THE ROLE OF MARKETING IN PROMOTING A SUSTAINABLE TRADE IN FOREST PRODUCTS IN TROPICAL REGIONS

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ABSTRACT

There appears to be consensus between many forest products firms and environmental groups that, whereas the harvest of timber is essential to the economic well-being of many tropical countries, the timber industry must adopt a philosophy of sustainability, both in the tropical and temperate regions. Improved marketing techniques can provide managers in the forest products industry with the opportunity to move towards a basis of sustainability in a number of ways. This paper explores four areas where marketing can help to promote sustainability of the tropical forest resource. The areas described include: 1) facilitating the more effective flow of information from markets and customers, 2) evaluating the use of sustainable timber certification programs, 3) developing increased market access for lesser-used tropical timber species and, 4) developing increased market access of non-traditional forest products.

Key words: *Marketing, sustainability, certification, lesser use to species, non-wood forest products.*

INTRODUCTION

Environmentalists have long charged that the timber industry is the driving force behind the process of deforestation in the tropics. While industry and government officials counter that this is a gross misrepresentation of the truth, the environmental charges are designed to simplify the scale of the problem and cater to public distrust of industry as a caretaker of the environment. However, by placing the blame on industry, environmentalists have minimized the role of the factors that play a far more important role in the process of tropical deforestation: poverty, rapid population growth and high unemployment rates.

To illustrate the importance of these other social and economic factors as driving the process of deforestation, compare the role of industry timber production to total timber harvest in Ghana and the United States (Figures 1 and 2). Fuelwood production represents less than 20% of the total harvest in the US while it accounts for over 90% of the total timber harvest in Ghana. To imply that the cessation of timber harvesting by industry would halt the process of deforestation in the tropics is disingenuous and a distortion of the facts that detracts attention from the more fundamental factors than fuel deforestation.

Having said this, it cannot be denied that the timber industry does contribute to deforestation by opening access to areas of tropical forest that may have been relatively undisturbed and inaccessible in the past. Whether or not these areas would have remained undisturbed in the long-term given the social and economic factors noted above is problematic. In addition, the reliance of the industry on a small proportion of the species found in the forest results in larger areas of forest being disturbed than would otherwise be the case given a more efficient utilization of the tropical forest resources. For example, although over 400 timber species attain a harvestable size in Ghana, very few have international or domestic markets (Figures 3 and 4).

Confusing the situation further has been the initiation of a series of tropical hardwood boycotts in several European countries (e.g., the U.K., Germany and Holland). The primary objective of these boycotts is a reduction in demand for tropical hardwoods to coerce firms and governments in the tropics to adopt sustainable forest management practices and policies. However, the most recent export statistics from Ghana indicate that the boycotts have had little impact and export earnings from forest products have increased substantially since the start of the boycotts (Figure 5). It could be argued that, rather than coerce government and industry leaders into compliance with environmentalists objectives, the boycotts have diminished the influence of environmental groups.

This reduction in influence can be attributed to the fact that many Ghanaian forest products firms have opted to de-emphasize their traditional markets in Europe in favour of other less environmentally sensitive markets in Asia. This shift is particularly obvious in the trade of tropical hardwood logs.

Over the period 1972-1994 log exports to European markets declined from 91% of total exports to just 9% while exports to Asia increased from 7% to 89% over the same period (FPIB, 1979; FPIB, 1995).

- Today there appears to be consensus between many forest products firms and environmental groups that, whereas the harvest of timber is essential to the economic well-being of many tropical countries, the timber industry must adopt a philosophy of sustainability, both in the tropical and temperate regions. Improved marketing techniques can provide managers in the forest products industry with the opportunity to move towards a basis of sustainability in a number of ways. This paper will explore four areas where marketing activities can promote sustainability of the tropical forest resource including:
  - greater access to market information
  - certification of sustainability
  - market development for lesser-used tropical timber species and
  - market development for non-traditional forest products.

