

Sustainable livelihoods in Sudan by Lucky Lowe - Manager, Knowledge and Information Services Unit, ITDG . page 1

case studies | shelter | shambob

<http://livelihoodtechnology.org/home.asp?id=csShambob>

Print

Close Window

Abstract

This is the story of brick producers and their families in Eastern Sudan, living in a context where brick production traditionally is in the hands of middle-class businessmen, who reap the main profits and pay little to the workers. ITDG's project interventions gave support to a group of workers from the peri-urban village of Shambob to manage their own brick enterprise. Technological capacity-building aimed to improve brick quality, increase energy efficiency, and establish production in order to meet the demand of urban markets. The establishment of a formal co-operative assisted in small enterprise development. The significant rise in incomes, increased asset base and improved linkages with local markets and public sector bodies, has enabled the members of Shambob community to establish a primary school and improved health services. As relationships and development interventions have broadened women in the village have become co-operative members, acquired donkey carts and are now making an income from transporting and selling water. The single sector focus of the initial intervention has led to a broad range of initiatives affecting change in livelihood options and outcomes.

Shifting scenes - an increasingly vulnerable environment

[INSERT MAP: "Courtesy of The General Libraries, The University of Texas at Austin."]

Shambob is a village at the foot of the mountains which lie on the outskirts of the Kassalla town, in Eastern Sudan. Today's inhabitants know their grandfathers used to be nomads in the far north of Kassalla where they sought water and grazing for their livestock; cows, sheep and goats. Their people settled in the area 100 years ago - before living memory, but believe their grandfathers chose this place for many reasons:

- sorghum could be grown
- grazing and the soil is good for settlement i.e. not clay which is detrimental to their livestock
- during the summer season nearby sites, such as an island in the middle of the river Gash, some two or three kilometres away, also offered grazing and water.

Declining natural assets

A declining natural asset base and new agricultural practices have been forcing changes in livelihood strategies. Deforestation and desertification has resulted from increasing occurrence of drought. Droughts are recorded as having happened in 1948, 1973, 1984-5, 1989, 1990, 1992, 1994, 1997 and 2000. The residents of Shambob can remember the times when lush greenery covered the dusty tracks that now traverse the sandy scenery.

The semi-nomadic life continued until 1960 when small scale irrigation was introduced to the area - the sawagi began, using the traditional water wheel for lifting water from shallow hand dug wells. A significant change in access to this natural resource base was brought about by sedentary agriculture as land started to be enclosed.

'In the dry season I'd take my herd to an island in the middle of the dried-up river bed for grazing, and then in the rainy season when the river swelled I'd bring them back here. When this area started to be cultivated, the land was fenced, I couldn't bring them any more'

Mohammed Airha

Movement was restricted to the seasonal grazing grounds in order to avoid conflict with the agriculturists. When cattle ate crops the owners would have to pay compensation. Some people felt they had benefited from the irrigated farms in two ways: they could harvest the weeds for animal fodder and those farms also became the source of free water for domestic and livestock consumption for some.

By 1966 the island grazing site was completely out of reach. New locations for grazing were used. Forests on the river edges were not ideal due to the presence of harmful insects. Grazing was then confined to the village surrounds in the rainy season and the nearby mountain ranges which now form the border with Eritrea. The increasing pressure on land in turn took its toll and a new threat was introduced. The mesquit tree, said to have been introduced in an attempt to combat desertification, began to prove problematic. Now considered a widespread menace in eastern Sudan, these thorny trees cause health problems for livestock and have reduced the availability of grazing. As land becomes inaccessible to those people who previously exercised their customary rights of use, livestock declines. Sporadically in the years of drought entire livestock herds are wiped out and people are unable to replace this productive capital base. Livelihoods in Shambob became more vulnerable.

