

Integrating Forest Biodiversity Conservation and Poverty Alleviation in Local Forest-Based Enterprises:

A Case Study of the Woodcarving Industry, Ghana

by Dora Nsuwa Cudjoe, MEM 2005

Introduction

Woodcarving is one of the informal employment sectors in the forested areas in Southern Ghana, notably in the Ashanti, Central, Western, Eastern and Volta regions. An otherwise part-time lean season activity, however, is being nurtured into a full-fledged trade as a result of regulatory and policy framework support for the tourism industry, which provides the main local market for carved products (Addo and Marshall 2000). Ghanaian woodcarvings are gaining increased recognition both locally and internationally, presently contributing approximately \$500,000 annually to the Ghanaian economy and providing employment to about 20,000-30,000 people (Okrah 2002). The producers, individuals and cooperatives, rely almost solely on the natural forest for wood. Wood inputs usually tend to be a few specified hard wood species, some of which, like African mahogany (*Khaya ivorensis*), have been extracted almost to the brink of extinction. Woodcarving is therefore perceived as a source of forest biodiversity loss in Ghana (Dei 1990).

Dora Cudjoe is originally from Ghana. She obtained her B.Sc. from the Kwame Nkrumah University of Science and Technology, and then worked with the Environmental Protection Agency in Ghana prior to attending F&ES. Dora spent the summer of 2004 with the UNDP in Ghana, and plans to work with the Global Environment Facility on graduation.

Since woodcarving is an industry important to two vital aspects of human social welfare – rural economy and forest biodiversity conservation – it becomes imperative to find alternative wood sources that are more environmentally benign. In this study, I describe the woodcarving industry of Ehwiaa, the largest woodcarving center in the Ashanti region. Ehwiaa, a tourist town located five miles from the regional capital, Kumasi, has gained local and international recognition for its carvings. I investigate the industry's structure, discuss ways in which its production could be spurred, and evaluate the potential for using byproducts from the timber industry to provide a sustainable source of wood for artisanal woodcarving. I draw inferences from a similar woodcarving enterprise, the 'Ecocraft', which uses strictly byproducts from the timber industry rather than directly from the forest. Finally, I address plausible conclusions and recommendations towards sustaining the woodcarving industry.

Methodology

Research design

I conducted field surveys; a method through which I could extract substantial amounts of data at relatively low cost within the limited time available for this research (Babbie 1989). I targeted woodcarvers from Ehwiaa after preliminary interviews with retailers in New York revealed that over 60% of woodcarvings sourced from Ghana come from

this town. Interviews in Ghana confirmed Ehwiaa's suitability as the study site: of the 150 woodcarving export companies in Ghana, "almost all source their products from Ehwiaa."¹

I surveyed the following actors: one-man (individual) carvers who form about 70% of total woodcarvers; association woodcarvers who constitute about 30% of the town's woodcarving population; industrial carvers (Ecocraft project); and finally government and non-government institutions such as the Forestry Commission, Ghana Export Promotion Council, Aid to Artisans-Ghana, and the Director of UNDP-GEF, by virtue of their influence on the industry. One hundred woodcarvers were targeted, but only 20 carvers could be interviewed.² Nonetheless, I obtained a representative number of people from the various categories within the woodcarving sector (carvers, retailers, and exporters). Questions were directed at eliciting information on the social background of woodcarvers, the production chain from sourcing of wood to retailing both locally and by export, and the factors that account for changing trends in production.³

Results and Discussion

Current status of Ehwiaa woodcarving

The backbone of the town's economy and an embodiment of the rich Ashanti cultural legacy, Ehwiaa woodcarvings date back to the 19th century.⁴ Back then, the art of carving wood was seasonal, done during the lean agricultural seasons. Two main tree species, *Khaya ivorensis* (African mahogany) and *Holarrhea wifsbergii* (sese), were used.

Woodcarving in Ehwiaa has since evolved from serving a strictly local market to being an almost entirely export-based activity. Currently the export market to Europe and the US accounts for 65% of all products made in the town, while the remaining local market includes

tourist travel to Ghana. The quality of labor force (as producers and exporters), tree species used, and product lines have changed over the years in response to economic policies (such as redundant labor from the formal sector), availability of required tree species, and market forces.

we used to source wood from the town's vicinity but residential facilities are reducing at a fast pace the availability of wood. We have to travel for about 60 miles into the forest in search of the required species...⁵

According to Okrah (2002), the retrenchment of workers from the formal sectors as part of the World Bank's Structural Adjustment Program led to more and more people resorting to informal sectors of the economy, such as woodcarving. Over 60% of Ehwiaa's population was woodcarvers about three decades ago, until receding access to the required tree species resulted in a shrinking number of carvers. Woodcarvers presently make up 10% of the town's population of 20,000 (Table 1).

