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From Staple to Fashion Food: Shifting Cycles and Shifting Opportunities in the Development of the Acai Palm Fruit Economy in the Amazon Estuary

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Chapter 19

FROM STAPLE TO FASHION FOOD

SHIFTING CYCLES AND SHIFTING OPPORTUNITIES IN THE DEVELOPMENT OF THE AÇAÍ PALM FRUIT ECONOMY IN THE AMAZON ESTUARY

Eduardo S. Brondízio

There may be no better example of an economic prospect for overcoming underdevelopment in rural Amazonia than the case of the açaí palm fruit (*Euterpe oleracea* Mart.) production system. Emerging from the initiative of local producers to supply a growing demand for açaí fruit, using locally developed technology and knowledge with respect to forest management, açaí fruit production embodies the social and environmental principles that permeate the discourse of sustainable development for the Amazon region. At the same time, the formation of this production system poses important questions concerning the spread and duration of benefits resulting from booming tropical forest economies. To what extent are production and market opportunities diminished by a history of sociocultural prejudice, land tenure insecurity, and differential access to economic incentives, thus reproducing cycles of underdevelopment even under ideal market conditions?

The boom of açaí fruit consumption in the past three decades provides an example of the development and formation of a production system and the structure of its corresponding commodity chain as new participants appear, new product pathways and transformation industries emerge, and profitable opportunities change across different sectors of the economy. In this chapter, I refer to shifting cycles and shifting opportunities to discuss the shift in economic opportunities and returns in each development phase of a production system. Factors underlying access to economic opportunities are discussed at two levels. First, at a local level, economic returns of production reflect the land tenure condition of the producer, the level of access to appropriate crop areas, and level of

access to markets (defined, for instance, by the need for intermediaries or brokers). Second, at the level of the production system, factors underlying access to processing, stock control, and transformation industries determine the economic benefits experienced across different sectors and the socioeconomic outcomes for regional development. Access to emerging sectors as a complex economic system evolves is also defined in part by the hierarchy of social classes and the sociocultural identity of participants. These considerations raise the age-old question about the distribution of short- and long-term benefits from booming economies characteristic of tropical forests (e.g., rubber, gold, logging).

The interpretation of agrarian economies and forest crops in the Amazon requires attention to historical and sociocultural perspectives underlying their insertion into wider markets. These interactions are analyzed in this chapter from three related perspectives, taking into account the historical development of the different evolutionary phases of the açaí fruit production system, the factors defining the expansion of açaí production and the type and scale of consumer and market demand, and the sociocultural and political context that shapes the organization of labor and the structure of production, commercialization, and transformation of the product. In this context, this chapter examines the progressive growth of the açaí fruit economy in regional and, more recently, national and international markets as a venue to discuss sociocultural and economic factors underlying rural development in the Amazon estuary, where açaí production is concentrated.

The study of the formation of any production system requires a chronological, historical perspective that takes into account the interactions between its socioeconomic, technological, and ecological bases in relation to production and commercialization. Along with manioc flour, açaí fruit has continuously provided a caloric base for the rural diet throughout the historical periods of the region, from floodplain chiefdoms to missionary occupation to the period of social transformation marked by directorate policies all the way to the boom and bust of the rubber economy (Wallace 1853). In recent decades, açaí production continues to increase in order to meet the increasing staple food demand prompted by low-income urban population growth after 1970 and an increasing external demand prompted by the emergence of a national and international "fashion food" market that began in the early 1990s.

The expansion of the açaí fruit economy occurs as a combination of both endogenous and exogenous factors associated with the region as a whole and in association with its consumption basis. These include rural outmigration and urban expansion since the 1970s, the organiza-

tion and marketing strategies developed for the export of other Amazonian fruits in the 1980s, and the growth of the green product industry in the 1990s. The fad of açaí fruit consumption is driven by various claims relating to its healthful and invigorating qualities, rainforest conservation, respect for indigenous causes and products, and its representation as an icon of the sustainable development agenda proposing alternative forms of land use in the Amazon. Açaí fruit's secure position at the regional level as a staple food favorite and its national and international outlook have transformed açaí fruit into a symbol of cultural identity and regional pride for estuarine people in the states of Pará and Amapá, in particular.

The current açaí fruit production system has been shaped by the particular social and political structure resulting from the region's long history of extractivism and absentee land ownership (Brondízio and Siqueira 1997). Although the last thirty years of the açaí fruit economy have created a distinctive production structure that offers new opportunities to several segments of the population, including small-scale estuarine producers, this structure tends to reproduce historical inequalities that characterize the regional sociopolitical configuration, which is based on social hierarchy, sharecropping, dependency on intermediaries, unequal access to infrastructure, and differential economic return. In this context, as the market expands, new participants enter to take advantage of economic opportunities restricted to most regional producers.

As new participants enter the commodity chain, they tend to represent local producers in their condition of extractivists as insensitive to growing market opportunities. These representations further prevent local producers from taking advantage of new markets and economic incentives aimed at supporting new forms of regional development. Examples of entrepreneurial and development discourses emerging in the last few years of açaí expansion illustrate the sociocultural position of açaí producers in the regional economy. Whether they are portrayed as a "noble savage" or as the stereotypical extractivist *caboclo* in need of assistance from the economic and technological "helping hands" of entrepreneurial development, few acknowledge the success of local producers in developing, with no external assistance, an agroforestry technology that has resulted in the most important contemporary economic system of the Amazon estuary in the last thirty years. Indeed, the hands and technology of local riverine producers have made açaí a food source crucial to the region's urban areas (e.g., açaí is consumed twice as often as milk in the capital of Belém; Rogez 2000) and provided a supply that has allowed national and international expansion of a commodity that is