New sources of income

Having lost their cattle, many of the Beja people of Shambob turned to working as piecemeal labourers for local brick companies, serving the growing demand from the nearby town of Kassala. Men began to work in brick production after 1966, especially when the size of families grew and resulted in surplus male labour who could work for merchants. After 1980 sedentarisation was complete, even the few families who used to roam settled, with this the livestock number began to decrease. Nonetheless the drought of 1984 had a significant impact upon the population of Shambob, reducing grazing and tree cover in the area to the extent of desertification. Shingrai remembers being the owner of 10 cows and 100 goats - all of them died. Ali's occupation before the drought was livestock owner, once he had lost everything his livelihood strategy was to labour during summer and work as a butcher in the rainy season. Men took to working as casual labourers in Kassalla town in order to safeguard their livelihoods. Women's role was confined to the homestead, to raise children, cook and occasionally they would fetch water, a task otherwise undertaken by young men.

Livestock, a declining livelihood

Madani Mohamed Ahmed was born in 1962 and, like many of his neighbours he did not receive any education, a main factor in determining his choice of occupation. Madani's sole occupation when he was growing up was tending livestock, but in 1972 he combined this work with labouring in brick production. Of 13 men from Shambob who participated in a focus discussion group, only one now owns livestock comprising ten cows. He sells milk which only provides a good return in the rainy season; in the dry season the income generated is spent on fodder to keep the cattle alive. Other members of his family, his brothers, support him during the dry season.

Another occupation which provides some income is mediation in the livestock market, assisting buyers to locate sellers with the appropriate stock. Kassalla market is where the men buy goods to meet their consumption needs, but otherwise people feel they get little from Kassalla town, some suggested that this was due to their lack of education. An education they felt might have enabled them to be of benefit to their fathers and sons. Diversification in livelihood strategies is one way mechanisms people adopt to guard against the shocks and negative trends. Brick making in the face of loss of agricultural earnings is one such option. ITDG's Project Manager, Jeremiah Bairiak explained: "In the beginning it was not that much easy because we needed to look deeper into the problems. So I think it is very important to begin with what people know."

Building on existing skills and strategies

ITDG started working in Eastern Sudan on small enterprise development well before this project started. An initial survey identified brick making as a significant sector, offering good opportunities for improved livelihoods whilst tackling energy and environmental constraints. Brick making is an important economic activity in Sudan. Around Kassala, it involves around 5000 workers. It is mostly in the hands of businessmen, who own or rent the land and reap the main benefits. In 1995, ITDG began investigating brick production technologies and experimenting with alternative production processes, kilns, and fuels, employing local people to work on monitored firings.

Improving brickmaking technologies

Asked how they first came to know ITDG project partners said the first contact was through a relative who was involved in early experimental firings when ITDG sought and employed workers.

'Ten men worked with this man from Khartoum - a 'doctor' [this consultant undertook early feasibility studies with ITDG staff]. One of the elders working as a labourer was telling the ITDG man technical things about the kiln. For example, he said that bricks on one side would be first class, on the other of second rate and in the middle you would lose the bricks as they would be welded together.'

When the kiln was unloaded, this was found to be true. ITDG staff became interested to know more about these people and their existing knowledge in brick production. A relationship was established with brick workers from Shambob, and a baseline survey undertaken. ITDG held several meetings about the technologies and their organisation. While working in the experimental production activities, ITDG began to say they would help them to establish themselves and access land; many were sceptical and did not believe anyone would help them.

Shambob - the baseline study

A baseline survey in mid 1997 established Shambob as a poor village with 526 inhabitants; two-thirds of the men were brick workers. Their jobs were unstable and seasonal. The various skills required for traditional brick production were present, but little management skills were. The priorities of the present project were established with their participation:

- management of brick enterprises by workers
- cost savings through energy efficiency
- a higher price from better bricks.

ITDG's aim was not to impose ideas but engage with people, initially covering the risk by offering wages at the same rate of pay as merchants, learning about local ways of working and then introducing changes. This process enabled people to see the benefits and challenges for themselves, to learn from experience how new technologies could be adopted and developed.