Constituting over 60% of wood volume used now, *Cedrella odorata* (gyenygyene) is said to have replaced African mahogany as the most popular carving tree species. *Cedrella odorata*, in addition to having a similar coloration as the African mahogany, has the prized forestry value of a fast regenerative capacity. Logs from this species located at the research site came from 8-10 year old trees with diameter at breast height ranging between 0.4 and 0.8 meters.⁶

Interviews revealed that although forest plantations could serve as an alternative wood input, lack of access to land limits this source's potential. Since Ehwiaa is only five miles from the region's capital and has comparatively cheaper land prices, home owners and estate developers are increasingly buying lands that could otherwise have been used for tree plantations. Moreover, the Forestry Commission of the Ashanti Region allocates an annual quota of only 40 trees from production forests to all woodcarvers in the region, enough to supply

Table 1. Categories of Woodcarvers in Ehwiia

Association	Description	Number of active carvers
Unity Carvers	Basically carve the Unity design	120
Ehwiia Woodcarvers Woodcarvers	who own retail stores	40
Non-associational woodcarvers	Do not belong to any of the associations	1,500
Woodcarving Export Association	Network with local and International wholesale buyers	10

only one-fiftieth of the approximately 2,000 Ehwiia woodcarvers for a month.⁷

Production and marketing

Analysis of the rate of production revealed that, generally, an individual woodcarver utilizes about six m³ of wood annually, creating a cumulative total of 12,000m³ for the whole carving community in Ehwiia. According to the carvers, this volume of wood is sourced mainly from farmlands since informal price negotiations with farmland owners for trees are far cheaper than via permits from the Forestry Commission. Previously, a Legislative Instrument, LI 1518, granted permits to carvers, but this has been repealed on the grounds that carvers frequently abused these permits.⁸ As dwindling access to off-reserve sources therefore loom, illegal sourcing from the natural forest becomes the last resort. Woodcarvers clearly stated that they have taken to carving products at felling sites or in remote villages to evade security checks by the Forestry Commission Task Force for illegally harvested timber. Woodcarvers employ very simple locally made hand tools, which include the hammer, knife, and axe. This limits the diversity of wood species they can use, the quality of finish, and the intricacy of designs.

On entering Ehwiia Township, a visitor is welcomed by a stream of woodcarving retail stores that lines both sides of the main road. Retailers carry the same set of items, the only differences

being in sizes and colors. Products were mostly for decorative purposes – animal and human figurines – with no little household use. Observational studies revealed that cultural artifacts which served dual purposes, such as flower vases, book-stops, cutlery, lamp stands, fruit bowls, and furniture, had greater market value. This was confirmed by Bob Hewes, Manager in charge of product sourcing nationwide for Pier 1 Imports.⁹ Commenting on carved products from Ghana, he suggested that woodcarvers exploit avenues for more utilitarian products since “the interest among our customers for traditionally based ethnic wood carvings is not as strong as it was.”

The framework within which the woodcarving industry operates

Although a fairly small and informal sector of the Ghanaian economy, the woodcarving trade interlinks with a host of formal governmental and nongovernmental institutions (Figure 1). These linkages undoubtedly are centered on the production, financing, and market extension at levels that are, however, not involved enough to optimize the potential of the industry. There is not enough attention given to sustaining the wood resource base, an effort that will demand the regulatory and policy support from the Forestry Commission and environmental NGOs. Aid to Artisans, Ghana (ATAG), an NGO, has embarked on a forest plantation program that is geared towards establishing

1,500 ha in forest plantations. One hundred and forty-four hectares of this has already been planted. Educational institutions like colleges and vocational schools could be a source of logistical support in production and business skills training, as well as research.

The 'Ecocraft' project

A new model has emerged to address the growing gap between the dwindling supply of trees and the growing demand for wood to carve. Since a substantial quantity of products are currently being carved from smaller diameter trees,¹⁰ wood waste from timber companies may support the shrinking supplies from off reserve forests such as farmlands. The Samartex Timber and Plywood Company, which has stated "the need to utilize all raw materials," has established a woodcarving unit called Ecocraft that follows this model.¹¹

Samartex Timber and Plywood Company is a privately-owned German company located in the Western Region of Ghana, which has a well-developed woodcarving industry like that of the Ashanti Region. Samartex is situated about 240 kilometers from the Western Regional Capital, Takoradi.