Marketing strategies to promote sustainable forest management in tropical Africa

In many tropical countries, including Ghana, the predominant management philosophy in the timber industry involves the minimization of manufacturing costs to provide a competitive advantage in the production and export of commodity products. Reliance on this philosophy results in a situation where firms are forced to compete solely on the basis of price, thus providing them with minimal or negative profit margins and reducing their bargaining power with importers and manufacturers. A more appropriate competitive strategy for tropical Africa would be the development of differentiated products that can be marketed to niche markets in Europe and the United States. Adoption of this type of competitive strategy would allow firms to match the needs of the market place with the resources available while providing the opportunity to perform a greater share to value-added manufacturing locally. While this strategy would provide companies and governments in tropical Africa with a variety of benefits, it requires that managers in the timber industry accept a shift in management philosophy and become more market-oriented.

1. Increased access to market information

Currently the timber industry in tropical Africa is confronted with a paradigm shift from exploitation to sustainablility. This period of change is one of uncertainty where many managers perceive a high level of risk within the business environment. As a result, their reluctance to perceive a high level of risk within the business is natural until they have had the opportunity to assess the long-term implica tions of this change of their markets and competitiveness.

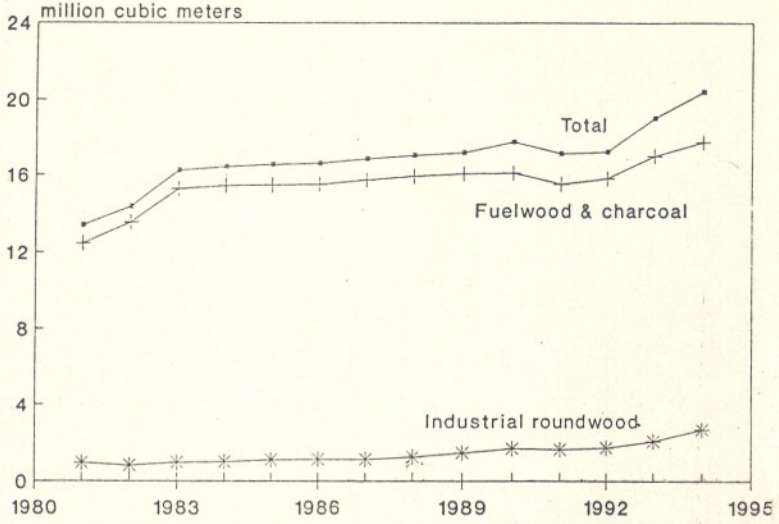

Figure 1. Ghanaian timber harvest, 1981-1994.

Source: FAO Yearbook and FPIB Export Reports, various.

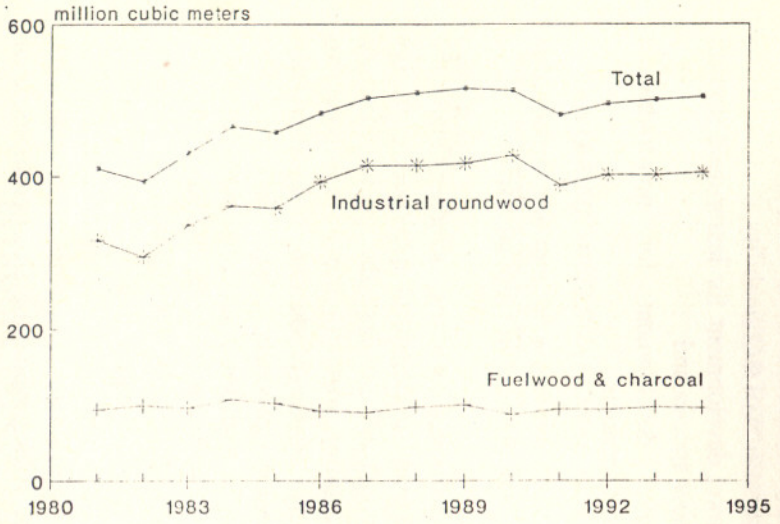

Figure 2. U.S. timber harvest, 1981-1994.

