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# ECO-PALMS

## A Case Study of the Development of Specialized Markets for Certified Nontimber Forest Products

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The community of Uaxactun, within the Mayan lowlands of Guatemala, is set in an emerald-green rainforest about 40 kilometers north of the famed Tikal National Park, home of awe-inspiring archeological remains. Uaxactun itself has important archeological resources, but is much less frequently visited by international tourists than Tikal. Throughout most of the twentieth century, the community offered the women who lived there few if any opportunities to earn cash incomes.

Over the past decade, however, the women and men of Uaxactun and similar communities have begun to harvest xate palm fronds sustainably from the rainforest for export to Continental Floral Greens, a wholesaler and distribution company based in San Antonio, Texas. The company distributes the fronds to a rapidly growing network of churches throughout the United States and Canada that pay a premium for the eco-palms. Churchgoers use them to commemorate Jesus' triumphant entrance into Jerusalem, an event celebrated each Palm Sunday by Christian congregations (Episcopal News Service 2008).

Floridalma Ax, a member of the Conservation and Management Organization that manages the Uaxactun community's forest concession in the Maya Biosphere Reserve, reports that the opportunity to harvest palm fronds sustainably means better living standards for local families. According to Ax, women who until recently had no cash income now earn between $6 and $7 per day culling the fronds.[1] By using sustainable harvesting methods—as opposed to more indiscriminate, traditional approaches—the women help protect the globally significant rainforest in which they live. "'For us, it's an achievement, it is progress,' says Ax" (Rainforest Alliance 1996). How she and her neighbors became pioneers in the sustainable harvest of nontimber forest products is the focus of this chapter.

[1] Unless otherwise noted, amounts indicated with a dollar sign ($) refer to United States dollars.

The *Chamaedorea* is a large family of palms. As shown in figure 7.1, these palms most frequently grow in the tropical rainforest understories in northern Guatemala, southern Mexico, and Belize (CEC 2002). The palms, which include a wide variety of subspecies, became known as "parlor palms" in the Victorian era due to their widespread

*Local man harvesting xate palm stems*

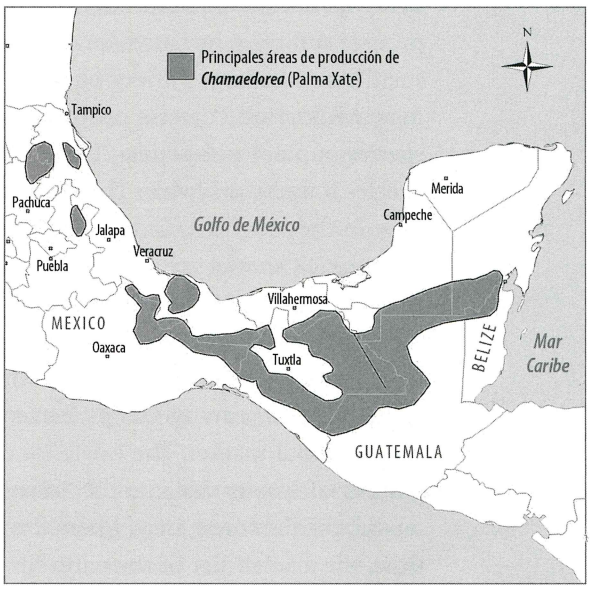
*Local woman sorting recently harvested xate stems*


*Christian congregation in the United States celebrating Palm Sunday*

use in home and office decor (Wikipedia 2008b). At present, significant demand exists for cut palms for use in interior decorating, floral arrangements, and at weddings and funerals, particularly in the United States and Europe. The veins and leaves (i.e., the fronds) of the distinctively shaped species *Chamaedorea elegans* and *Chamaedorea oblongata*, which sometimes collectively are given the common name xate palms, are also often used in the United States for Palm Sunday observances.