Ecocraft was initiated three years ago as part of Samartex Timber and Plywood's quest to maximally utilize all their industrial waste. The concepts behind this project are (i) to add value to harvested trees; (ii) to increase recovery from the timber industry waste; and (iii) to create jobs and increase awareness about the various valuable uses to which non-conforming wood could be put.¹²

By channeling all industry waste (non-conforming timber forms,¹³ round core, unwanted veneer) to the Ecocraft woodcarving unit, Samartex is able to maintain its electricity and heat generation and also increase earnings from recovered waste wood. By giving added value to waste wood, sometimes values higher than that obtained from equivalent timber volume, woodcarving is serving as an added source

of income without direct pressure on the natural forest for virgin timber.¹⁴

The company produces lumber, veneer plywood, and tongue and groove boards mainly for export from 25 tree species, 14 of which are utilized by the woodcarving unit. Eighty percent of products are for the international market. Of this, 60% goes to Europe, 30% to USA, and 10% to the Far East and other destinations.

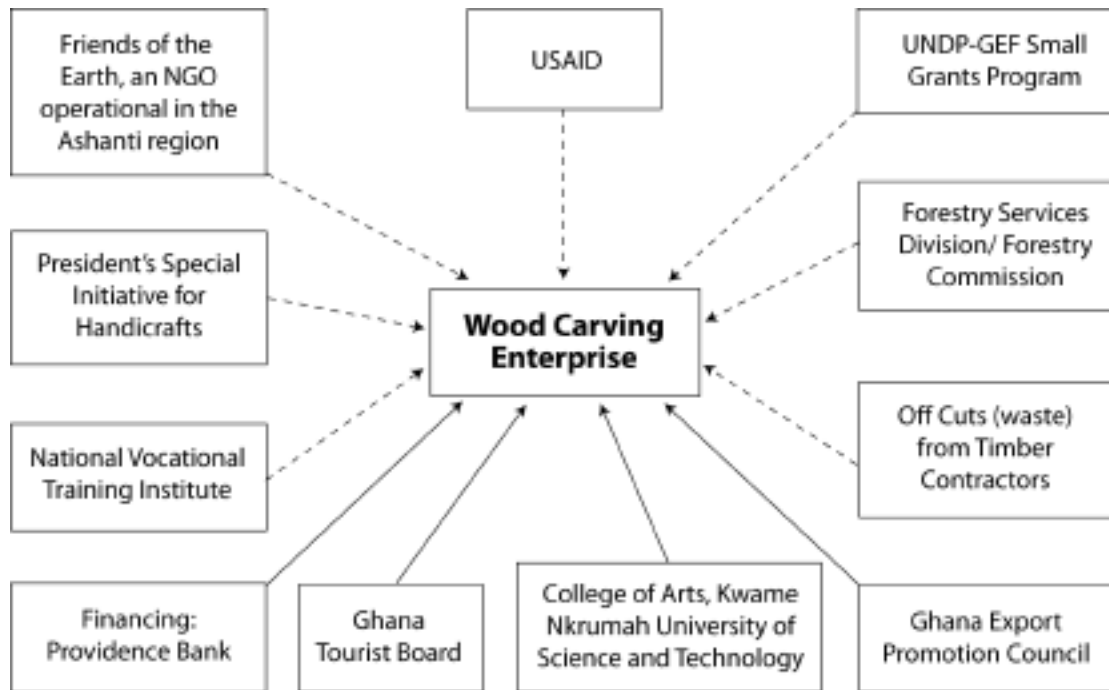
The saw mill, veneer mill, plywood mill, and molding departments demand a monthly wood volume of 9,500 m³. Forty-two percent of this volume is made of species that cannot be carved. Of the 5,500m³ carveable tree species, 2,750 m³ – a startling 50% – is generated as off-cuts, or byproducts. Of this volume, 1,000m³, a monthly supply of carveable wood is made available to the carving unit. The rest, which is composed of cracks, slabs, heartwood, and sawdust, goes to feed the cogeneration plant. Samartex also ensures that timber harvest meets the soil nutrient replenishment and forest landscape restoration standards set by the Forestry Services Division.

It is interesting to note that the volume of wood generated from industrial waste to feed Ecocraft per annum is the same as that required by the carvers in Ehwiaa (approximately 12,000m³ annually).