Participatory technology development

The key actors in determining project objectives and strategies were the workers from Shambob and project staff from ITDG Sudan. Essentially, the project aims to enable workers in the brick production sub-sector to benefit more from their hard labour. Being organised, and managing their own production and marketing processes, people realised that additional profits could be made from savings on energy and from making higher quality bricks. This required technical research in parallel with enterprise development activities.

A programme of action research was initiated to improve the energy efficiency of kilns, try out alternative fuels including residues, and better methods of moulding. This research and capacity building required external funding which was raised by ITDG from several sources. The EC, GTZ (<http://www.gtz.de/basin/knowledgebase/index.asp?A=1> and search for Utilisation of Cow-dung in Brickmaking & Utilisation of Bagasse in Brickmaking: R & D in Sudan), and a wide range of small donors gave their support to technology research and development activities.

Bagasse - a new fuel source

Much of the action research with producers focused on increasing fuel efficiency and replacing wood fuel. A first attempt, to replace the traditional clamp kilns by a vaulted oil fired kiln did not produce satisfactory results. Changes to the fuels used in clamps were more successful; the use of cow dung, traditionally mixed into brick clays (and not used elsewhere) was further investigated and optimised.

Another residue was explored - this was bagasse - available as a waste material from the sugar industry in the region. There are enormous dumps of bagasse in Eastern Sudan, some of which ignite spontaneously. Some bagasse is made into briquettes in simple block presses, generating economic activity near sugar plants. The loose form was mixed with clay and used internally during firing, the block form was used in the kiln tunnels as an alternative to external fuel, both gave good results. Project partners and staff were encouraged and were ultimately able to substitute up to 80% of wood with bagasse. A small permanent Scotch kiln has recently been built to achieve further fuel efficiency.

Improved standards

The quality of the bricks produced was also improved by better moulding and more controlled drying. Producing bricks with a more regular size and shape got project staff involved in the elaboration of new national standards for bricks in Sudan. At the local level, a few demonstration structures have been built with the improved bricks, which for example highlighted the savings in mortar and construction time that could be achieved by using more regularly shaped bricks; although the bricks themselves may cost somewhat more, this still makes for cheaper walls. Important consumers in the region (including several government departments and Plan International) have now accepted the brick standard set by the project. So far, demand outstrips production capacity.

Increased productivity - reduced drudgery

Incremental improvements in technologies has led to increases in productivity; new methods are also less exhausting. For example, the introduction of hand carts, produced in partnership with local manufacturers, was an important factor in increasing productivity and decreasing effort - as was the moulding 'table'. The new kiln, including a permanent structure, reduced the labour involved in loading the bricks and reduced the amount of firewood required.

After sometime of collaboration people felt that working together in one place was a good thing, rather than at various merchants' sites, and gradually came to think that forming a co-operative would be a good thing. Trying to work together was perceived as a good idea by some; though ITDG paid the same rates of pay as the merchants, we felt that there were benefits from working together and productivity increased.

Bridging divides: confidence building and organisational capacity

Co-operative formation and training

After the 1997 baseline survey, ITDG suggested options about the form of the community-based institution which could be created by the residents of Shambob. The idea of a co-operative appealed to people as they thought working together for themselves, in competition with others, would be beneficial. Following the survey, they established Shambob Brick Producers' Co-operative (SBPC) and managed to get it registered the next year; members each contributed around \$20. This initial capital, supplemented by project resources, helped them to acquire a piece of land for brick production. Brick production, a seasonal activity, requires working capital at the start of the season; a bank loan contributed to this. The community contributed 25% of the costs of establishing production whilst ITDG secured 75% in the form of a loan to be repaid from the profits of the commercial activities. Building a collective base gradually enabled people to challenge and negotiate with others who had previously benefited from their labours. Market information and connections take a long time to establish, but the seeds were sown.