FIGURE 7.1 **PRINCIPAL AREAS OF ECO-PALM PRODUCTION**

*Source: Current (2009).*




Importing palms from Central America to international markets is a well-established business. The United States market alone accounts for the annual importation of approximately 300 million palm fronds, which are valued between $30 million to $45 million. According to Dean Current, a research associate at the University of Minnesota's Center for Integrated Natural Resources and Agricultural Management (CINRAM), rough estimates from surveys of churches that are potential eco-palm customers suggest that Palm Sunday observances may account for about 10 percent of this total (Current personal communication 2007).

In the late 1990s, issues related to palm harvesting came to the attention of the Commission for Environmental Cooperation (CEC), an international organization comprised of Canada, Mexico, and the United States, which came into being in conjunction with the completion of North American Free Trade Agreement (NAFTA) negotiations. Given the CEC's responsibility "to address regional environmental concerns, help prevent potential trade and environmental conflicts, and to promote the effective enforcement of environmental law" (CEC 2009), the organization took an interest in promoting sustainable management of Mexican forests and improving the social welfare of Mexican farmers who collected the fronds through a trade-related project. The CEC contacted Dean Current in 2001. Along with colleagues in Mexico, he was commissioned to study how palms are harvested and sold and to recommend how associated environmental and social welfare issues might be addressed.

The executive summary of the CEC's September 2002 report, based on the research conducted by Current and his colleagues, is excerpted below.

> The goal of the CEC's work on the *Chamaedorea* palm, a wild species endemic to Mexico and selected by the CEC's Governing Council as a pilot species, is to study the possibility of using the market to protect the species. The basic

question is, under what conditions, if any, would trading of a wild species be sustainable? This report, the first for this project, documents palm collection and cultivation in Mexico, and its market structure within and outside Mexico. This information is used to assess whether eco-labeling palm [*sic*] would provide sufficient incentive for sustainable trade in the species. . . .

There is a large variety of palm species endemic to Mexico, one of the most biologically diverse countries in the world. The country is home to 95 species of palm grouped in 22 genera, which represent 18 percent of the palm species found worldwide. There are more than 130 species of palm that grow only in the Americas, and the majority—50 species—are *Chamaedorea* palms. Of these, 14 species are native to Mexico, making Mexico the leader in number and endemism of *Chamaedorea* varieties.

Trade in the 21 commercial species began long ago, but massive exportation—mainly to the United States with some re-exported to other countries—started just 50 years ago. The *Chamaedorea* palm family has a well-established international market. The existence of this market, which can be expected to remain fairly constant into the future, appears to be contributing to the maintenance of the forest areas where the palm products are gathered. At the same time, the availability of the palm for harvesting from the wild and its market price have maintained production primarily in natural forest areas, with some recent movement towards cultivation in tree or forest shade. There have also been reports of reductions in wild populations due to over harvesting and, primarily, habitat destruction.

Seed and leaf gathering are carried out by farmers, most of them indigenous, who grow corn and sometimes earn a large share of their income from palm. They live in towns located in the mountains of Tamaulipas, San Luis Potosí, Hidalgo, Veracruz, Oaxaca, Tabasco, Campeche and Chiapas. Some of these states have important remaining forest areas and the most marginalized populations. This creates an interesting combination of biological and cultural diversity, although it carries with it the common problems found in rural areas. In some areas, income from palm has encouraged local residents to maintain the forests that shade the palms, but it also has led to overharvesting.

Marketing channels in Mexico, from regional buyer to exporter, are concentrated, there being only one or two of each. . . . This makes it hard for individual farmers to negotiate prices. They generally receive only US$1 to US$1.20 for 144 leaves (a gross). In the United States, the same price purchases just a dozen. These low prices, the time palms take to regenerate, the difficulty involved in leaf cutting, and the availability of other sources of income make harvesting of the *Chamaedorea* palm a sporadic activity. Yet, at times, such as this period of coffee-price crisis, farmers must cut a larger number of leaves to survive, irrespective of the regeneration process of wild populations. Overexploitation of commercial species and a dramatic reduction in rain forest areas over the last decades has affected many of the *Chamaedorea*

species, especially those with restricted distributions or sold as seeds. Thirty-eight of the species of this genus are currently under official Mexican protection (NOM-059-ECOL-94).

