Africa 77 (1), 2007

AFRICAN SHEA BUTTER: A FEMINIZED SUBSIDY FROM NATURE

Marlène Elias and
Judith Carney

Biodiversity preservation is an age-old phenomenon. For millennia, peoples worldwide have selected for, managed and conserved species that fulfil nutritional, medicinal, cultural and spiritual functions. Amid the rapid global decline in fauna and flora, the urgency of preserving natural resources has increased. Environmentalists are now placing their hopes on traditional agro-forestry systems that can point the way towards the sustainable use and management of forest resources (Berkes 1999; Depommier and Ramakrishnan 2002).

Agro-forestry systems comprise biophysical features as well as the interrelated knowledges, meanings and social relations that mediate the ways societies and individuals relate to the physical landscape. These complex systems are an integral part of, and indeed reflect, the very cultures with which they co-evolved (Berkes *et al.* 2000). The tangible and immaterial features of agro-forestry systems represent a natural heritage that is passed down and even developed, from one generation to the next. In the African savanna the shea tree, as well as the expertise and conventions that accompany its use, represent one such natural heritage that is integral to cultural and biodiversity conservation.

African shea butter is becoming increasingly familiar in the West. This vegetal oil has emerged from obscurity to prominence as a favourite ingredient in natural lines of cosmetics. Over the past fifteen years, shea – or *karité* as it is known in French – has become the focus of many development initiatives because it is one of the few economic commodities in the region under the control of women. Part of a *filière feminine* (a female commodity chain), shea has long been collected, processed and traded by women. The current global market demand extends the shea commodity chain, linking African women producers to Western female consumers.

Africa's shea tree (*Vitellaria paradoxa* C.F. Gaertn.) grows naturally in eighteen countries along a 5,000-kilometre expanse of the

MARLÈNE ELIAS is a doctoral student in the Department of Geography at McGill University, Canada. She has worked on agroforestry issues in Panama and Burkina Faso. Her research focuses on the impacts of the burgeoning international shea butter market on female producers in Burkina Faso.

JUDITH CARNEY is Professor of Geography at the University of California, Los Angeles. She has conducted field research in West Africa, Brazil, Mexico and Central America. Her research interests include gender and development, political ecology and cultural ecological issues surrounding the African diaspora. She is the author of *Black Rice: the African origins of rice cultivation in the Americas* (2001).

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

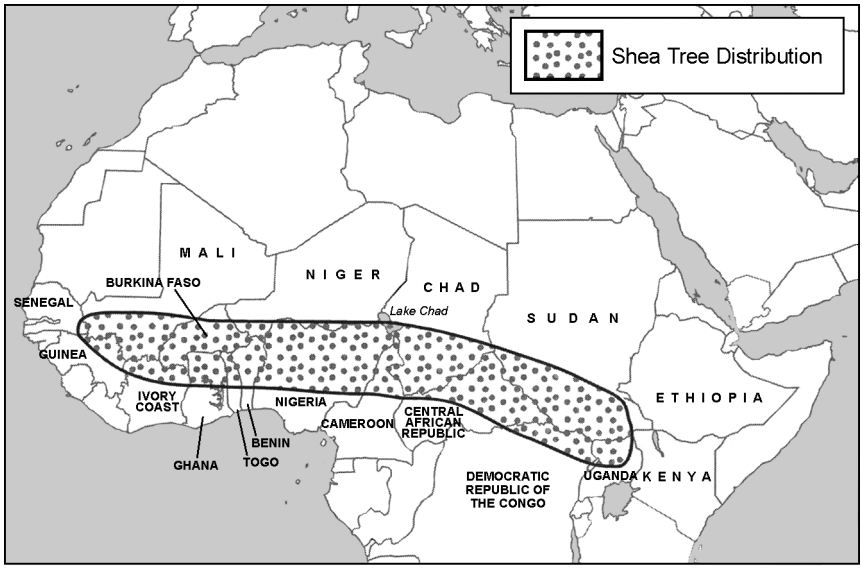


FIGURE 1 Shea tree distribution.

semi-arid Sahel and Guinean savanna woodlands (Figure 1).[1] Major shea-producing countries are among the poorest in the world. As a result of women-in-development (WID) projects supported by the UN, bilateral aid agencies and NGOs, shea butter exports from Africa have increased since the 1990s. Donors have sponsored fair-trade initiatives that promise to offer higher prices to female producers through direct contracts with firms promoting natural skin products. The current wave of shea commercialization, however, is prompting changes in traditional resource processing and management as well as agro-forestry practices in countries like Burkina Faso, West Africa's largest exporter.