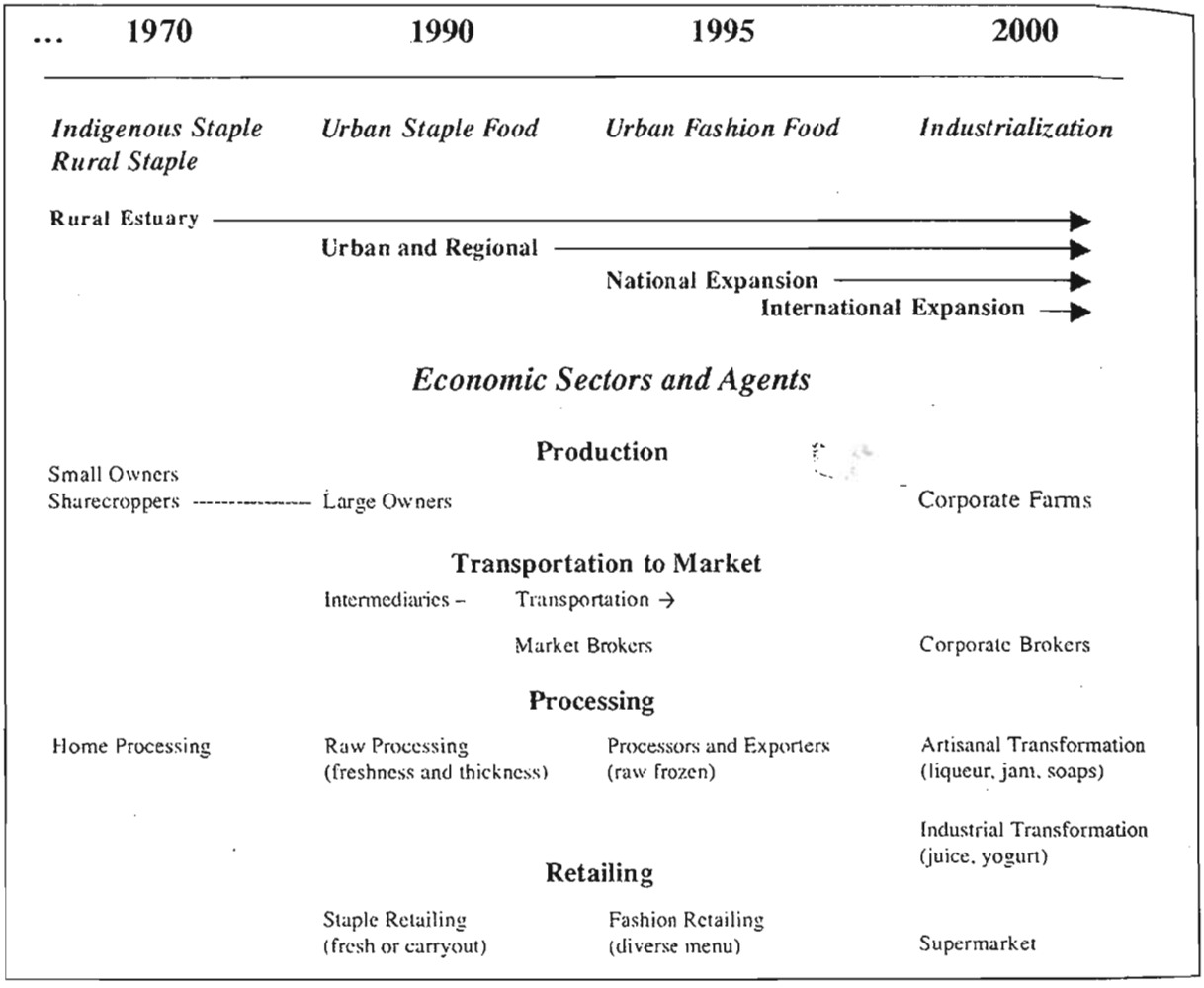

Figure 19.1 Development of economic sectors in the açai fruit economy.

seen by many as the key to achieving regional sustainable development. However, even the sustainable development discourse often reproduces cultural stereotypes that reinforce the region's vertical sociopolitical structure (Nugent 1993).

DEVELOPMENT OF PHASES OF THE AÇAÍ ECONOMY

For analytical purposes, the expansion of the açaí fruit economy can be divided into five main phases related to the progressive growth of its production, consumption, and position in the market (figure 19.1). In reality, these phases make up a continuum rather than separate stages. The indigenous staple phase represents the use of açaí resources by floodplain indigenous populations known to have occupied large areas of the estuary before European arrival and during the transition period after the

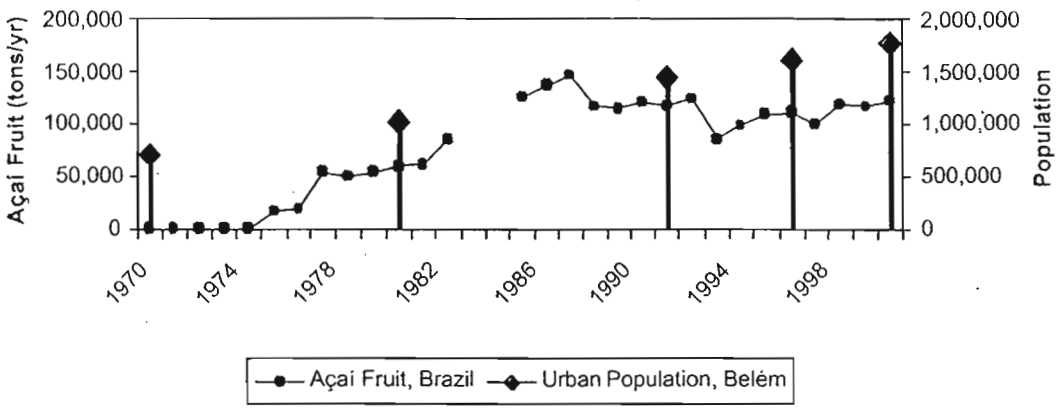

Figure 19.2 Açaí fruit production (1974–2000) and population growth in Belém and surrounding urban areas (1970–2000). Data were not available for 1983 and 1984. *Source:* IBGE (1974–2001).

second phase, the use of açaí as a rural staple food spans a long period starting in the seventeenth century, expanding during the directorate and rubber periods, and continuing today by riverine occupants living in isolated households and small communities and towns throughout the estuary (Murrieta 1994, Siqueira 1997). These populations actually constitute the production basis of açaí fruit both then and now. The urban staple food phase is characterized by a boom in consumption of açaí as a staple food in large regional urban centers, particularly following post-1970 population growth and coinciding with urban expansion of the region as a whole (figure 19.2). The urban fashion food phase began in the late 1990s along with the popularization of other Amazonian fruits in other regions of the country and, more recently, internationally. The energy value of açaí juice is an important health-based consideration for teenagers and adults in urban areas throughout the country and abroad. Finally, the industrialization phase is still emerging as açaí is becoming widely visible and is incorporated into existing products of popular consumption such as yogurts, concentrated juices, energetic beverages, and even beauty products such as shampoos and soaps. This phase can be subdivided into a regional artisanal industry and, more significantly (in economic terms), a multinational food production industry.

Açaí fruit consumption has two primary bases: a stable regional base and a flexible, growing external market, which is still developing and fluctuating as some areas experience bursts of consumption as a fashion food while others settle into consolidated markets. Pará state, for instance, with a production estimated between 300,000 and 500,000 tons of fruit per year, is believed to consume two-thirds of this production internally (IBGE

1990–2001, Rogez 2000).[1] Reports indicate that consumption of açaí juice in Belém grew from 90,000 liters/day in the late 1980s to an estimated 400,000 liters/day in the late 1990s; this figure implies an estimated consumption of more than 60 liters/person per year. Families with the lowest level of income consume most of this food, which is bought fresh twice a day as a main meal staple, not a dessert. Poulet (1998) estimates daily consumption for the city of Macapá between 27,000 and 34,000 liters of fresh açaí processed by about 500 açaí stands (*amassadeiras de açaí*).

For the state of Pará as a whole, consumption of açaí juice varies widely depending on the region (higher in the estuary, lower in colonization settlement areas) but presents an average of about 27 liters/person per year. It is interesting to note that consumption in colonization areas of the Amazon, particularly in the state of Pará, is also growing at a steady pace; at least in part, the acceptance of açaí in these areas also stems from the popularity açaí has achieved elsewhere in the country.