In response, producers have begun to cultivate some of the most popular species, such as *C. elegans*, both in the primary and secondary rain forests, as well as in coffee plantations and in other shade systems. The initiatives are many and diversified, but have been impeded by low palm prices. Some of these projects have emphasized diversification of sources of income, but too many could lead to market saturation and additional downward pressure on prices.

To maintain and enhance the role of the palm as an important income-generating crop, and to maintain its function in protecting natural forest areas, certification may be an option. By tying certification to production in natural forest areas, as well as offering market premiums for forest gathered sustainable production, both environmental and economic conditions may improve in the natural areas and communities where the palm grows and is harvested by local residents.

The *Chamaedorea* palm could be a candidate for certification efforts if the cost of certification is reasonable or can be covered by a premium paid for certified products. To do that requires identifying potential markets for the certified product or, perhaps more importantly, focusing attention on its quality. More information is needed on the specific market sectors that might demand certified production, and the costs and potential premiums available through certification. Attention must be paid to certification costs, since these have often been borne by producers, with no premiums paid in the marketplace.

There may be opportunities for marketing certified palm products in the United States and Europe. In the United States, the principal markets may be niche markets, since the floral industry has not pursued certified production. In Europe, there appears to be a growing market for certified products in the floral industry. Certification could be channeled through the existing certification efforts in Europe, while specific niche markets are approached and explored in North America.

To succeed in using the market to protect this wild species, further exploration of specific markets for certified palm is needed, as well as identification of palm-producing areas/communities that meet the basic tenure and production/distribution requirements for certification. More information is also needed on the sustainable management of *Chamaedorea* species, and on how it relates to conservation of the forests that provide the palms with shade. (CEC 2002)

With the initial report showing promise, the CEC helped sponsor further research between 2002 and 2004 to address the issues meriting "further exploration." Current and Dave Wilsey, a graduate student who went on to serve as a Peace Corps volunteer in Ecuador, worked with several organizational partners in the trio of NAFTA nations, as well as adjacent Latin American countries, to put together a system for the marketing of

what the CEC began calling eco-palms. Their ongoing research focused on topics including demand and marketing, sustainable harvesting and certification, fair trade certification, and supply chain. Throughout the history of the Eco-Palm Project, each of these topics has remained critical.

## DEMAND AND MARKETING

Current and Wilsey began their investigations into potential markets for sustainably harvested palms by conducting personal interviews with local floral wholesalers and retailers in Minnesota. They wanted to know if these merchants were aware of fair trade and sustainable production options and to get an idea of demand for *Chamaedorea* palms in the United States. They were also interested in the quality requirements of palm distributors and retailers.

After discovering that more than 10 percent of the palms imported and sold annually were used on Palm Sunday, Current and his associates at CINRAM surveyed more than three hundred congregations (Current personal communication 2007). They were surprised to discover that the churches seemed quite concerned about environmental and social issues and that most were willing to pay up to twice as much for palms that were certified as being grown, produced, and distributed in an environmentally sustainable fashion.

Current's team also learned that, in addition to an average of about 35 million palms imported to the United States each year for Palm Sunday, palms were also imported throughout the year for use in funeral and wedding floral arrangements. Although churches did not necessarily order these palms per se, the demand for them was influenced by choices made for ceremonies often held in churches or ceremonies at which clergy officiated.

By 2004, the team had decided that a good first step in marketing eco-palms would be to focus on the palm market for Palm Sunday at various churches in Minnesota and nearby states. At this early stage, the team had already engaged Lutheran World Relief (LWR), a Baltimore-based social action organization associated with the Lutheran Church that has a particular interest in fair trade and environmental sustainability programs. By June 2004, a working group had targeted Palm Sunday 2005 for initial marketing efforts. The Lutheran Coalition for Public Policy in Minnesota (LCPPM), based in the Minneapolis-St. Paul area, was instrumental in disseminating information about the project to the region's congregations.