Based on fieldwork in Burkina Faso's provinces of Boulgou (2001) and Sissili (2005), this article examines the role of shea as a female heritage in Burkina Faso.[2] Emphasis is placed on the knowledge systems that inform the transformation of nuts into butter and the

[1] The natural range of shea includes Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Ethiopia, Guinea, Mali, Niger, Nigeria, Senegal, Sudan and Togo. Over the past centuries, the tree has spread to Gambia (Maranz and Wiesman 2003), the Democratic Republic of the Congo, Ghana and Uganda due to human influence (Hall *et al.* 1996). The subspecies *paradoxa* dominates in the western Sudan while ssp. *nilotica* is found in the Democratic Republic of the Congo, Ethiopia, Uganda and the Sudan.

[2] Elias carried out primary data collection for the study over two months in each fieldwork period. Interviews were conducted with male and female farmers, NGO personnel, academics and government officials working in the shea sector. More in-depth participant observation occurred with members of the Laafi women's group and the Union des Productrices de Produits Karité de la Sissili et du Ziro. Primary and secondary sources obtained in Burkina Faso supplemented the collected information.

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

tree's management in farmed fields. The objective is to illuminate the cultural and botanical heritage of shea as well as the tree's role in biodiversity protection, African natural heritages and female knowledge systems.

Divided into four sections, the article begins with an overview of the female knowledge informing the preparation of shea butter and perceived product quality differences that affect its regional trade. The next section considers the traditional land-use practices and local agronomic knowledge shaping shea parklands and fostering the tree's conservation. The article then turns to contemporary markets for shea products, identifying preliminary trends of shea commercialization on female tenure rights and biodiversity conservation. Issues surrounding the marketing of shea as a 'heritage product' are finally considered, with emphasis on the ways standardized shea-processing techniques are breaking from the specialized and diverse traditions related to the resource.

TRADITIONAL SHEA BUTTER PRODUCTION AND TRADE

Preparation of shea butter

The shea belt crosses many sub-Saharan countries and ethnicities. Yet, in areas where the tree is found, women have long been the ones to collect and process shea nuts (Lewicki 1974). The process of rendering butter from shea nuts represents an ancient knowledge system that has been passed on generationally from mother to daughter. There are many ways to process the butter, however, and female producers and buyers of the product recognize the differences in quality that are associated with distinctive methods in specific geographical regions. The preparation of shea butter represents a cultural heritage of many different ethnic groups in the sub-Saharan shea zone. The female shea commodity chain thus reaches deep into the environmental knowledge systems of Africa and the techniques developed by African women over the centuries. An overview of the ways shea is collected and transformed into the product now esteemed in Western skin care elucidates this point.

The collection and processing of shea nuts involves a great deal of work. Shea trees come into production at the onset of the rainy season and bear fruit throughout most of the agricultural period. At this time, women are especially burdened with farm work. Butter making thus produces an intensification of women's workloads during the rains. The preparation of shea butter requires large quantities of firewood and water, which women collect. The production of a single kilogram of shea butter demands between 8.5 to 10 kilograms of fuelwood (Hyman 1991: 1250).

Shea nut processing also occurs during the dry season, when women's workloads are lessened. In some areas of Burkina Faso, however, this is not possible because village wells seasonally run dry. As seasonal water shortages increase the distance to permanent water sources, Lobi women in southwestern Burkina Faso produce shea butter during the

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

rainy season (Crélerot 1995: 116). In recent decades, the steady fall of farm commodity prices and deepening impoverishment of rural society are increasing the need for money. The result is that many shea producers now make butter year-round for sale.

Despite its importance to female incomes, there is little research to date on the diversity of nut-processing techniques developed by rural women. These techniques, however, represent a significant cultural heritage passed down through generations of female producers. The steps of the butter-making process and key techniques are summarized below for Burkina Faso, the shea tree's probable centre of domestication (Maranz and Wiesman 2003).

