

Micro - Enterprises and Sustainable Development Through Human Resource Development: Fairfield Pottery Co.

BARBADOS

Introduction

Sustainable development in the English-speaking Caribbean has to mean much more than an article of faith. From **this** perspective, it has to be made meaningful for all social groups and strata in the region. In this regard too, it has to embrace individuals at their current levels of social development and income generating capacity, while enhancing their standard of living and social condition. Sustainable development therefore does not necessarily have to be associated with doing more with less; it can also mean doing more with the same quantum of natural resources.

It is in this context that the Caribbean Development Bank (CDB) through its Caribbean Technology Consultancy Services (CTCS) Network has strongly influenced the development of the social lives of persons engaged in the micro-enterprise sector in the English-speaking Caribbean, providing them with the necessary technical skills through hands-on training, and the

dissemination of related technical information. It has made a crucial contribution in this regard with respect to the small enterprise and small-scale manufacturing sectors, in the use of a relatively abundant natural resource found throughout the region - clay. A more optimal use of the clay resource, the talents of several hitherto relatively unskilled and low-end producers of pottery in the region, and the necessary technical training introduced through the CDB, have been brought together. The results have been the creation of products of higher added value, not only in terms of quality, but also regarding such attributes as aesthetics, and uniqueness.

Fairfield Pottery as an Important Training Resource

A substantial amount of work associated with the improved use of the local clays for pottery, art and brick-making which allows for substantial income generating enhancements throughout

the English-speaking Caribbean, has come from the technical training provided by Fairfield Pottery. This Barbados-based company has been used to train a number of persons working in the area of pottery on the recommendation of the CDB's CTCS Network.

Red Clay Products, trading under the name of Fairfield Pottery, is a family-owned business with an estimated sixty-year combined experience, in dealing with end-products from clay. The background of experience of the most senior member of the team with heavy clays in Britain; brick-making and refrigeration in Barbados; and food-canning and equipment testing as an engineer in Jamaica, makes the firm ideally suited to assist with the relatively less demanding problems, associated with clay and **kiln** technologies emerging from the related business start-ups in the region. The company in its present form began in 1989, with three people. Since then, the staff has increased over 100%.

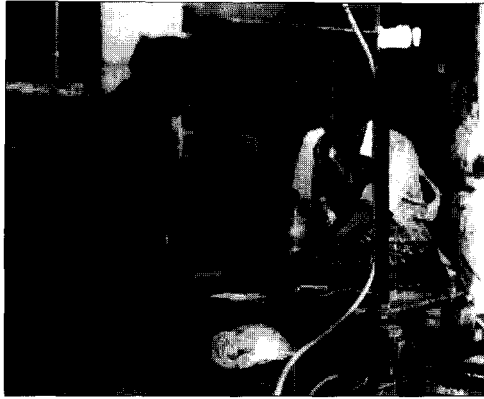
Training Activities of Fairfield Pottery:

Its Work in Guyana Enhancing Traditional Skills

Fairfield Pottery **has** played a significant role in the development of pottery micro-businesses in Guyana, St. Lucia, and St. Kitts. In Guyana, an Indo-

Guyanese family had been using methods originating with grandparents, (transferred from the Indian sub-continent), such as the hand-driven potter's wheel and the hole-in-the-ground kiln technique. The family business, through Fairfield Pottery was introduced to the glazing of pottery, giving rise to end-products with considerably higher market value — the design and production of moulds, and the creation of ornamental and plant pots much larger than those which the family had been accustomed to replicating. The **training** also introduced new knowledge about the use of other types of local clays. It encouraged the use of the readily available local white clay in the design and completion of pots, a movement away from its tradition of producing simply red clay products.