That first year, some 20 churches in Minnesota, Wisconsin, and North Dakota ordered 5,000 *Chamaedorea* fronds from the University of Minnesota Eco-Palm Project. Current and others at the University of Minnesota hand-delivered the fronds to the churches. Immediately, they realized that, in future years, they could not invest the time and energy involved in this sort of transport, particularly if the market was to expand. At between 22¢ and 25¢ per stem, preshipping retail sales for the project in 2005 amounted to only about $1,100 to $1,250.

In 2006, the number of churches using eco-palms on Palm Sunday grew an impressive 14 times, to 281 churches in 34 states. They purchased about 80,000 fronds, which varied in size, depending on species, from 12 to 14 to 24 to 26 inches and again sold

for between 22¢ and 25¢ each. At this price, 5¢ per frond was returned to the local communities that had harvested the palms, compared to the 1¢ to 2¢ that had gone back prior to the Eco-Palm Project. CINRAM worked with a local distributor in Minnesota and FedEx to distribute the fronds to the churches. Revenues are estimated to have grown to between $17,600 and $20,000, before shipping, in the project's second year.

TABLE 7.1 **GROWTH IN THE SALE OF ECO-PALMS, 2005–2009**
*Source: Current (2009).*

| Year | # Churches | # Fronds sold | # States |
|---|---|---|---|
| 2005 | 20 | 5,000 | 3 |
| 2006 | 281 | 80,000 | 34 |
| 2007 | 1,436 | 364,000 | 49 |
| 2008 | 2,123 | 582,900 | 49 |
| 2009 | 2,500 | 650,000 | 49 |

The demand for eco-palms grew briskly again in 2007, with 1,436 churches from 49 states (all but Hawaii) purchasing 364,000 fronds. A few palms were also shipped to nondomestic markets, in such places as Canada and Okinawa, Japan. Current estimates suggest that 2007 orders represent only about 1 percent of the total palm demand for Palm Sunday in the United States. The increased involvement and support of Lutherans and Presbyterians played a major role in the increase in sales, with 50 percent of the orders coming from Lutherans and 25 percent from Presbyterians. With prices still between 22¢ and 25¢ per stem, project revenues are estimated to have increased to between $80,000 and $91,000 before shipping.

Demand grew once again in 2008, with Lutherans and Presbyterians still accounting for about two-thirds of the total demand (Current and Jones-Loss 2008). For Palm Sunday 2009, sales grew to an impressive 650,000 stems at an average price of about 25¢ per stem, for total sales of between $150,000 and $165,000 (table 7.1). By 2009, under an agreement with Hermes Floral—a St. Paul, Minnesota, company that handled the project's Internet sales and distribution—some $32,000, or about 20 percent of total revenues (that is, 5¢ per frond, representing 20 percent of the 25¢ price per frond) was returned to the Central American communities that harvested the fronds. In addition to the 2¢ per frond paid to the Central American communities at the time that the fronds were harvested, a total of about 7¢ of revenue per frond was realized, well above the 2¢ paid prior to the establishment of the eco-palm initiative (Current personal communication 2009).

As of April 2009, plans were under way for the 2010 eco-palm marketing effort. Current reports that if one million eco-palms are sold, that will still represent only 3 to 4 percent of the Palm Sunday market, and well less than 1 percent of the total market for decorative palms in the United States (Current personal communication 2009). These calculations exclude demand for decorative palms in Europe and other continents.

Note that these markets are supplied by sources not only in Mexico and Guatemala. Alternate supplies for such palm fronds are also available from sources in the United States, Costa Rica, and other tropical locations in the Americas. Other species, such as leatherleaf and tree ferns, can also serve as substitutes for decorative palms (CEC 2002, 24).