Source: FAO Forest Products Yearbook, 1995.

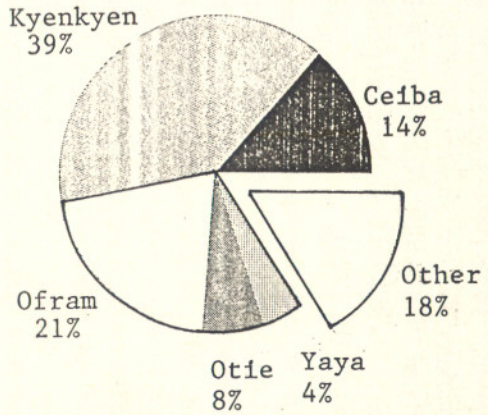

Figure 3. Ghanaian log exports by species, 1994.

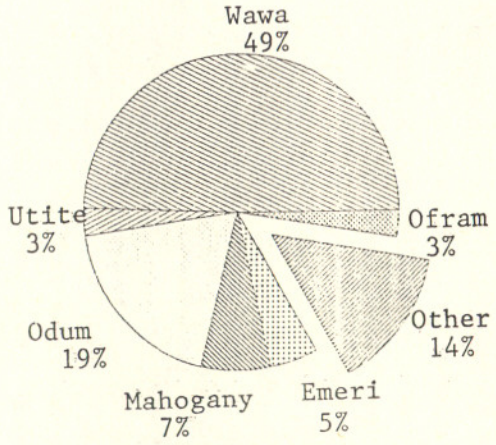

Figure 4. Ghanaian lumber exports by species, 1994.

Source: 1995 Forest Products Inspection Bureau Report.

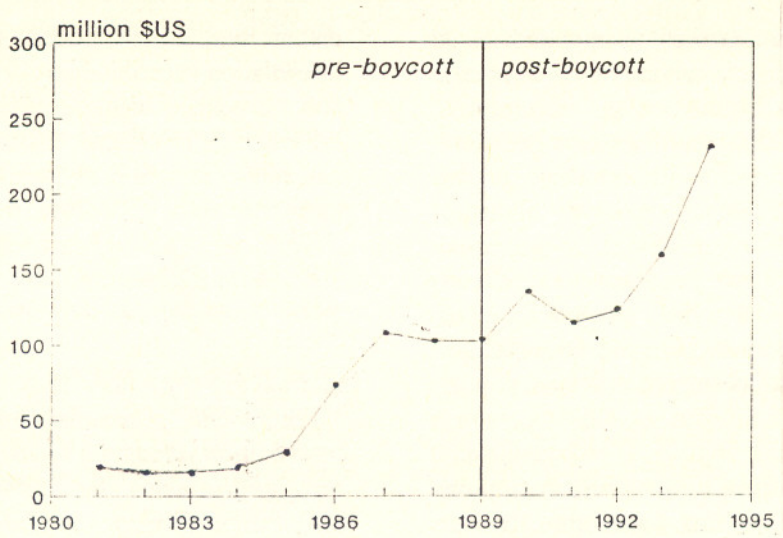

Figure 5. Ghanaian forest products exports, 1981-1994.

Source: FPIB Export Reports, various years.