Product comparison

Products made by Ecocraft and by woodcarvers from Ehwiaa differed substantially in terms of product diversity and quality of finish. Samartex products are diverse and cross-cutting; both useful household items, such as furniture and house wares (bowls and cutlery), and purely decorative pieces like human and animal figurines. Ehwiaa products, conversely, focus largely on the decorative pieces. Samartex is also able to utilize 14 species of wood,¹⁵ as compared to the two main species used in Ehwiaa. Although these two production lines have characteristics peculiar to them and thus cannot be directly compared, artistic creativity and available technology appear to be the main factors that account

Figure 1. Perceived Stakeholders Partnerships and Relationships



The links represent the various existing or proposed linkages between the stakeholders in woodcarving. Solid lines represents existing working relations; dotted lines represents no or very weak relations. Taking a cue from India and Kenya, the UNDP-GEF Small Grants Program is targeted as the main source of donor support for this industry. The Friends of the Earth may also act as a medium between woodcarvers and the donor.

for differences in product diversity and quality of finish. Samartex employs design service support from German-trained nationals and the Ghana National Vocational Training Institute, and adopts the use of simple but efficient carving and finishing tools such as the hand-held sand paper machine, the circular saw, and the bend saw. Woodcarvers from Ehwiaa, meanwhile, still use less-efficient indigenous handmade tools. Carvers in Ehwiaa are also slow in adapting their cultural designs into products preferred by customers.

Conclusions and Recommendations

Woodcarving, as an informal employment sector, contributes to strengthening the Ghanaian economy. Having been given a facelift by the

tourism industry and its supporting policy regulations, woodcarving is continually expanding its market both locally and internationally. Expansion is, however, at the expense of the biodiversity of the natural forest via illegal harvesting. It is posited that this effect is partly due to lack of support from the governmental and non-governmental institutions in sustaining the input material base; as such, woodcarvers are forced to thrive on illegal harvesting.

Ecocraft therefore provides an important example of an alternate wood source, demonstrating the possibility of an industrial ecology relationship between woodcarvers and timber concessionaires, if given the necessary logistical and financial support by the Forestry Commission and donor organizations such as the UNDP-GEF.

I do not suggest that this relationship could serve to provide all the wood material needs for the woodcarving industry, but it could effectively meet at least 10-15% of annual inputs. It must be recognized, of course, that some concessions may not be close enough to woodcarvers to be economically viable to feed byproducts into carving. The Ashanti region has enough timber concessions to substantially support woodcarving with industry waste. Samartex is not supplying its wastes to other carvers in the Western region since the Ecocraft unit absorbs it all.

This relationship undoubtedly will require a “medium of transfer” such as an environmental NGO (ENGO).¹⁶ The ENGO could provide the production policy framework needed to raise and sustain funding for the industry in the areas of education, skills and technology, marketing strategy, and forest plantations. If a linkage like this is successful, eventually Ghanaian woodcarvings may be able to compete with ecologically friendly products being promoted in Kenya and India (WWF 2003; Sudipto et al. 2003).

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Endnotes

¹ Interview with Isaac Okyere, exporter, July 2004.

² In order to evade routine checks by the

Forestry task force, woodcarvers have taken to carving on felling sites and transporting the semi-finished products to Ehwiia.

³ I could not obtain a copy of the Development Plan for the Kwabre District (referred to as the “Bible” by the District Development Officer). There has not been any prior study of the woodcarving industry in Ehwiia and so, without the Development Plan, research was based mostly on oral data.

⁴ The original designs are the queen-mother stool (*asesedwa*) and the fertility doll (*akuaba*).

⁵ Interview with Kwadwo Dwomoh 2004.

⁶ Interviews with Samuel Opoku, Woodcarver and Treasurer of Ehwiia Woodcarving Association, June-July 2004.

⁷ This is based on the estimate that an average carver uses a volume of six m³ of wood annually.

⁸ Interview with George Atta-Wusu, Regional Director, Forestry Commission, Ashanti Region, 2004.

⁹ Pier 1 Imports, AMC Mar/Maxx, Cost Plus, and TARGET are all USA stores that source products from Ehwiia.

¹⁰ Unity woodcarving designs use logs of diameters between 40 cm and 60 cm.

¹¹ Interview with Al-Helou Raymond, General Manager, Samartex. Smarerobio, West Region, Ghana, 2004.

¹² It is also worth noting that Samartex co-generates electricity and heat from wood residues mostly saw dust from its log yard, sawmill, plywood mill, and veneer mill. Electric power and heat generated from such waste is used to run the company’s 24-hour operation schedule and to supply energy to company’s residential facilities as well as the Sameraboi Township

¹³ Tree boles that are buttressed are not straight enough or have scars or ring shakes.

¹⁴ Interview with Richard Nsenkyire, Production Manager, 2004

¹⁵ Note, however, that not all 14 species have been proven to be very viable for carving.

¹⁶ Friends of the Earth is already operational in the Ashanti Region. This middle link will mitigate

the mistrust that has been mentioned as a problem in past relations between the Forestry Commission and the carving community.

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