Nationally, estimates indicate that from 1992 to 1996, exports to Rio de Janeiro jumped from 2 tons/month to more than 180 tons/month, and the total amount exported to other states (São Paulo, Goiás, Minas Gerais, and Rio Grande do Sul) reached 300 tons per month in 1996. It is estimated that by the end of the 1990s, the state of Pará was exporting almost 10,000 tons per year. Although export to foreign countries is still modest (less than 100 tons/year), it is increasing steadily and is expected to exceed 1000 tons per year after 2002 (Rogez 2000, IBGE 2001, Brondízio et al. 2002).

In the 1990s, along with other Amazonian fruits, açaí juice started to become known outside the region; in the case of açaí, it became known particularly among the active, young urban population as a "miraculous" source of energy. Exported mainly in the form of frozen pulp packages, açaí fruit was served first as smoothies (*suco de açaí*) or in bowls (*açaí na tijela*) in food huts on popular beaches in Rio de Janeiro. Soon, the açaí juice fever spread to gyms, shopping centers, and to a wide range of *lanchonetes* (sandwich shops); specialized açaí fruit stores emerged throughout Brazil with menus presenting dozens of variations of açaí preparations.

Until very recently, most Brazilians had heard the word *açaí* only in popular songs such as those from Paraense singer Fafá de Belém or popular singer Djavan. The media have played a crucial role in the fruit's rapid popularization. In the past few years, reference to *açaí* as a synonym of *energy* can be heard in any youth circle, on soap operas (e.g., on TV Globo), and on popular TV shows such as TV Globo's *Caceta & Planeta*. In this show an avid gym-going character drinks açaí juice as his strategic source of physical power. In this way, as new forms of consumption were becoming accepted outside Amazonia (as in the form of smoothies),

a new cycle of the economy, a fashion food phase, was emerging with a new set of participants.

The recent expansion of açaí fruit juice, first to major national urban centers and later to Brazil as a whole, has been based on myriad new forms of consumption. Particularly, it involves the addition of guaraná syrup (a sweetener derived from *Paullinia enura*) that helps to cover açaí's peculiar taste for unfamiliar consumers. Other popular forms include smoothies with banana and other fruits and açaí–granola bowls. Interesting to note is that such forms of consumption are largely unacceptable in rural areas of the Amazon estuary. Actually, among riverine producers, there are food taboos related to the mixing of açaí juice and acidic fruits, which is said to provoke congestion strong enough to cause serious illness and, in some cases, even death. As frozen açaí reaches new markets, the process of thawing the pulp often leads to coagulation and acidification (souring), thereby making its flavor more difficult to accept. The addition of guaraná syrup and other fruits and the icy consistency of smoothies help to mitigate this problem. Besides, consumers of açaí juice in this form generally are unfamiliar with its fresh form. As a fashion food, açaí is known as a fruity blend and has nothing to do with the fresh, unsweetened pulp that is eaten with manioc flour to accompany beef, shrimp, fish, or even eggs during lunch or dinner among rural and urban Amazonian people (Strudwick and Sobel 1988, Murrieta 1994, Siqueira 1997).

The urban economic growth of açaí fruit has occurred in the context of other Amazonian fruits and their transformation industries. For instance, cupuaçu (*Theobroma grandiflora*), graviola (*Anona muricata*), and taperebá (*Spondias mombim*) were actually first in this progression, probably because of their flavors, which present a more palatable but still exotic flavor to non-Amazonians. Pioneers in this process were the Japanese communities in Tomé-Açu and Quatro-Bocas municipalities in the state of Pará. Emerging from the black pepper crisis in the 1960s, these producers started to emphasize agroforestry systems using tropical fruits, including non-Amazonian species such as acerola (*Malpighia grabla*). Of particular importance was the creation of a processing industry in the area, freezing methods, and a distribution network that opened the first pathways to popularize these fruits throughout Brazil, including representatives in São Paulo and other capitals. At the same time, other Amazonian cooperatives focused on exporting fruit pulp also emerged. The restaurant sector included several of these fruits on their menu. No less important was the informal introduction of açaí through the increasing number of Amazonians living elsewhere and, conversely, growing numbers of non-Amazonians living in this region.

Figure 19.3 Examples of transformed açai palm products.

More recently, the use of açaí fruit has been taken to a different level of industrial processing as its energy value and health qualities (e.g., thirty times the amount of anthocyanins found in red wine) have been promoted in advertisements. The yogurt industry was one of the first to jump in with a variety of flavor combinations. Similarly, pasteurized container versions of açaí juice sweetened with guaraná syrup and sport beverages were launched into the market. These industries are located mainly in southeastern and southern Brazil as part of dairy and fruit juice complexes. Today, these products are available in supermarkets throughout Brazil. Interestingly, most of them only slightly resemble the taste of açaí fruit as it is consumed in its place of origin (figure 19.3).

Açaí consumption still shows signs of a growing market. For instance, many stores in Rio and São Paulo that specialize in açaí products have stayed in business for more than five years. In the summer of 2002–2003, McDonald's included an açaí shake on their Brazilian menu. The state of Amapá has invested significantly in transformation industries of regional products, particularly new forms of Brazil nut products for export (oil, flour) but also açaí products such as soap, shampoo and conditioner, medicinal syrup, jams, and liqueurs. A new, international fashion food phase shows signs of emerging as commercialization of açaí juice has been reported in the United States (reports from California, Texas, Florida, and New York), Europe (England, France, and Scandinavian countries), and Australia. Although there is an enormous international potential, for instance in the ice cream and yogurt industries, this is a still a fledgling market. In fact, the ability of the industry to move from a fashion to an acquired consumption basis depends, at least in part, in adapting the taste and form of açaí fruit to culturally distinct markets. The incorporation of açaí fruit into industrial uses and transformation is

the assimilated consumption stage.

Recent examples of the expansion of açaí fruit internationally include feature articles in *Gourmet* magazine (July 2002) and the celebrity-centered magazine *InStyle* (April 2002), both in the United States. One of the key distributors of açaí pulp in the United States, Sambazon Inc., lists dozens of retail shops located throughout twelve states. As previously mentioned, the international industry has pursued a similar strategy that is working in Brazil, which is to focus on the health and energy claims of açaí and its conservation and indigenous culture linkages. Although often facing importation constraints regarding product safety, distributors have been able to grow by combining the health and green markets and focusing on the youth sectors, such as surfers, skaters, conservationists, and the health conscious.

A combination of a solid regional market (as a staple) and an emerging external market and transformation industries (as fashion) underlies an increasingly complex socioeconomic structure now in place.

INTENSIFICATION OF AÇAÍ AGROFORESTRY AND THE INVISIBILITY OF *CABOCLOS* AS AGRICULTURAL PRODUCERS

Historically, the açaí fruit production system has been considered to be a system of extraction, even in the wake of sixfold expansion of production from 1970 to 2000 (Brondízio and Siqueira 1997, Brondízio in press). To some extent, the extractivist label has not been dismissed but rather reinforced during the current boom of açaí fruit economy.