Formalisation

Formalisation is a process from which poor people are often excluded, due to lack of a voice and lack of information, knowledge resources, management and entrepreneurial skills. In order to support people in building their asset base, ITDG engaged in a range of local and national partnerships. Particular elements of the project required external support in manpower and funding. The first involved the training and capacity building of the Shambob Brick Producers Co-operative (SBPC) to acquire the skills to produce better bricks, to market their product, to manage the co-operative, and to negotiate

with local authorities, the bank and other funders. People had to learn about co-operative law, costing, bookkeeping and marketing. This support was provided by staff members from ITDG Sudan, Kassala Rural Council and the Department of Co-operatives.

Linkages with institutions

In discussions with SBPC members, the institutional connections which were highlighted as important included ITDG, their own co-operative and the government department which supports co-operatives. The next in importance were identified as the financial institutions, investment bank and ACORD, and some felt that the Planning and Development Dept were equally important. Other institutions mentioned were Oxfam and PLAN Sudan, as consumers of their products. The benefits accruing from these partnerships are: assistance in supervision; marketing; co-ordination and communication; technical training and access to finances. The creation of a co-operative enabled people to aggregate their resources, both financial and human, and to create the capital necessary to establish productive activities. The Co-operative also enables them to undertake marketing and to manage the productive process. The Co-operative Dept helped them with registration and management training and supervision. The Planning Department participated in early project studies.

Legal problems over land use

Problems arose over land; it became apparent that the plot initially rented was only licensed for agricultural use, so production had to be interrupted and a new plot acquired. Access to bank credit was not so easy either and took substantial lobbying with the support of ITDG staff, plus a guarantee by the INGO. The loan repayment period imposed by the bank was too short in comparison to the brick-making season. Still, SBPC managed to repay in time, and is now eligible for further credit. The NGO ACORD is now also keen to provide credits to brick enterprises.

Creating institutional linkages and access to urban markets

Social and political context

To assist in building people's ability to work their way out of poverty you need to be able to link what happens at the local level with the broader environment. The social and political context is critical in creating or constraining livelihood options. Linkages with other institutions such as PLAN International have provided market opportunities, giving co-operative members experience in negotiating supply contracts and fulfilling them. Registration of SBPC gave formal recognition, access to markets and to credit institutions.

Financial perspective

In financial terms, the investment in research and capacity building is currently considered as a cost which cannot be recovered. The project is making a case to banks that it is possible to provide loans to producer co-operatives and achieve full and timely repayments. In due course, it is hoped that the banks' interest in micro-credit will increase and that subsequently will not require an NGO to guarantee the loans. In the meantime, an international NGO has now agreed to support these co-operatives. The need for research will diminish over time. The need for capacity building will remain as long as workers' co-operatives keep emerging; there already is some support by the authorities for that activity. The project will need to consider how other elements of support can be provided in the long run, e.g. by peer training or against payment.

Social capacity

Locally, social capital has been developed by creating collective working arrangements that have grown into multi-faceted partnerships that link individuals, communities, institutions, through various formal and informal processes. Bridging capital has connected local blacksmiths and manufacturers to produce the tools required for production, and to address other community needs such as donkey drawn carts for water transportation. An increase in confidence and trust has enabled ITDG staff to work with the women of Shambob to increase their skills base, for example, by offering training in food processing.

Cash based economy and urban markets

'Coming from a marginalized group myself, I know how important it is for someone to have the capacity and the knowledge and the skills required for interaction with the larger community. They are turning away very slowly from an agricultural community to a business world, they are also absorbing what is required to survive in a town. If given more support I think the co-operative will go into new areas, like production of new building materials, like lime, they will try to develop trade, in animals making use of their previous skills.'