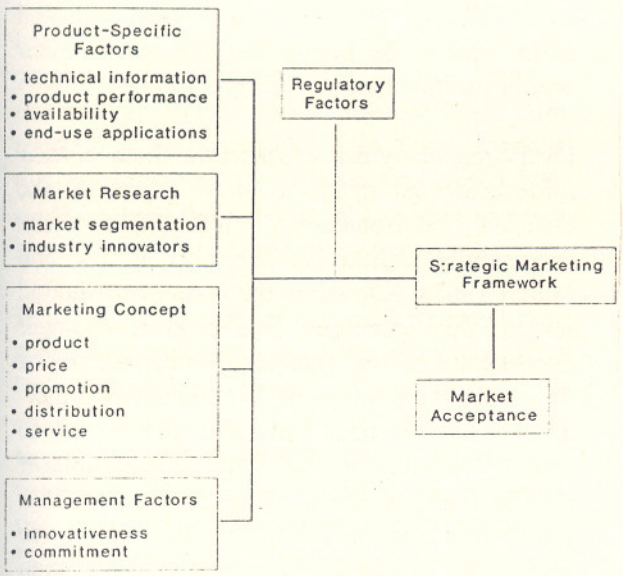

Figure 6. Conceptual model for marketing lesser-used tropical species

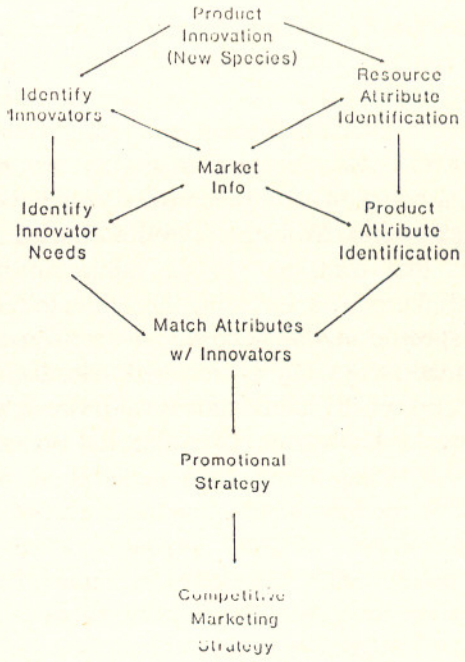

Figure 7. Theoretical marketing framework for introducing lesser-used tropical timber species.

Acquiring accurate market information is a crucial component of strategy development during this period of transition and uncertainty. The acquisition of current market information plays a key role in informing managers of the impacts of new developments in the industry and contributes toward reducing the perceived level of risk within the business environment. The acceptance of the philosophy of sustainability as the new competitive paradigm will increase as the perceived level of risk is reduced.

One of the major reasons why firms in tropical regions focus on exporting commodities rather than value-added products is their lack of market information. This lack of market information regarding the wants and needs of consumers in geographically distant markets makes it difficult for tropical producers to develop and manufacture new products. Cooper (1979) found that the failure of a new industrial product in the market place could be attributed largely to inadequate market analysis prior to the introduction of rubberwood lumber in southeast Asia. Webster (1969) identified six factors that contribute to the failure of new industrial products, including the failure to focus on a specific market segment, underestimating the marketing effort required, inadequate knowledge of the industrial buying process, and inadequate knowledge of influential industry members. Other research in the area of new industrial product introduction indicates that the primary cause of new product failure is inadequate market knowledge and misdirected marketing strategies (Cooper 1979; Davis 1988; Lawless and Fischer 1990).

Timely access to market information strongly affects the ability of a manager to respond effectively to changes in the business environment (Robinson and Piece 1984; Dilts and Prough 1989; Covin and Slevin 1989;). This factor is of critical importance for managers operating in developing countries whose primary markets are geographically distant and whose access to current market information is problematic. The ability to obtain and process accurate and timely market information is critical during the development and implementation of business strategies. The lack of this type of market information contributes to an increased level of uncertainty and risk in the business environment (Galbraith 1973; Anderson and Paine 1975).

Aldrich (1979), in his book "Organizations and Environments", asserts that "*variation in information about the environment, as filtered through members perceptions, is the major factor explaining organizational change*". The process of information gathering provides a manager with a method of reducing uncertainty in the business environment (Meyer et, al. 1990). Although information gathering is regarded as an important step in identifying and defining problems within the business environments, managers of export oriented firms tend to be highly unsystematic in their search for information (Keegan 1974).