Explanations of land use intensification usually are based on conceptual models using parameters such as fallow cycle (Boserupian model) or variables based on factors of production, such as labor, energy, technology, and capital—the so-called input factors (Boserup 1965). Alternatively, output factors, such as the maintenance of productivity over time, often are used as a complementary measure of agropastoral intensification (for review see Brondízio and Siqueira 1997). However, these models are limited in their ability to explain agroforestry systems such as the açaí fruit case, where a clear distinction between the agricultural domain and the natural forest domain is not obvious.

Caboclo patterns of land use often are based on the coexistence of intensive and extensive activities that minimize risk while guaranteeing farm consolidation and expansion of market activities. Similarly, another element underlying our views of agricultural systems involves a subtle link between agronomic and aesthetic arrangements. Dominant views of

productive agricultural systems include elements of field homogeneity and shape and the types and composition of plant species and crop varieties. It also includes particular patterns of land allocation representing domesticated, technologically driven production and a farmer's ability to keep areas "clean." These characteristics, usually borrowed from temperate areas, generally defy even the most productive farm lots in riverine Amazonia, such as açaí fruit production areas. The rigid boundaries drawn between different food production systems usually place forested areas (as in the case of agroforestry systems) in the "fallow," "unproductive," or, at best, "agroextractive" category.

The term *caboclo* has stimulated great discussion because of the stigma attached to it and discrepancies between academic and regional uses of the term (Parker 1985, Lima 1992, Nugent 1993, Brondízio and Siqueira 1997, Pace 1998). The regional connotations of the term refer to a lower social class made up of a technologically and economically backward population doomed to an extractive economy; historically, this has defined in several ways the interpretation of riverine *caboclos* as açaí fruit producers by reinforcing their position as extractivists. *Caboclos* have been repeatedly disregarded for their social and economic contribution to the region, a process similar to what Nugent (1993) has called "manufactured invisibility," in which *caboclos* are viewed as exhibiting a condition of "social pathology" that impedes regional development. In the current context of açaí fruit economy, this view tends to characterize producers as passive and depending on outside help to foster intensification of production and economic development (Brondízio and Siqueira 1997).

INVISIBLE INTENSIFICATION IN THE AÇAÍ ECONOMY

Açaí agroforestry management has been the focus of numerous studies in the Amazon estuary (Calzavara 1972, Anderson et al. 1985, Jardim and Anderson 1987, Anderson 1988, 1990, Anderson and Jardim 1989, Anderson and Ioris 1992, Brondízio et al. 1993, 1994, Moran et al. 1994, Brondízio et al. 2002). Contrary to a system based on extractivism, management and planting of açaí takes specialized agricultural and forestry labor to maintain and increase stand crop productivity. Different management and planting strategies transform these areas into açaí agroforestry, locally called *açaizais*. The term encompasses different intensities of management; tree, sapling, and seedling population densities and structure; and a diverse range of species composition. Encompassing a large range of management stages, the term *açaízal* refers in this work to açaí agroforestry. The three main means of açaí agroforestry development are management

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Figure 19.4 Management and planting of açai agroforestry.

(*roçado de várzea*), and combined management and planting in native stands. In simple terms, management of açaí stands can be understood on two different levels: the forest stand level and the plant level. On the forest stand level, thinning and weeding techniques are used. On the plant level, management focuses on pruning techniques (figure 19.4).

Stand thinning and selection control the density of individuals of all species competing with açaí palm, in addition to the balance between açaí basal area and other species. Propagation consists of planting and dispersing seedlings and seeds of açaí while introducing other economic species to the stand. Finally, pruning controls the selection of productive clumps and stems. In the case of pure planted stands (i.e., *roçado de várzea*), there is a need to include intercropping techniques between annual and perennial crops. These techniques demand intensive care of the crop site, including weeding, pest control, and pruning of other crops. Despite the modification of species composition, the managed areas largely retain the structural characteristics of the floodplain forest (e.g., basal area and biomass), but with an overwhelming concentration of individuals of economic value.

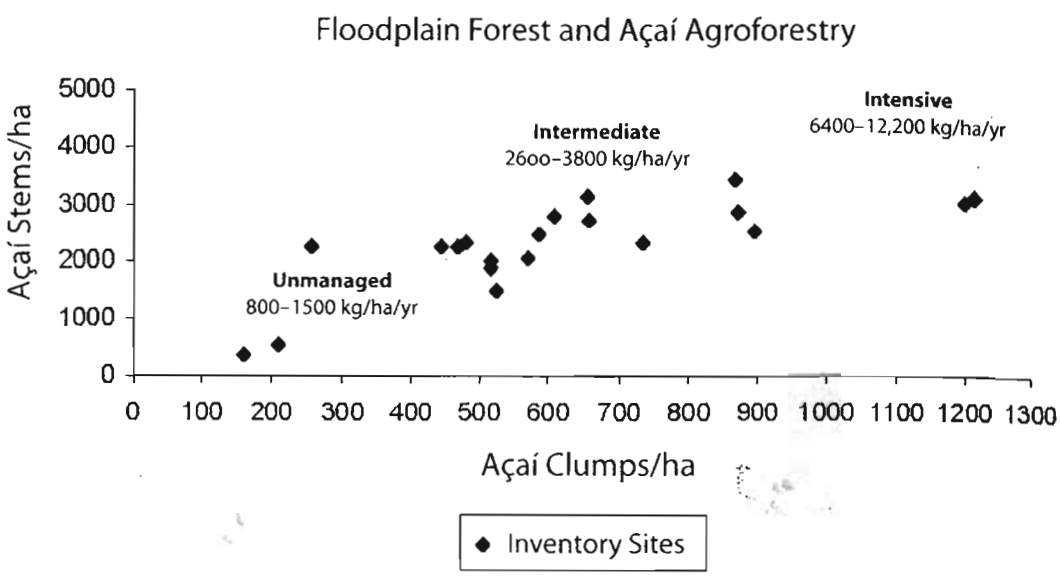

Figure 19.5 Açaí palm stem and clump density, with inventory areas under different management regimes.

The production pattern resulting from different levels of forest management and planting clearly shows the level of direct intervention underlying açaí fruit production. Three basic levels of açaí agroforestry can be distinguished by variation in stem and clump density and are thus related to fruit yield and production (figure 19.5). The first, occurring in unmanaged sites, evidences an average of 250 clumps/ha. In this group production output averages around 1390 kg/ha per year, that is, an average of 116 fruit baskets/ha. The second, occurring in initially and intermediately managed sites, has an average of 600 to 730 clumps/ha. In this group, output production varies between 2600 and 3800 kg/ha per year, for an average of 269 fruit baskets/ha. Finally, the third level, characterized by more intensively managed sites, has an average of 890–1200 clumps/ha. In this group, production varies more widely from 6400 to 12,200 kg/ha per year, an average of 760 fruit baskets/ha (Brondízio 1996).