Jeremiah Bairiak

Engaging in the cash based economy Shambob's leaders gather market intelligence. They collect information from the merchants but also ask consumers, because they believe the merchants may mis-inform them. They enquire about costs, selling prices, make comparisons between the quality of the bricks and fix their price accordingly. ITDG staff facilitated the SBPC's initial marketing efforts by supporting such activities as the production of promotional pamphlets explaining the benefits of improved bricks. SBPC feel their best customers are the NGOs. Recently relationships have been established with government departments, who are useful in marketing their products. SBPC members feel that they have increased their power base in that they are now able to negotiate with public sector officials for the necessary licences and to meet with senior officials. The co-operative not only provides for greater communal wealth, it gives the community a bigger voice in local affairs.

Setting standards

The project has been influential at the national level in the development of a new standard for bricks, which was promulgated in 1998. The traditional brick size is very small; Shambob bricks came into the market and managed to set the required standard, by the Sudanese Standards Administration. Kassala town is now fully implementing the brick standards, with resulting benefits. For instance, it is quicker to build with bigger bricks, using less mortar to produce better quality walls.

Whose assets increase?

Communal assets

There are communal assets now in Shambob which are directly the result of investment of project resources. One example is the community building, which served as a demonstration of new building materials using new technologies. This building nevertheless reintroduced traditional architectural forms suited to the local climate. The building serves the community as school, adult training and health centre, social gathering place, as well as a forum for local governance meetings.

Education

An increase of SBPC members' incomes has allowed some members to send their children to school for the first time. They point to the increased attendance at kindergarten by girls and the new adult education activities held at the community centre. In an exercise using stones, people put one stone in the 'before segment' and seven stones in the 'after segment' saying they now send more children to school, spend more on books and uniforms.

'I left [the village for university] when the educational term started, and when the term ended, I returned home. Learning is the main branch of development for society. This project stopped emigration [from the village] because now there's more than enough work available here. The people stay here and work - there's no need to emigrate. Now you can go to work close by, and return home at night. This is my family, and my land. I never want to leave it, so I returned to help.'
Gafar

Health and hygiene

The same exercise demonstrated an increase in awareness of good personal hygiene practices due to knowledge exchanged during the co-operative meetings. Health expenditure was seen to have increased as people are able to supplement traditional medicines with modern treatment - some use their increased wealth to pay for health fees.

Food and water provision

Expenditure on food has increased; the amount of sorghum purchased and the number of meals people eat has risen, some mentioned that they now occasionally eat meat. Water consumption has increased as the donkey carts have increased availability; previously a person could carry two jerry cans on the donkey's back and the journey to collect water could take 4 hours.

Housing quality

At an individual and household level, participatory assessment exercises showed how the quality of housing has increased from one hut to two huts or to one hut and a shed. One of the discussion groups said that the type of housing had improved; previously walling and roofing was thatch material, but now some people build using mud walling, and occasionally fired bricks are used. One participant highlighted the fact that they now have windows where previously they only had a door.

Clothing

The quality and quantity of clothing has improved, most people from the sample group said they used to have only one 'jelabia' whilst most now they have two or three.

'Before this cooperation project, the benefits were going to others, but now with all of us working, our money is bigger and bigger... For instance we had only two thousand Sudanese pounds. Now we get more than six thousand per day, and this is very useful for us. Economically we've grown, we've become better than the others. Also this is affecting the village - even the people who'd left, before this project, are beginning to come back.'
Adam Yusuf

Knowledge and information

Knowledge and information is helping to create sustainable livelihoods and increase peoples options - even those of the women who have been kept away from any economic activity. In the Islamic society of Eastern Sudan it is not accepted for men and women to work together.

'The Beja community, from which Shambob burghers come, is a closed community in terms of division of roles between men and women. Women had no voice in affairs of the community and they did not own assets of any kind.'
Jeremiah Bairak

It is perceived as a major change to have both men and women involved as members of the co-operative. Whilst women do not work in brick-production activities, they do hold shares in the co-operative. This has allowed the women to become more economically engaged.