The butter-making process begins when the shea tree bears its fruits. This corresponds with the end of the dry season and continues for several months into the rains. Women and children collect the fallen fruits, canvassing an area within a radius that extends between one and three kilometres from the household. The nuts are head-carried to the homestead for processing. The initial stage of butter production involves pulping the fruits to remove the nuts. In order to ferment the pulp and extract the nuts, shea fruits are sometimes buried in underground pits for at least twelve days. Nuts are then boiled (if it is raining) or left to dry in the sun for approximately two days – a process that prevents them from germinating. The de-pulping stage concludes with roasting or smoking the nuts over a fire for three to four days (Hyman 1991). Upon completion of these preliminary steps, nuts can be stored for up to nine months, until a woman is ready to convert them into butter. The specialized techniques women use for preservation and storage prolong the product's 'shelf-life' and ensure nut availability throughout the year (Howard 2003: 13).

When the time for making shea butter arrives, shea nut shells are cracked and removed. Nuts may then be roasted or smoked over a stove for 24 hours prior to being crushed one by one with a stone on the ground. They are thereafter warmed in a cauldron (Figure 2) and pounded in a mortar with a pestle. This yields a coarse brown batter, which is placed on a large stone and ground, with a smaller stone, into a finer-grained paste.

The following stages typically involve several women sharing the workload. Water is added to the paste and the mixture is kneaded. Two or three women jointly reach into the thick shea batter to beat the paste so the foam floats to the surface. Every few minutes, they relieve each other of the work to reduce fatigue from the labour. As the kneading motion is rhythmic, those waiting their turn raise the spirits of the ones working by singing and clapping to the tempo of the kneading (Elias 2003). For women, the preparation of shea butter is a social process.

The foam is then transferred to a bucket of water, where it is 'washed' by hand, with women spinning the mixture in basins of water to eliminate unwanted residues (Figure 3). Subsequent washings – repeated as many as four times – yield progressively whiter foam, which is then boiled for many hours. The top layer is skimmed, or clarified, and upon cooling becomes the white butter so desired in

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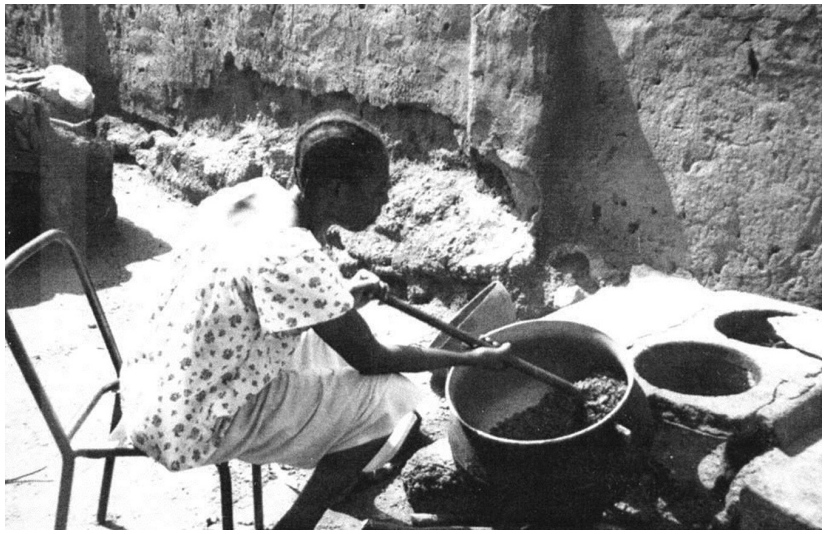


FIGURE 2 Woman stirring shea nuts as they are warmed over a fire. Source: Marlène Elias 2003.

international markets. The conversion of ten kilograms of shea nuts into butter typically demands eight to ten hours of an individual woman's labour (Faucon *et al.* 2001; Crélerot 1995; Elias 2003).

Differences in methods of butter making were recorded as early as the eighteenth century by Scottish explorer Mungo Park, as he searched for the source of the River Niger. On his journey through the Bambara landscape, Park witnessed shea nut collection, processing and trade. He observed the drying and roasting of nuts during the wet season. Park's village hosts informed him that the nut transformation method he witnessed produced the best shea butter:

> In one corner . . . was constructed a kiln for drying the fruit of the Shea trees: it contained about half a cart-load of fruit, under which was kept up a clear wood fire. I was informed, that in three days the fruit would be ready for pounding and boiling; and that the butter thus manufactured, is preferable to that which is prepared from fruit dried in the sun; especially in the rainy season; when the process by insolation is always tedious, and oftentimes ineffectual (Park 2000: 215).