These data and measurements in experimental sites reported by Brondízio (1996) illustrate the variation in economic return of agricultural and forest products across the range of producers in the region. Net return per hectare varied from US$203.6/ha per year (unmanaged site) to US$2272.7/ha per year at the most productive site. However, within the same production class, such as the intermediate group, economic return varied from US$303.7/ha per year to US$669.8/ha per year as a function of the harvesting and selling period, which are closely related to land tenure.[2] In all cases, the economic return depends on harvesting sched-

region, surpassing other agropastoral production systems in economic and social importance.

Most claims of açaí production intensification tend to point to home gardens as the area that is managed intensively. However, a spatial perspective provides a different picture while highlighting the need to take into account the heterogeneity of floodplain areas in defining management levels (figure 19.6). Figures 19.4 and 19.6 show the potential

Figure 19.6 Spatial extent of intensive açai agroforestry beyond house garden intensification, Ponta de Pedras region.

invisibility of this production system resulting from its forest characteristic and subtle differences between managed, planted, and unmanaged stands.

In summary, the limitations of intensification measures to evaluate the production system can be summarized as follows:

- Production technology is based on local management knowledge and presents low levels of input factors used to characterize intensity.
- The agroforestry structure can fit into both extremes (intensive or extensive) of Boserup's frequency model, depending on the definition of stages of production (besides being aesthetically different from other production systems).
- Spatial dimensions overlap areas of intensive, intermediate, and unmanaged areas, which allows expansion according to environmental conditions and household needs and possibilities.
- The multiple productivity dimensions of agroforestry areas (i.e., the "hidden harvest" of other fruits and raw material) tend to go unnoticed as economically relevant production.
- Floodplain cycles dictate cropping frequency more than the fallow period used in Boserupian models (see detail discussion in Brondízio 1996, Brondízio and Siqueira 1997).

ECONOMIC RETURN TO PRODUCERS: PRICE SIGNALS, LAND TENURE, AND HARVESTING SCHEDULE

Comparisons of the açaí price index and the agricultural and husbandry index for the state of Pará for the period between 1984 and 1995 are presented in figure 19.7. This figure shows a similar growth of both indices. This is an important parameter in the success of the açaí economy over the ten-year period presented. Using a ratio between the two indices. one observes that the açaí price index has followed and surpassed the inflation rates of most agropastoral products of the state (Brondízio 1996, Brondízio et al. 2002). Analyzing the evolution of this ratio, we can see that açaí producers had an incentive to grow açaí because its prices have kept up with those of other products and surpassed them at the beginning and end of the harvesting seasons. Another important point is the consistent market for the product in the last two decades, which shows signs of a well-structured production system. Production has increased sixfold in the past twenty years, based on management and planting

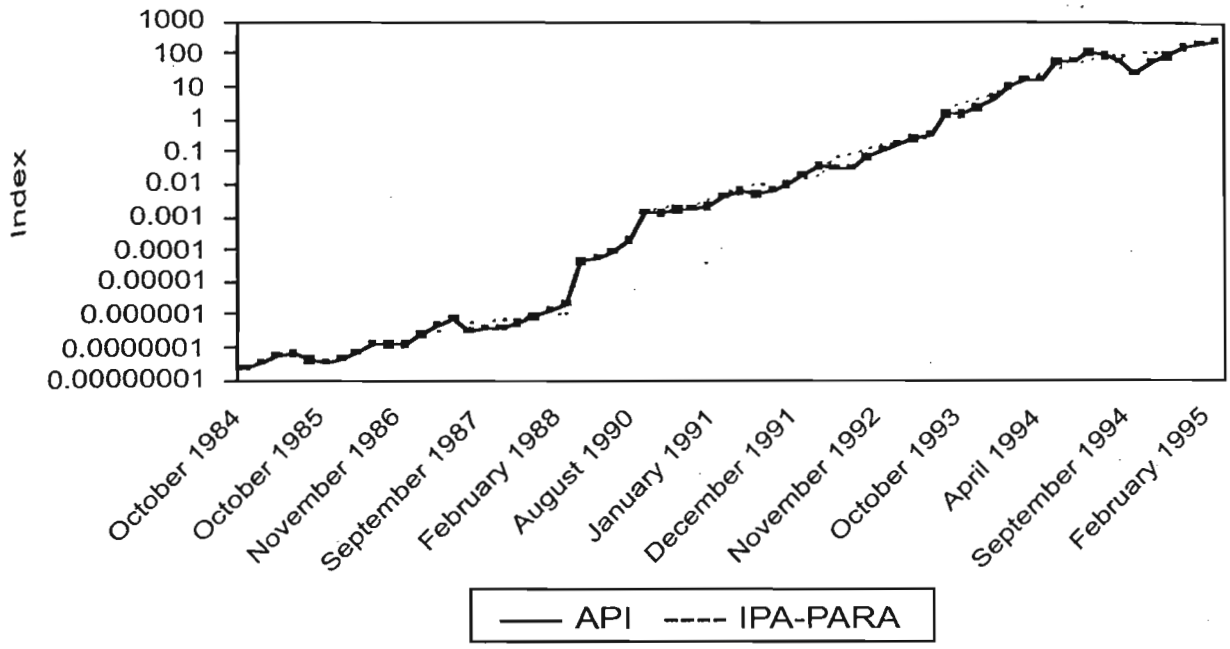

Figure 19.7 Açai price index (API) and the Fundação Getrilio Vargas index for agropastoral products, Pará State (IPA PARA) 1984–1995 (base 1994 = 100). *Source:* Adapted from Brondízio (1996).

socioeconomic organization around production, distribution, marketing, and processing, introducing a new class of regional producers and workers and, most significantly, new entrepreneurs in the processing and commercialization sectors. Emerging from a local rural economy, the açaí fruit industry is now functioning as a complex multilevel economic structure.

As previously suggested, for producers a key factor affecting economic return is related to one's land tenure condition because it underlies not only harvesting schedule (and thus response to price) but also commercialization. From a producer's perspective, several factors mediate the links between productivity, harvesting, and economic return. Daily and weekly distribution of harvesting throughout the season reflect the ability to market according to price signals and are the most important factor.[3] Similarly, the cost of transportation in relation to fruit price has a direct impact on return. Whereas the cost of transportation can hover around 10 percent of açaí prices at the beginning and at the end of the season, it can reach 25 percent or more at the season's peak, when the fruit price is lower (Brondízio et al. 2002). Whereas owners are free to wait for better prices, sharecroppers need to follow their landlords' schedules and decisions. In most estuarine municipalities, sharecroppers are the largest category of producers. They provide the bulk of acaí pro-

In the Ilha de Marajó, an island twice the size of Wales at the mouth of the Amazon, . . . a food processing company is working with the local authorities to *persuade* the growing number of *ribeirinhos* (riverbank dwellers) to cultivate the açaí palms that grow abundantly in the swampy land around their wooden huts. . . . [A company representative] accompanies a state official on a boat trip to try to interest the *ribeirinhos* in *taking a short course* on cultivating the trees to maximize yields of fruit and palm hearts. "You could be earning 8,000 Reais (about US$4,000) a year from this plot," [the representative tells] . . . a father and son living nearby. The two smile *politely but disbelievingly—incredulous* that what is a small fortune by local standards might be within their grasp. The company already owns and tends its own plots of land on the island, but . . . [company representative] says he would rather leave the cultivation and processing to the locals and stick to being a distributor. (*The Economist,* May 10, 2001, emphasis added)