This business however, similar to other growing micro-enterprises in the region, suffers from marketing difficulties. Located in the Guyana hinterland, the output from **this** business not only faces precarious transportation by ship to the capital, Georgetown, but also other drawbacks. The lack of natural gas or LPG to fire a gas kiln inhibits the production of the higher value-added end-products, namely, glazed pottery. There is substantially greater earning capacity for micro-businesses engaged in the commercial production and sale of the higher-end value-added glazed pottery. Although, Fairfield Pottery



Antique equipment for making pottery

successfully demonstrated the glazing technique in this case, it appears that much more experimentation will have to be undertaken with respect to available input combinations, to perfect a glaze more suitable to the Guyana clays. The family nonetheless, has been left with an enhanced income generating capacity, which at the same time is sustainable.

Improving Higher-end Products

Fairfield Pottery has also made a tremendous contribution to the Guyana-based Copeland's Home Studios Pottery. Before the training intervention, Copeland's used a kiln, courtesy the Head of the School of Arts. With technical assistance from Fairfield's instructors, Copeland's graduated to a gas kiln. In the capital, this unit is more reliable, granted the general energy resource supply conditions in Guyana. Moreover, relative to electricity, it uses gas, a cheaper source of energy. Not only does the gas kiln lend itself to firing



Mr. Belle, owner-operator Fairfield Pottery

more quickly, thereby granting greater production flexibility, but it also allows for a controlled cool down.

Compared with the opportunity to glaze end-products in other countries in the Caribbean, Fairfield Pottery found that the glazing of products made from the Guyana clays requires special attention. Copeland's which dealt almost exclusively with the creation of high-end products had particular difficulty with this. Nonetheless, the company benefited from the technical assistance in building its moulds. The family enterprise learnt how to design the moulds itself. Other creative and industrial aspects of pottery making, also formed an integral part of the instruction set. One of the most outstanding outcomes resulting from the training was the ability of Copeland's

to achieve a twelve-fold increase in productivity, from the production of one large pot per day, to twelve. The potential for enhanced income generation, granted the existence of a market, therefore remains tremendous.

Copeland's, on suggestions from Fairfield Pottery, was also encouraged to use discarded motor vehicle wheel parts in the construction of its revolving moulds and stands. Here, beyond knowledge of clays, the engineering experience of Fairfield Pottery was extremely useful. It follows that, pottery making can have important implications for reuse of discarded material and environmental improvement.

In terms of "the three **Rs** of sustainability," (recovery, reuse, and recycle), the aspects of reuse **are** well-represented in the development **of** the pottery industry, at the micro-business level in Guyana.

Fairfield Pottery's Assistance to St. Lucia

*Energy Savings with **New Kilns***

The work of Fairfield Pottery in St. Lucia has been significantly associated with Clay Products Ltd. This small-sized company is in the business of manufacturing hollow clay and decorative blocks using the natural red clay found on the island. Here, the intervention target was already on a

commercial footing, but was to all intents and purposes, only just viable. The contribution of Fairfield Pottery this time was to assist with the design of a new, more energy efficient kiln for the company's hollow brick production. The entrepreneur had been searching for technical expertise to improve **his** production processes, but had hitherto been unsuccessful. The construction of the new **kiln** thus represented a shift away from the top-hat **kiln** that was previously in use by the company. The replacement, a Hoffman-type kiln was more efficient, providing an estimated 60% energy saving. **A** major technological transfer here, was the construction design which allowed one chamber to pre-heat another.

The project also has some very noteworthy environmental and sustainable development implications. It reduces fuel consumption (cost and energy savings) and reuses old oil from serviced vehicles (reuse, in terms of the **3Rs** of sustainability).

Gas Kilns and the St. Lucian Environment

In another instance of Fairfield's work in St. Lucia, the CDB was approached for a loan to build a kiln. The CDB identified Fairfield Pottery as the organization to undertake the necessary training to effect the construction of that **kiln**. The associated technical assistance involved teaching the micro-business-

man how to build and fire the kiln. Beyond this, was the learning imparted slip-casting and the use of a press mould system.