Certainly a great deal of work is ongoing to spread the word about eco-palms in the United States, both through word of mouth and more formal media. To date, Lutherans, Presbyterians, Methodists, and Roman Catholics have done a large portion of the work, in part through the collaboration of Lutheran World Relief (LWR), the Presbyterian Church of the USA (PC-USA), the United Methodist Committee on Relief (UMCOR), and the Catholic Relief Service (CRS). According to Current, these organizations have been great "links" in recruiting new customers.

The project continues to be featured in significant online and print media, including the *Chicago Tribune*, *Time Magazine*, *New York Times*, *USA Today*, and *Minneapolis Star-Tribune*. Minnesota and Wisconsin public radio stations have also broadcast feature stories on the project.

## SUSTAINABLE HARVESTING AND SMARTWOOD CERTIFICATION

One of the two key objectives of the Eco-Palm Project is to help protect forests. Those in Mexico and Guatemala where *C. elegans* and *C. oblongata* palms grow are threatened both by agricultural deforestation and, in those that are not destroyed, by overharvesting of timber and nontimber forest products.

One of the initial methods employed to protect the forest was to give them semiformal protected status by including them as part of "biosphere reserves," which were created "to promote and demonstrate a balanced relationship between humans and the biosphere" (Wikipedia 2008a). In many cases, however, establishment of reserve status conferred by national governments and international organizations unfortunately is not in itself an effective protection strategy. Indigenous people seeking to improve their lives may simply ignore such designations and clear the land for agriculture, which eliminates habitat critical to the forest's rich diversity.

For example, several areas in Chiapas State in southern Mexico are designated as biosphere reserves. Chiapas, where a majority of the *Chamaedorea* palms are harvested, is also home to 8,000 species of vascular plants, which are especially well adapted for holding water, and 19 separate types of vegetation environments, including deciduous forests, cloud forests, tropical rainforests, and coastal mangrove swamps. The same forests provide breeding habitat for many migratory and nonmigratory bird species, including the beautiful wild green-eared parrot (Lutheran World Relief 2006). A recent survey indicates that this region is losing more than 50,000 hectares of wildlife habitat per year to deforestation (Alliance of Religions and Conservation 2006).

Even if the forests are not cleared, traditional methods of harvesting the xate palms, which grow near the forest floor, present considerable risks to the rich biodiversity of the forests that shade them. In the traditional market chain, indigenous people do the arduous task of trekking into the forests to pick and collect the palms, and they are paid

to pick as many palms as possible. Since the harvesters are paid based on quantity and not quality, aggressive xate palm harvesting can quickly strip a forest floor of plants that, by providing nutrients and microhabitat for various organisms, are themselves integral to healthy ecosystem function.

A key idea behind the Eco-Palm Project is to provide incentives for local people to sustainably harvest forest products, including timber from trees and nontimber forest products such as xate palms. The hope is that the local people will recognize that their livelihoods depend on standing, healthy forests, and will therefore work to protect them. According to Current, incentives for sustainably harvested xate palms can be combined on the same piece of land with incentives for sustainable timber harvesting through the sale of government concessions (e.g., long-term leases) to communities or cooperatives of a specified area of forestland.

In exchange for the right to harvest timber from the forestland, the cooperative must agree to follow forestry practices that are in accord with Forest Stewardship Council (FSC) practices as certified by the Rainforest Alliance's SmartWood Program. Auditable FSC standards for sustainable timber harvesting are already well developed and have been in use in Central America for more than a decade.

Incentives for the sustainable harvesting of xate palms in such forests are provided by paying the cooperatives holding forestland leases about 5¢ per sustainably harvested palm frond, as opposed to the 1¢ to 2¢ they would receive for a conventionally harvested frond. Even though fewer palms are collected, the net revenues to the cooperatives (and, therefore, the harvesters) are reported to increase by several times.