Over time, many firms restrict the focus of their information gathering to those areas of the business environment that have been successfully utilized in the past (Cyert and March 1963). Known as the concept of limited search, this technique results in a manager overlooking critical changes in other sectors of the business environment. While exploring the relationship between firm size and access to market information, Darling and Postnikoff (1985) found that the strategic options of a small firm may be limited by their ability to gather and process environmental information due to primarily limited financial resources.

During my conversations with the managers of forest products firms in Ghana, they indicated their frustration in acquiring accurate information regarding export markets. This lack of market information was identified as the most important factor affecting their ability to gain an accurate understanding of export markets and restricted their ability to develop and implement

effective marketing strategies. The ability of Ghanaian managers to acquire market information is restricted by three factors:- the poorly developed and unreliable communication infrastructure in Ghana, the reluctance of export agents in Europe to share market information for fear of being bypassed along the distribution channel, and the relatively high expenses associated with performing international market research at the individual firm level. These interviews substantiate the fact that managers in Ghana are intensely aware of the positive impact of accurate market information on the strategic decision-making process, but given the small size of many firms in the industry, acquiring market information is extremely difficult and, as a result, the level of uncertainty in the decision-making process is increased.

In addressing the need of managers in Ghana for accurate and timely market information, it appears there are three options available. The first option involves each firm individually developing its ability to acquire market information. This could involve the firm conducting market research in those markets that are important to it. In contrast, each firm could contract the services of a market research organization to acquire this information.

However, both of these options are time consuming, expensive and often perceived to be beyond the financial means of smaller firms. A second option relies on an external organization to acquire market information for a group of firms or the entire industry. In the case of Ghana this could involve the Timber Export Development Board working cooperatively with member firms to perform in-depth market research on those markets and issues that are of particular importance. Finally, individual firms can work cooperatively with import agents in Europe to develop cooperative relationships that facilitate the flow of information from the market place. While this is an efficient and inexpensive method of acquiring market information, it requires that producers work with importers to assure that shared information not be used to bypass the importer and sell directly to the European customer.

2. Certification of sustainability

More and more, sustainability is becoming an important factor employed by consumers in reaching a purchase decision for wood products. The largest home centre chains in both the US and the UK (Home Depot and B&Q) now require that their suppliers of timber products demonstrate the sustainability of their products (Burbidge 1993; Knight 1993). Although a number of studies indicate that consumers are currently influenced more by price and quality than by environmental considerations, it is clear that this relationship is changing. For example, a recent survey of furniture customers in the U.K. found that 83% of respondents felt that retailers should not purchase products manufactured from non-sustainably harvested timber (Knight 1993). In addition, educational programs developed by environmental and academic organizations are teaching children about the value of preserving and protecting forests and will strongly affect their purchase decisions in the future.

Although the entire process of certification is still relatively new, several groups are currently offering services in this area. The certification process is based on establishing an audit system to ensure products marketed as sustainable can be traced to ensure their origination from sustainably managed sources. The first stage consists of certification of a forest or concession area as being sustainably managed through a management audit. Forest management audits are requested, and paid for, by individual firms and are almost always performed at the individual forest land or concession level. Audits are performed by a specialized team of independent scientists and typically focus on three elements: timber resource sustainability, forest ecosystem maintenance, and the socio-economic benefits of the forest operation. The second stage of the certification involves the establishment of management systems to ensure

that products from certified forests can be tracked through the distribution channel. Finally, the third stage of certification involves the continuous monitoring of the certified forest area to ensure continued compliance with the guidelines of sustainability.

One of the major factors restricting the establishment of an international system of timber certification in the past has been the absence of an internationally recognized accrediting organization to ensure that different certification programs conform to a basic set of criteria. The establishment of the Forest Stewardship Council in 1993 as an independent organization to oversee and regulate the certification process appears to have solved the major problem regarding sustainable certification (de Haes 1993). Currently, a number of firms offer certification services, including the Rain Forest Alliance (US), the Blue Angel (Germany), Societé Général de Survillance (SGS) - Silviconsult (UK), and the Soil Association (UK).