Challenging gender roles

The community centre has provided a focus for the women in the community, and the increased wealth has given them the time to explore their own business opportunities. ITDG works with thousands of women to develop their skills through workshops in small business techniques. Recently ITDG's Agro-processing Programme staff has been providing vocational training to the women of Shambob. They produce their own products for selling in the local market, and in a reversal of past roles, they now have the status to own their own water carriers, which they employ men from the village to operate, and to sell the water on their behalf. Both activities are contributing to female empowerment.

Conclusions

Building on skills

Technology-focused project interventions have built on existing skills and livelihood strategies, deploying staff and financial resources to develop new technological and commercial capacity. Staff and partners in the community, the public and NGO sectors, have facilitated a process of sharing information, developing knowledge, improving products, creating organisations and linkages.

Skilled workers can become the managers of their own enterprise (and see their income grow substantially), provided:

- business development services are made available
- there are no major changes in product or production processes
- the market climate remains positive.

Having the right support is important, and in this particular case ITDG's previous local experience of providing support to other economic sectors, including food processing and transport was significant.

Income generation through co-operation

Single focus interventions have been intertwined with the range of technology expertise held by the ITDG Sudan Kassala office. Bridging with local manufacturer and market institutions, the brick makers of Shambob have developed the necessary capacity to assess and meet market demand in order to generate incomes.

Increased personal and community assets

Individual households and Shambob village have witnessed an increase in their asset base and created linkages that are valuable tools in their armoury against the environmental threats and persistent pressure of widespread poverty.

Involving producers

It is important for producers to be involved in research that aims to improve their production methods. Local skills and resources are important assets that need to be nurtured and built upon rather than displaced in favour of technologies from elsewhere. That is not to say that there is no scope to consider additional options in the context of participatory technology development, but they need to be inserted in, and adapted to, the local context. Previous experience by ITDG shows that it is much more difficult to launch new enterprises with innovative materials such as micro-concrete roofing tiles, where a market needs to be identified. It is also problematic to introduce new enterprises where the production technology has changed drastically, as in lime production. There may also be problems when markets are reducing, e.g. as a result of structural adjustment, and existing producers react more aggressively to newcomers.

Reducing environmental pressures

There is a huge potential for the use of residues as fuel in brick production, and this can substantially reduce the pressure on wood fuel resources. Residues tend to be a much cheaper fuel than wood and this, added to increases in energy efficiency, help to improve the commercial viability of the enterprises.

Scaling up

ITDG is replicating the approach with displaced and refugee populations who have been driven from rural home lands to reside in the informal settlements of Kassala's suburbs. At Kadugli, on the outskirts of Kassala, a workers' co-operative has now been established, and at Waggar, 106 kms to the north, brick production is a new economic activity run by an existing co-operative; both have begun well.

Around 250 brick workers are now involved in self-managed brick production in three locations; this represents approximately 5% of the work force in the sector. More than 100 others, in three different locations have already approached IT Sudan for support in establishing a producers co-operative. There is clearly scope for more, not only within the region, but perhaps elsewhere in Sudan as well. The main constraint is going to be the external funding required, particularly for capacity building.

Raising the funds to support SBPC and other worker co-operatives continues to be a major bottleneck. Not many bilateral donors support the Sudan; they may have their political reasons, but in doing so, they ignore the important results that can be achieved by NGOs in working with poor people at the grassroots, often with the support of Sudanese authorities. Consequently, the majority of funds for this project have been raised from a wide range of small donors, which is time consuming and less secure.

References

- Utilization of Cow-Dung in Brickmaking** Jeremiah Bairiak, BASIN Wall Building Case Study, GATE, 1999, pp 6.
Utilization of Bagasse in Brickmaking: R & D in Sudan Jeremiah Bairiak, BASIN Wall Building Case Study, GATE, 1999, pp 4.

Sustainable small scale brick production: a question of energy? - International action research experience in brick production, Theo Schilderman, ITDG leaflet, June 2000, pp.4.
UNCHS Best Practice Submission <http://www.bestpractices.org/>

supported by  infrastructure and urban development department

© ITDG 2001