Output increased some **30-40%** in response to the intervention. The productivity of capital for the entrepreneur, with respect to expenditure on energy is quite impressive. Where previously for the same output, the enterprise normally expended approximately **US\$296**, the expenditure on fuel had now been reduced to nearly **US\$111**, a near **63%** decline. The businessman experienced a tremendous wealth creation effect (cost savings and expenditure avoidance).

Fuel Switching and St. Lucia's Water Stress Problem

Another consequential by-product of this intervention was the use of gas as the primary fuel source. St. Lucia, is a net importer of energy. The island exports charcoal to the neighbouring island of Barbados but imports other fuels, for example, liquid petroleum gas and automotive fuels. Moreover, there is still a substantial use of charcoal as fuel in St. Lucia. Thus, any removal of stress on existing wood fuel stocks is useful. For a country struggling with its emergence from a threat of deforestation, associated with the heyday of the cultivation of bananas as the main source of foreign exchange generation, the fuel switch from electricity to liquid

petroleum gas, instead of wood, must be regarded as noteworthy and a plus in terms of sustainable development.

Knowledge Dissemination

A "knock-on" or ripple effect was also present with respect to the intervention, in terms of knowledge dissemination. The trained entrepreneur subsequently, was able to teach the techniques passed on by Fairfield Pottery to four persons, starting with the relatively quick income generating press mould technique.

Fairfield Pottery in St. Kitts Decorative Masks on Demand

Fairfield Pottery has also contributed to another micro-business start-up, which was undertaken on the island of St. Kitts. Here, the recipient of the training was mainly interested in the making of moulds for the artistic creation of clay-based, decorative "one-off masks and faces. What essentially was a tentative individual initiative at starting a business, and gaining a measure of economic independence, was transformed into a thriving tourism-oriented business.

The Fairfield Pottery training intervention moved the recipient through wheelwork, design, and the technical aspects of clay products, to full commercial production. Now, perfected faces or masks, can be made into moulds and replicated according to market demand

conditions. A missing dimension in the intervention however, was the absence of training in marketing the end-products. Marketing however, is not part of Fairfield's training programme.

Achievements of the Transfer of Technology Through Fairfield Pottery

Increased Technical Competence of the Recipients of Training

Fairfield Pottery has been a significant player in the transfer of increased technical competence regarding appropriate **kiln** design, the design of moulds, and the production of fine pottery and higher-end value-added glazed clay products throughout the English-speaking Caribbean. Its contribution to sustainable development in the region cannot be again said. Beyond sidestepping any potential learning difficulty, the company's training has exposed a wide range of clay techniques to a diverse group of entrepreneurs (including individual males and females, and family groups) throughout the region. The training recipients too, have been taken from their respective stages of development - sometimes from beginners' entry level and transformed into more optimistic business people, with greater control of their products, thereby unleashing highly creative and productive talent.

Increased Income For the Training Recipients

The financial benefits of the technological transfers have been substantial. The interventions have witnessed the development of practical income generating businesses through the use of available natural resources, with the added capability of creating niche products, by those who are generally associated with the lower income strata in those countries. In the manufacture of terra cotta objects for example, one can transform one pound of dirt (clay) into an object which retails at US\$2.00.

Building on Inherent Talent

The company has been careful to help the entrepreneurs perfect their own creative outputs, rather than simply imitate known standards or designs. Regarding pottery making, in most cases, the recipients have been drawing on the European tradition. A true African pottery making tradition was found in the village of Choiseul in St. Lucia. Not only have the recipients been able to apply the training, attesting to its effectiveness, but in some cases they have passed on to others, the skills gained from Fairfield Pottery - a genuine ripple effect. This unselfish sharing of ideas too, remains a hallmark of the work associated with the Fairfield Pottery interventions and the CTCS Network.

The Need for Marketing Skills

A major drawback of the training has been the absence of a transfer of necessary marketing skills to take the end-products to the market shelf. **This** has to be done separately. The issues related to costing, pricing and distribution of the end-products have been cited by the recipients, **as** the major deficiencies associated with the interventions. The human resource development implications for small business development in the English-speaking Caribbean region are clear.

