recognise the potential for multi tiered trickle out impacts. This idea can also be illustrated with reference to small traders selling products who then purchase in the local economy and are able to better support their households and families.

Suggestions

Based on our work with Cookswell and Musaki enterprises a number of suggestions are made about possible ways to enhance operations and impact:

- The blogs and Facebook page have proven to be successful mechanisms for marketing and raising awareness about the company. However although the company has quite a substantial web presence this presence is quite diffuse. There may be an argument for developing a more structured website in addition to the blogs with clearer product information and online purchasing.
- Through organisations like the Global Alliance for Clean Cookstoves international standards and guidelines are being developed for rating cookstoves in areas of fuel use/efficiency, total emissions, indoor emissions, and safety. Engagement with these standards as they emerge may be worthwhile both from the point of view of further distinguishing Cookswell stoves and ovens from competitors in both the formal and informal economies, and also as a way of attracting new customers, particularly in the NGO sector, where organisations presently often distribute lower quality stoves to low income communities, with the stoves frequently made outside Kenya and Africa.
- In interviews it was unclear whether packets of tree seeds were also included in purchases of stoves and ovens from Musaki Enterprises and larger retailers like Nakumatt. If this is not presently the case this could be encouraged, both as a way to foster tree planting but also to help purchasers distinguish between Cookswell products and competitors. Cookswell products are currently sold in a number of regional supermarkets however other stockists could be approached.
- Kenya Seeds of Change are an innovative product development however there may be scope for improvement in labelling and packaging, developing additional routes to market for example micro traders selling tree seed packets, and more variation in tree seed types.
- Various gaps in knowledge were identified including information about customers, how they use the products, and how they found out about Cookswell. An effective market research exercise would provide insights in these areas. It might also encourage repeat business and allow for use of positive testimonials in marketing.

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Visit the website at: <http://trickleout.net>

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