



Glad's House



Glad's House is a charity aiming to work with the street children in Mombasa, Kenya. In the summer 2011 SIFE Nottingham ran a project with Glad's House with the aim of lifting some street children and the wider community of Mombasa out of poverty, empowering them through enterprise.

One section of our project was the briquette business.

Briquette Business



We decided to try and introduce a new business venture to Glad's House at the same time as introducing a new product to the market in Magongo (an urban slum in Mombasa). This was the biomass briquette. These briquettes are a form of renewable energy made from compressed, dried out waste vegetation and other waste materials. Not only are they eco-friendly and more efficient than charcoal, but they are also a solution to waste problems in Kenya, they reduce the fuel expenditure for the community and act as a solution to deforestation (from charcoal production). We were introduced to this idea by Dr. Mike Clifford at Nottingham University who made fuel out of banana skins and sawdust

which was a great success. Due to the rising charcoal prices in Kenya we felt there would be a high demand for this product if we undercut the price of charcoal. We worked with a member of the charity (Riziki) for a week teaching him how to make the briquettes and how they work. We collected waste materials from around Magongo to test out which briquette worked best. The community were more than happy to help out, which was brilliant. We had carpenters saving their sawdust and market stalls saving their waste fruit and vegetable produce for us. We felt a real buzz in the community. To increase production we hired a local carpenter to build a machine that squeezes the moisture out of the biomass and moulds the shape of the briquette. This machine saved Riziki a lot of time and made the product look more professional as well as increased the efficiency of the fuel.

We decided that the most efficient briquette was made out of four ingredients; banana skins, skuma stalks (a local vegetable), sawdust, and clay. We ensured that as many people from the charity had a go at making these briquettes so they understood how they worked, as well as the street children. The next step was to test our

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chosen briquette in the community. Riziki chose about ten households and gave them a couple of briquettes each. The results were fantastic! On average the briquette burned for one hour, there was little smoke and no smell. One mother claims 'they are better than normal charcoal' when we asked if she wanted more she replied 'yes ... I need it', with a big grin on her face. Due to these results we decided to speed up production further so we could start selling as soon as possible. We ordered a second machine which grinds up all the materials, instead of Riziki doing it all by hand. This reduced labour time by about 50%.

The production is now in full swing with a further three people being employed, a total of four now working on the briquettes, including two from the streets. The business has to make enough briquettes to start selling, as they will sell in bulk. Due to the briquette being created solely by waste products we will be able to sell the fuel at less than the price of charcoal.

An average income of a Kenyan living in Mogongo is about 300 KES (£2) a day, some living on as little as 150 KES (£1) a day. The average family buys one sack of charcoal a week, these costs 1000 KES (£6.70). You can see how being able to buy fuel at a lower price could have a dramatic effect on people's lives. Additionally in the wet season charcoal can be scarce increasing the price further. We can make our briquettes all year round so scarcity will not be a problem.

We look forward to hearing how the first sales go.



Spreading the knowledge

We recognised that although we want to increase profits for Glad's House the people that Glad's House help could really benefit from making hand-made briquettes themselves. Firstly we decided to teach the Caddies employed by Glad's House who live in Vipingo (a rural village about two hours away from Magongo). Most have families to feed and they often have spare time in low season at the golf club. We taught the nine caddies how to make hand-made briquettes out of waste materials, they loved the idea and plan to sell these to the community in Vipingo. If this business is a success after one month Glad's House have agreed to invest in capital by buying a moulding machine for them. Secondly we decided that a group really in need were the street mothers. They struggle to afford fuel and could benefit greatly from selling the briquettes. We taught five of the mothers how to make the product.



Results

A briquette business set up for Glad's House, a briquette business set up for nine caddies in Vipingo and five street mothers taught to make and sell their own fuel. An urban slum in Mombasa introduced to renewable energy. We expect great results from this section of the project and will be collecting data over the next few months.



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