Sustainable certification, for both temperate and tropical timber, appears to be an important

trend for the future of the forest products industry. However, given the costs associated with the certification process and sustainable forest management, it might not be appropriate for all firms to adopt. Recent reports estimate that the cost of certification range from US$.30 to US$.60 per hectare in developed countries. In addition, increased logging costs associated with sustainable forestry would add an additional US$40 to US$60 per cubic metre of timber harvested (Ghazali and Simula 1994). Obviously these costs would be higher in lesser developed countries.

Offsetting these higher production costs is the willingness of consumers in developed countries to pay higher prices for sustainably-sourced products. A recent study in the U.K. found that sixty-six percent of respondents were willing to pay higher prices, up to thirteen percent higher, for sustainable-sourced products. A similar survey in the U.S. reported sixty-eight percent of respondents were willing to pay up to fifteen percent more for sustainably-sourced products (Winterhalter and Cassens 1993; MORI and WWF 1991). It should be noted however, that there is a great distinction between actual purchase behaviour and professed purchase behaviour, particularly with respect to environmentally sensitive topics.

In assessing the end-use markets for forest products, it appears that markets for commodity construction materials will likely be less affected by certification than markets for value-added products (i.e. doors, windows and furniture) where consumer perceptions are much more important. As a result, not all firms will be affected equally by a requirement to certify their operations. For, example, smaller firms and firms located in developing countries will find it harder to justify the additional costs of certification than will larger firms operating in developed countries. It is important that managers of timber firms understand that they have other options to certifying their operations. For example, a manager can opt to source raw materials from certified firms, de-emphasize their trade relationships in environmentally sensitive markets or simply ignore the situation.

3. Developing markets for lesser-used tropical species

Despite the fact that tropical timber species number in the thousands, the international timber trade has traditionally focused on a small proportion of timber species. For example, in Ghana the number of timber species that reach commercial size exceeds 400. Despite this, timber export statistics from Ghana indicate that only 45 species have been exported at least once over the past twenty years and less than ten species represent over 90% of current Ghanaian timber exports (FPIB, 1995).

The focus by the international timber trade on a few species has significant implications for

forest management in tropical regions. Tropical timber species, particularly in West Africa, rarely occur in pure stands. Rather, these species tend to be dispersed throughout the forest in low stocking levels. The focus of the industry on the established timber species, in combination with low stocking levels, means that harvest operations unnecessarily impact large areas of forest. This practice has contributed to non-sustainable forest practices through the establishment of an extensive network of logging roads, high levels of harvest damage to the remaining trees, depletion of the genetic stock of established timber species, early re-entry into forest blocks, and discouragement of sustainable forest management practices.

One approach for reducing tropical deforestation is alleviating pressure on the forest resource by developing markets for lesser-used tropical species (LUS). This strategy implies that tropical forests can be sustainably managed by adopting a more intensive management regime that fully utilizes the timber species located within a specific harvest block, thus reducing pressure on other harvest blocks. Despite the market potential of many LUS, to date there has been little success in developing commercial markets for timber obtained from these species.

While LUS have the potential to substitute for traditional species in some markets, it is important to note that forest products manufacturers are inherently conservative and reluctant to accept substitutes for traditional species. This reluctance focuses on three concerns: reliability of supply of the new species, the performance of the new species in the manufacturing process, and concerns regarding the in-service performance of new species. Research in the area of new species introduction indicates that raw material preferences within the international timber trade are slow to change (Smith andEastin 1990).

The challenge in marketing LUS focuses on describing a conceptual model of the introduction process and providing a framework to assist in the development of marketing strategies to introduce LUS successfully as new industrial materials (Figures 6 and 7). Exploratory research in Ghana indicates that the decision to evaluate a new timber species is related to the availability of technical information, knowledge of the appropriate end-use applications of a new species, raw material processing attributes, resource availability, and promotional incentives that reduce the risk associated with the trial use of a new species (Eastin 1995). However, the development of an effective marketing strategy requires a thorough understanding of the interrelationships between the factors that influence end-user acceptance of new species in industrial markets.