Entre as técnicas repassadas pela empresa aos pequenos produtores, como os de [localidade], está a poda de antigas palmeiras de açaí, que apresentam baixa produtividade e oferecem riscos aos trabalhadores no momento da colheita da fruta. . . . Integrados à natureza, eles conhecem a hora que a direção da maré do rio se altera e os perigos da floresta, como o de encontrar uma onça no momento da colheita, mas desconhecem técnicas agrícolas que permitem aumentar a produção de açaí, palmeira típica da região amazônica. . . . "Antes disso, o produtor só via o pé de açaí na hora da colheita," diz [responsavel de extensão para uma companhia]. (*Agrofolha, Folha de São Paulo,* February 29, 2000)

Among the techniques disseminated by the company to small producers . . . is *the pruning of old açaí stems* that present low productivity and are risky to workers during fruit harvesting. . . . Integrated with nature, they know the hour and direction of tides and the dangers of the forest, such as confronting a jaguar during harvesting, *but they do not know agricultural techniques that increase açaí production,* a palm typical of the Amazon region. . . . "Before now, *the producer would only see the açaí tree during harvesting,*" says [an extension agent for the company]. (Author's translation and added emphasis)

These are just two examples portraying companies in agriculture technology extension as a key element and producers as ignorant of opportunities and needing to learn about açaí management. The examples just cited are from well-known sources; the latter is a respected agropastoral news supplement of a leading Brazilian newspaper. It is important to note that some of these companies are actually working toward offering new opportunities for producers, but the way this discourse is presented gives several misguided impressions. They emphasize *açaizais* as "native forest" while stressing the need to teach *caboclos* to manage them in order to increase production. This allows companies to stress their role in preserving biodiversity, but it reinforces açaí producers as extractivists. There is a pattern of emphasizing the need to "persuade" local residents to engage in açaí production and that producers—usually portrayed as playing a passive economic role—disbelieve their potential return. Interestingly, the so-called rational management techniques presented by companies and aimed at increasing productivity not only have been learned and practiced for decades but were developed by the very people to whom the companies are offering technical assistance (Anderson et al. 1985, Jardim and Anderson 1987, Hiraoka 1994, Brondízio 1996, Brondízio and Siqueira 1997).

Most arguments also give the impression of a fledgling economy that these companies are nurturing and helping to grow. However, if one takes a closer look (see IBGE data, for instance), a very different picture emerges. The production of açaí fruit has reached the current level of performance entirely through the initiative and efforts of riverine *caboclos* and their management techniques. Companies are building on a production system that has been established at its current level for at least two decades. Both commercial enterprises and the state government tend to forget that açaí fruit has been a leader in state agropastoral production for years without any support or technological assistance from extension agencies. One has only to look at the level and role of açaí consumption in Belém and Macapá, among other important urban centers, to understand the economic scope of the açaí fruit economy. Regarding the claim that riverine producers currently use "native forest" as the basis of production, one can easily say that if the forests they are currently using were truly native forests, the state of Pará would be achieving no more than 30 percent of its current production of açaí fruit. Indeed, management figures presented in this work and elsewhere indicate that "native forest" (unmanaged floodplain forest) produces meager amounts of açaí compared with managed areas. Palm heart companies, many of which usually make claims such as those presented earlier, actually wiped out thousands of hectares of

açaizais throughout the estuary; some of these exploited areas are now being called "native forest."

It is likely that today's açaí export economy would not even exist if riverine farmers had not been managing *açaizais* intensively for decades and were simply relying on "native" areas. The development discourses from the private and government sectors include both misinformation and lack of knowledge about the region and the production system, as well as a sociocultural prejudice typical of the regional elite against riverine *caboclos*. Though perhaps well intentioned and tapping into a green market that yields support loans and an attractive merchandising strategy, these discourses reproduce a sociocultural bias that fails to recognize riverine *caboclos* as the legitimate leaders of the current açaí fruit boom. This bias contributes to the perpetuation of a cycle of differential access to important economic opportunities, such as bank loans, under the guise of "promoting sustainable development." The ones who form the very foundation of the açaí fruit economy—the riverine açaí producers—are portrayed as economically insensitive and technologically impoverished, as well as both helpful and in need of help. In this way, an already golden business opportunity becomes a social and environmental cause, thus yielding further marketing revenues for industries that espouse "conscious consumption" and use the sustainable development discourse. As the international market opens and competition increases, it remains to be seen whether this type of discourse will continue at the cost of portraying riverine producers erroneously.

SHIFTING CYCLES AND SHIFTING OPPORTUNITIES: A CONCEPTUAL MODEL TO EXPLAIN SHIFTING ECONOMIC RETURNS IN DIFFERENT PHASES OF A TROPICAL AGRARIAN ECONOMY

Figure 19.8 presents a conceptual model for a process of shifting cycles and shifting opportunities, or the shift in economic opportunities and returns in each development phase of a production system. In the context of development cycles of the açaí fruit production system, economic returns have increased significantly during the regional staple food expansion of açaí consumption, when the production base was growing and producers could benefit more directly from daily and seasonal fluctuations in fruit supply. In the first two decades of expansion of the açaí fruit economy, demand exceeded supply for most of the production season. However, IBGE production data indicate similar levels of production since 1990; in this decade, producers have found lower prices for most of the main production season (from September to December), when açaí