Indigenous people can be trained to be selective in their harvesting of the stems, taking only those palms that are likely to make it to market in the United States. Those that are too small or have defects are left undisturbed. Training is provided by local nongovernmental or nonprofit organizations such as the Rainforest Alliance in Guatemala and Pronatura in Chiapas, Mexico. In January 2007, Jean Waagbo, LWR's deputy regional director for Latin America, traveled to Guatemala and Mexico with Dean Current, Melanie Hardison of PC-USA, and RaeLynn Jones-Loss, a research assistant at the University of Minnesota. A local harvester in Guatemala took them into the forests and showed them how he had learned to incorporate new sustainable techniques when picking the plants. The harvesters explained how to cut the palms in order for the plants to survive, and which ones to avoid cutting until later when they had grown larger. "It was apparent they were trained to harvest the palms more sustainably than they had when using previous methods," reports Waagbo (personal communication 2007).

"In some areas where the waste ratio reached as high as 50% before [using the new method], the discarded palms now account for only 5% to 7% of the harvested volume," said Brenda Meier of LWR, who visited palm-harvesting communities in Guatemala and Mexico in 2006 (Lutheran World Relief 2006).

SmartWood certification of communities for the harvesting of nontimber forest products is not as common as obtaining similar qualifications for timber harvesting, but at present several communities in Guatemala and Mexico are in the process of becoming SmartWood certified. The process itself is rigorous. Once a community

decides it wants to be certified, an auditor from the Rainforest Alliance visits and gives them a list of 32 specific qualifications they must meet. After they have a chance to work on these principles and techniques, the auditors are invited back to verify progress. The community cannot obtain certification until all 32 qualifications are met, however. Nontimber forest product certification requires development of long-term forest management strategies; establishment of monitoring systems to maintain security over forest areas; establishment of conservation zones to protect habitats and biodiversity in the forest; and other social, community, and cultural requirements (Current personal communication 2007).

## FAIR TRADE CERTIFICATION

A second key objective of the Eco-Palm Project is to improve the social welfare of the small farmers who harvest the palms. This is generally in line with fair trade certification programs that promote sustainable agriculture and development. TransFair USA and other members of Fairtrade Labelling Organizations International certify products, which can then use the FAIRTRADE mark if they are characterized by fair price, fair labor conditions, direct trade, transparent and democratic organizations, community development, and environmental sustainability (TransFair USA 2008). Eco-palms appear to qualify in many respects, but for the time being, project coordinators are simply stating that their products are "fairly traded," because the costs involved in the fair trade certification process are prohibitive. Dean Current noted that "we will, however, continue to work on this option, even if it doesn't presently make too much sense" (Current personal communication 2007).

Anecdotal evidence suggests that the premium price paid for the eco-palms is, in fact, being translated into social benefits for the communities that are harvesting the fronds. For example, in Carmelita, Guatemala, the local cooperative used their extra profits to sponsor seven student scholarships, provide stipends to elders who had harvested fronds in the past, and pay an elementary school teacher's salary (Waagbo personal communication 2007). Although encouraged to spend the money on social programs to benefit the whole community, the cooperative supplying the eco-palms can use the money in whatever way it chooses.

## SUPPLY CHAIN

Current described the traditional supply (or market) chain and elaborated on opportunities for value-added processing in that chain that might benefit local communities in a report prepared for Conservation International, under a grant from USAID (Current 2006).

In June 2009, he confirmed that, should the market for eco-palms continue to grow rapidly, the number of communities in Mexico and Guatemala that supply such palms would probably have to increase. At present, such new communities are not apt to have the refrigerated trucks and cold rooms necessary to process xate palms prior to their shipment to the warehouses of importers in larger commercial centers in the United States. Current faced several challenges, including how to continue to increase demand for eco-palms; how to organizationally, logistically, and financially handle

increased demand; and how to finance the expansion of the eco-palm supply chain throughout Central America. He was cognizant of the fact that as the eco-palm business expanded, the challenges and headaches he faced when initiating the enterprise were being replaced by a new set that involved "getting to scale" (Current personal communication 2009).

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