4. Developing markets for non-traditional forest products

Another way to more fully utilize the tropical forest resource, and an important component of sustainability, is the development of markets for non-traditional forest products (NTFPs). NTFPs are typically used by indigenous groups and developing international markets for them can provide substantial economic benefits. NTFPs can generate income and employment opportunities on forest lands protected from timber harvest (i.e. watersheds) or those that are uneconomic to harvest (i.e. steep slopes). For example, recent research in Brazil indicates that the economic returns generated from the sale of NTFP's on some sites can exceed the returns obtained from converting forestland into pasture land or for agricultural end-uses (Peters et al. 1989).

A number of private organizations have been established with the goal of assisting indigenous peoples develop markets for NTFP's as a strategy for protecting the forest. However, given the unique characteristics of this type of activity, the marketing of NTFP's is confronted with its own set of unique problems. Pendleton (1992) identifies a series of eight factors which

must be present in order for a NTFP activity to be successful: 1) there must be an economically viable volume of products available in an area to be harvested, 2) there must be markets (current or potential) for the products 3) NTFP activities must be economically viable in both the short-term and long-term, 4) the economic value of NTFP's must equal or exceed other types of forest utilization, 5) the NTFP's must be accessible for harvest, 6) the NTFP's must be readily available, 7) there should be a long-term supply of these resources, and 8) harvest operations must be sustainable.

The primary challenge in marketing NTFPs is identifying and developing markets suited to the unique characteristics of these small-scale industries. In most cases, the volume of products harvested is limited and well below the volumes required by even small firms in developed countries. A second challenge relates to the acquisition of market information for these products. As a result, the marketing challenges in this area are imposing but certainly worth the effort.

Several non-profit organizations (i.e. Cultural Survival Enterprises, Conservation International) have undertaken projects with local community groups that successfully developed profitable market niches for NTFPs in developed countries.

While most forest products firms might not be interested in the marketing of NTFPs, it is important to note that the opportunity exists to work with indigenous groups to develop markets for these products. Occasionally an opportunity may arise where selective logging and the harvest of NTFPs may be mutually supportive. Timber firms need to be sensitive to the possibility of these collaborations and be willing to take a chance in this area. Not only will it assist them in developing a sustainable forest management plan, but it can provide tremendous opportunities to develop positive public relations in their primary markets of Europe and the United States. Managers should not underestimate the amount of public goodwill that can be generated from this type of collaborative relationship.

CONCLUSIONS

Activities by a broad range of non-governmental organisations, including environmentalists and academics, have created a heightened sense of urgency regarding the fate of tropical rain forests. In response, consumers have expressed concern regarding the purchase of products manufactured from tropical timber. Recent surveys in the U.K. and the United States demonstrate this concern on the part of consumers. However, these same surveys hold forth a glimmer of hope. Consumers appear to be willing to pay higher prices for products manufactured from sustainably managed timber, although it should be emphasised that willingness to pay and purchase behaviour are not the same.

As a result of these developments, there has been tremendous pressure to achieve sustainability within the timber industry by the year 2000. While achieving sustainability may not be appropriate (or even necessary) for all firms, most will find in their best interest to move in this direction. Achieving sustainability represents an opportunity to increase market share in some niche markets as well as increasing profitability. However, taking advantage of this requires that managers increase their use of marketing tools in order to become more market-oriented and identify the most profitable, and appropriate, in the markets.

This paper described four marketing strategies that can be used by managers in tropical Africa to promote sustainability in their operations in a profitable way. The strategies described included: gaining increased access to market information, gaining sustainable certification for their timber harvest operations, developing markets for lesser-used timber species, and developing markets for non-traditional forest products. By evaluating and adopting market-oriented strategies based on consumers and environmentalists concern for the forest

resource, managers can help to promote the sustainable utilization of tropical forests.

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