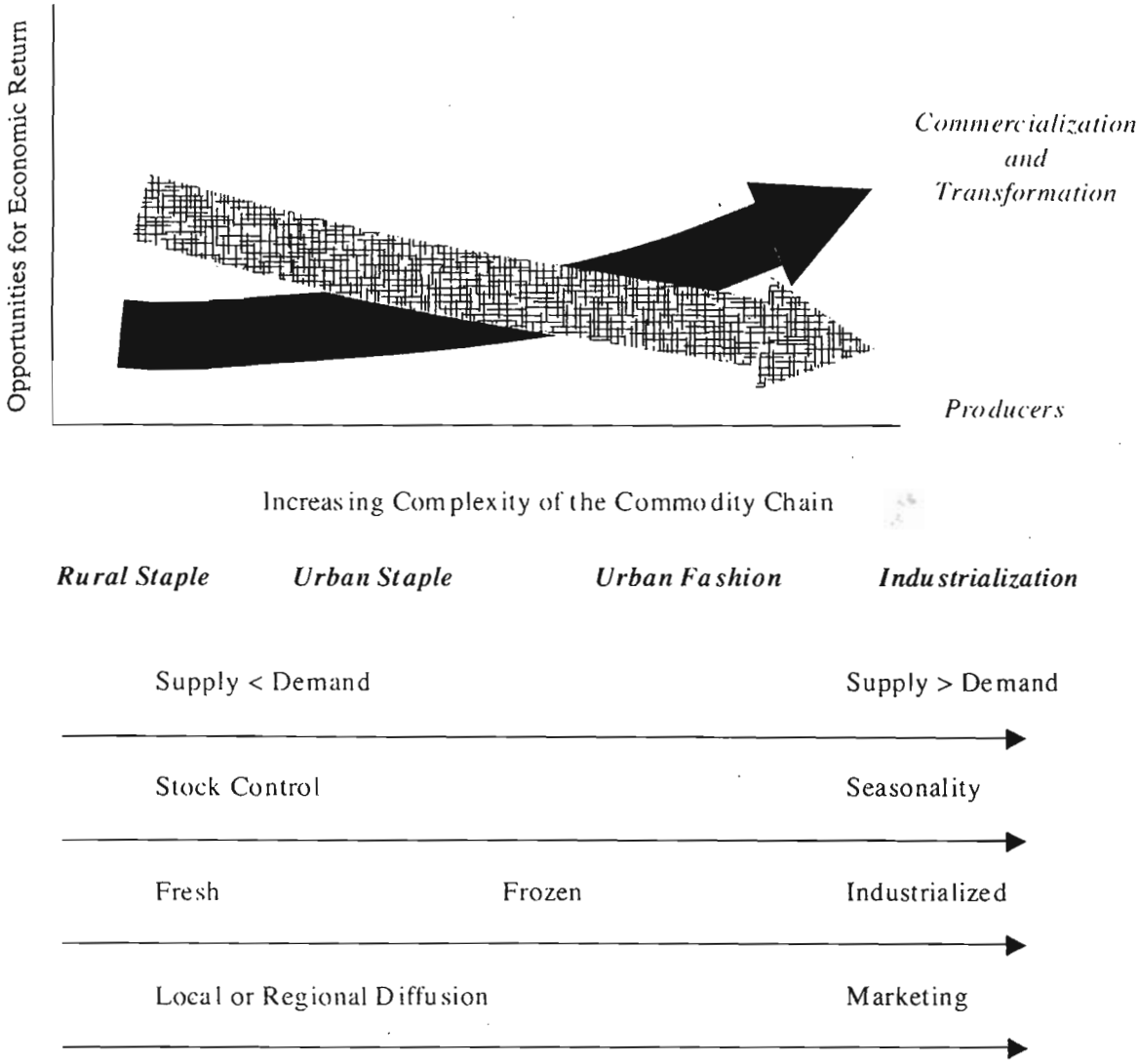

Figure 19.8 Conceptual model for shifting opportunities and economic returns in the açai fruit economy.

arrives from all corners of the estuary and the state of Maranhão. As the regional production base expanded (including to southern and western Amazonia), supply started to meet demand and even exceed it in particular seasonal periods. During this phase (e.g., the last ten years), profits shifted in favor of the processing and export sectors and, particularly, the transformation industry that controls storage and aggregation of value to derived products. While producers maintain a secure market, particularly in the northern region, profit opportunities narrow and harvesting decisions, negotiation with intermediaries and brokers, and transportation costs play a greater role in economic return for the producer. The

bottleneck of infrastructure (on a basic level, storage and transportation, and at an advanced level, access to processing, industrial transformation, and retailing) constrains the participation of producers in the most profitable sectors of a booming economy based on the expansion of the national and international consumption bases. Producers in the estuarine region, though seeing some investments in pulp processing plants, are not taking full advantage of the profitable commercialization and transformation sectors but rather are staying with the raw material side of supply. Although the government is working with established industries, little has been done to build producer-controlled transformation industries and commercialization infrastructure. As described earlier, producers are "supported" in their position as extractivists who receive "help" from new participants, sometimes in the form of repackaged technology that has long been in use in the region.

Figure 19.9 shows the added value of açaí produced in 1 ha of the estuarine floodplain as it moves through the commodity chain and is commercialized in different places and in different forms, from the fresh product in the producers' lots to local rural towns and regional urban centers, to markets elsewhere in Brazil and abroad. The figure does not include derived products but only pulp products transformed through maceration (in some cases pasteurization), freezing, and addition of guaraná syrup.[4] From the producer to national and international markets, one hectare of açaí fruit may change in value up to fifty times. To some extent, the majority of the value added to açaí fruit is based on the fad value that is increasing promotion of the product to different consumption sectors. For instance, it is heralded as an energetic boost to the health conscious, as an antioxidant to the heart conscious, and as a sustainable development alternative to the environmentally conscious, making it an outstanding consumer product for the twenty-first century.

The prosperous Japanese community of Tomé-Açu offers an interesting contrast to and validation of this model. When they opened the market for Amazonian fruits in southern Brazil in the 1980s, their strategy was based on creating a processing industry in their area and distribution venues through their own cooperative. Two key differences can be noted: The role of their social organization in creating this infrastructure and the fact that they are respected as intensive producers and hard workers both helped to increase national and international support for their enterprise. The opposite can be said for riverine *caboclos,* whose attempts to establish collective forms of social organization have been historically undermined, for instance by forms of debt servitude and absentee land ownership; similarly, they continue to be seen as extractivists