Lessons Learned

From the foregoing a number of lessons can be highlighted which can be instructive for the region:

- The Caribbean region has an abundance of clay soils and is endowed with some very talented people willing and able to convert them into income generating enterprises; some also have been waiting for alternative employment opportunities to become self-employed. Many have found such an avenue for self-employment and enterprise development in the conversion of clay into art, pots, and building materials.
- The Fairfield Pottery training interventions, have introduced necessary technical knowledge and value-adding expertise to recipients, without which they might have been condemned to low value-added, higher cost, and inefficient end-products.
- Beyond the knowledge gaps to be filled, a lack of quality, business savvy and confidence characterize the majority of micro-enterprises in the region.
- The positive higher value-added products emerging from the interventions underscore the observation that higher value-added products (at the national level, **GNP**) is significantly and positively correlated with the technological content of output (exports). The implications for more technical education in the region are immense, if not compelling.
- Human resource development can contribute substantially to an improvement in the lives of individuals in the region through higher income generation, by training them to become quality producers of their current output.
- The training interventions by Fairfield Pottery in various countries in the Caribbean, have made a tremendous contribution to micro-enterprise development in the pottery industry, by introducing

new approaches and techniques to recipients who have been engaged in the industry from their youth.

- The interventions also show that there is a great deal of scope for the improved and sustainable utilization of the natural resources of the region. The higher value-added products created by the recipients, have not only used a fairly abundant natural resource, but through the intervention process, have benefitted from the introduction of appropriate technology.
 - The pottery industry is sustainable especially through the construction of energy-efficient kilns. The helped micro-enterprises have witnessed a reduction in energy usage and cost, by switching to alternative and relatively less expensive types of fuel (electricity), or even away from critical non-renewable energy sources, such as wood.
 - Sustainability in terms of recycling can be also part of the benefit of micro-enterprise, training and development. The impact of the interventions demonstrates that there may be also, profitable opportunities for the employment of “the 3Rs of sustainable development” (recovery, reuse and recycling) in the region’s productive processes. The improved production of clay products in the very
- limited number of countries surveyed in this case, has also shown that the respective countries can also benefit from the reuse and recycling of discarded vehicle parts and spent oil, besides energy-use reduction and/or cost-reduction, through fuel switching - and with substantial and beneficial economic impact.
- Some meaningful social gains can also accompany sustainable development efforts. In this regard, taken together, the developments relating to the improved use of the clays in the region, spread over a dispersed geographic area, have moved the whole issue and debate about sustainable development from being an article of faith, to one embracing the development of practical income generating businesses using available natural resources, and with the added capability of creating niche products, by those who are generally associated with the lower income strata in those countries.
 - Nonetheless, the commonality among all those interventions points to a serious deficit in the output of regional training institutions in relation to numeracy (the reading of gauges) and a basic knowledge of business. From the training interventions onward, or for agencies wishing to continue the

training effort, the need is therefore expressed for greater dissemination of marketing and product distribution skills at start-up business level, from the commercial production processes to the market shelf.

- Regarding the search for an African tradition in pottery making in the

English-speaking Caribbean, Fairfield Pottery found that by and large, pottery making in the region is influenced more by the European tradition. A genuine African pottery making tradition can be however found in the village Choiseul on the island of St. Lucia.

Recommendations

Fairfield Pottery as a part of the network of regional technical cooperation, continues to play a significant part in the sustainable development of the region. The work of the resource company has seen the conversion of waste car parts into acceptable turning wheels for the making of clay products. Significantly too, it has been instrumental in helping with the energy and fuel switching objectives of some of the countries where it has carried out its training activities. Therefore, besides

enhancing the long term income generating capacity of the persons trained, it has left the countries affected better off environmentally.

It is advisable that the NGO's and other social groups intervene to advertise the significant contributions this company is making towards sustainable development in the manufacturing sector of the nation. These agencies should assist in providing funding so as to allow this enterprise to develop into a large-scale income generating business, thereby improving the standard of living for low-income earners.