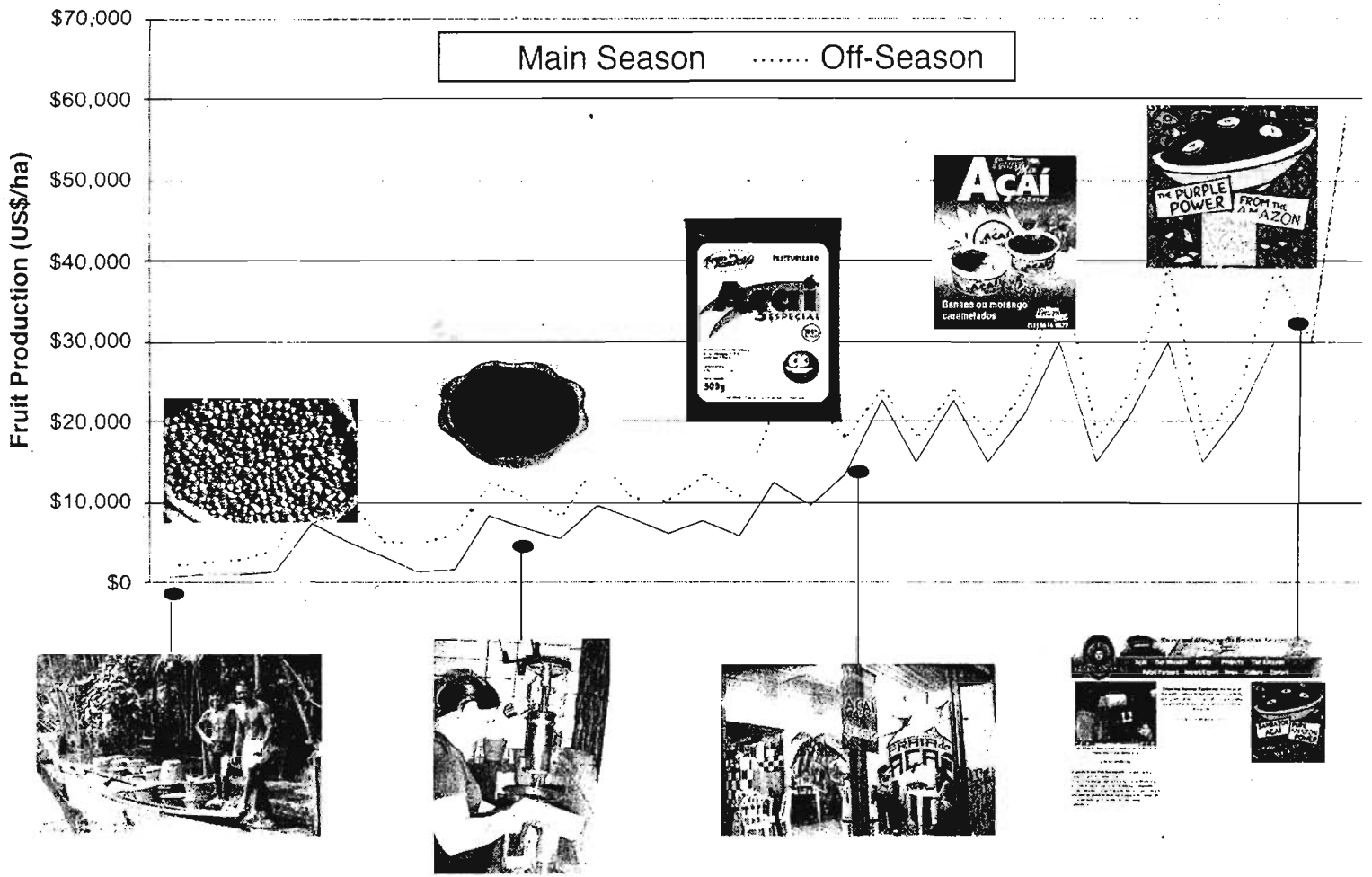

Figure 19.9 Adding value through the commodity chain for 1 ha equivalent of açai fruit. Assumptions: Production is ~9000 kg/ha; average conversion of fruit to pulp is 1.9 kg/liter; prices are for the year 2000.

taking advantage of "native forests," not as producers harvesting the products of their work. These are key underlying factors perpetuating regional underdevelopment and explaining their "inability" to engage in the high-end sectors of their production system.

In summary, the lack of infrastructure support for storage and processing and the lack of a broader agrarian policy to support transformation industries prevents riverine producers, and the region in general, from taking advantage of the booming national and international markets and industrializing their product. There has not been an economic phase as significant for the Amazon estuary as the current açaí fruit since the rubber economy;[5] this is a unique opportunity for estuarine towns and the population at large to call for large-scale investments in the region that would yield long-term improvements in their access to social and economic services.

OVERCOMING A VICIOUS CYCLE OF UNDERDEVELOPMENT: OPPORTUNITIES TO SUPPORT LOCAL PARTICIPATION

Estuarine towns and people are not benefiting from the full potential of a growing economy and will continue not to do so if the sociocultural, political, and infrastructure constraints are not addressed. Most producers and local politicians are enthusiastic about at least having the possibility of market participation, and açaí fruit could indeed provide an opportunity to increase social and economic development throughout the region. Yet regional socioeconomic indicators including income, education, infant mortality, youth prostitution, access to clean water, housing, and land tenure security are among several indices that show that the region is falling behind with respect to the basic aspects of social development. Although technological, economic, and infrastructure improvements are key elements for improving regional development, the most significant problem remains the stigma and the lack of respect for riverine producers. The açaí fruit economy is clearly the product of local knowledge of smallholders, but, conversely, it has helped reinforce their position as extractivists and subsistence forest dwellers who are insensitive to the regional market.

Regional improvements in agropastoral technology and processing are urgently needed but should be built on existing knowledge and carried out through the support of education and training, lines of credits, and storage and transformation cooperatives, among other services. Most importantly, however, political support is needed to overcome land tenure conflicts and provide access to credit incentives and basic infra-

structure in order to develop commercialization infrastructure and high-end transformation industries that will generate jobs and increase the circulation of capital in the region.

There are several examples of promising developments, but they may not be adequate in the context (and scale) of the booming açaí fruit economy. Although some companies are locating their pulp processing plants in estuarine towns, it does not guarantee the participation of producers in high-revenue sectors, such as in distribution, commercialization, and transformation.

The initiative of Projeto Pobreza e Meio Ambiente na Amazônia (POEMA, an organization associated with the Federal University of Pará) in creating a type of "Amazonian stock market" and mediating direct commercialization between the production sector and international outlets shows promising results that, with support, could be reproduced throughout the region. Recently, POEMA reported the export of several tons of açaí pulp to Australia (Revista AgroAmazônia 2002 [http://www.revistaagroamazonia.com.br/index.htm|). The state of Amapá has been particularly aggressive in pursuing transformation industries and partnerships with international distributors in aggregating value to regional products. In the case of açaí fruit, the state has particularly promoted artisanal transformations that, though limited, may open opportunity for new industrial sectors to build partnerships with regional cooperatives.[6]

Infrastructure conditions, economic incentives, and support for social organization of the type that the new açaí fruit entrepreneurs are receiving from banks and government could help increase the share of the wealth generated by açaí fruit among local municipalities and riverine communities. Açaí producers are responsible for the palm fruit that has been transformed, through direct and indirect marketing, from a rural food item to an international fad, and they should be entitled to receive support to participate in its commercialization and transformation. This may help to break a continuous cycle of exporting the regional wealth—as raw material—at the expense of local labor and social development.

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NOTES

1. Estimates by IBGE actually are smaller than this figure; it is based on literature sources (Rogez 2000) and author estimates.

2. Economic return is related more to harvesting period than to total area production and productivity. One can compare data supporting this chapter with most of the figures presented in the literature. Jardim and Anderson (1987) calculated an average return (discounting cost of management) of US$235.2–371.5/ha/year for areas producing around 1158.8–1854.8 kg/ha/year. These figures are comparable to those for the unmanaged site. For an area producing around 2437.6 kg/ha/year, they estimate a return of US$504.6/ha/year, a figure comparable to that of some sites used in this research. Hiraoka's (1994) estimate of gross economic return was US$946/ha/year. This is a satisfactory estimate because it is intended to be an average return, thus placing it between those of intermediate and intensively managed sites. Muniz-Miret et al. (1996) found higher rates of return, particularly for sites managed less intensively, and point to strong variation in seasonal prices.

3. Owner–sharecropper relationships during the harvesting season are typified by a number of informal and formal rules in relation to harvesting periodicity and schedule, price, and transportation costs. It has become more common for owners to organize a general meeting with the sharecroppers to decide on these issues. Owners usually choose a starting date for harvesting that coincides with that of different sharecroppers working on the same property (Brondízio 1996).

4. Production cost is maintained at 30 percent throughout the chain. Research in this area is still in development, so this figure is merely illustrative;

published figures of production costs are still unavailable for new sectors entering this economy.

5. Some may argue that the logging boom after 1950s in parts of the estuary was equally important.

6. In my opinion, the most important contribution of the state of Amapá is the sociocultural valorization and acknowledgment of açaí producers (and others) to the state economy.

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