Park commended the taste of shea butter, writing that the product had the 'advantage of its keeping the whole year without salt'. He also noted that it 'is whiter, firmer, and to my palate, of a richer flavour, than the best butter I ever tasted made from cow's milk' (Park 2000: 201).

Variations in nut processing do indeed yield butters with different qualities. Regional shea markets recognize the quality differences associated with specific localities. This same point has been made with the African locust bean tree (*Parkia biglobosa*) or *néré*, another valued

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FIGURE 3 Women with hands in shea batter, washing shea. Source: Marlène Elias 2003.

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

parkland species, from whose pod women prepare a paste used as a sauce-flavouring agent. Women in Benin base their market purchases of *néré* on tangible differences in product characteristics between localities (Gutierrez and Juhé-Beaulaton 2002: 468). These differences reflect distinctive methods of locust bean preparation. Female shea butter makers similarly contend that the manner in which the nuts are prepared results in product differences. Some appreciate the partially fermented product obtained from nuts stored in underground pits (Hyman 1991), while others prefer the butter that results from boiling the nuts (Crélerot 1995; Elias 2003).

Many of the techniques women employ in butter preparation are related to water, firewood and labour availability. Smoking, roasting or boiling the nuts – and even the number of times the paste is rinsed – account for perceived differences in quality and taste. For instance, while the taste of butter derived from smoked nuts is enjoyed in certain communities, it is unappreciated in others. As with the preparation of *néré*, the diversity of product offerings derives from cultural repositories of knowledge that reside in specific communities.

Women develop the rich knowledge of shea nut processing at a young age. This knowledge is imbued with meanings that draw on the sociological, cosmological and ritual realms (Appadurai 1986). Shea butter production is a gendered identity marker, as well as a way rural women cement their social ties. Women are recognized for the quality of their butter and skilled butter makers take great pride in their reputation. In south-western Burkina Faso, butter producers offer their finest shea butter as a gift at births and weddings and as a gesture of gratitude for acts of kindness (Crélerot 1995). Similar practices are reported elsewhere – as in central Anatolia, Turkey, where women maintain their social networks through gifts of wild plants they collect (Ertuğ 2003). The shea butter remaining after gift offerings is consumed within the household or commercialized.

Regional trade in shea

Trade in shea butter is the principal economic activity of rural Burkinabé women (Crélerot 1995). Nut collectors and butter makers sell shea products out of their houses, in local markets, or to bulk buyers who purchase and transport the goods to regional outlets. While commerce in shea is active year-round, product prices nearly double during the dry season. The economic value of shea nuts and butter is lowest between June and September, when shea fruits come to maturity and their by-products abound in local markets.[3] Nonetheless, considerable amounts of nuts and butter are sold at this time. This is because household grain reserves are at their lowest in the pre-harvest agricultural period, and women need cash to purchase critical food items (Gosso 1996). One

[3] A weighted average producer price of 500 FCFA per kilogram of butter is calculated from local Burkinabè markets, based upon annual means for the last decade (1990–2000) (ANDINES 2002; Elias 2003).

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way to raise the value of shea nuts is to convert them into butter, but this requires women to exert even more labour when they are already burdened with agricultural work.

Buyers (principally women) take advantage of low wet season prices to purchase nuts cheaply from female collectors. These buyers then stock the nuts until their values rise. The nuts may be sold to merchants, wholesalers, local food dealers and, at times, even resold to the very females whose cash needs originally forced them to part with the nuts so cheaply (Terpend 1982; Audette 1995). Terpend (1982) estimates that a rural Burkinabè woman gathers between 560 kg and 650 kg of nuts in a typical year. If she transforms all her nuts into butter and sells the entire lot in the dry season, her earnings will average 50,000 to 58,500 FCFA (US$91–106). Such figures, however, overestimate the real value earned by women because most of the gathered nuts are retained for household consumption rather than sold, and because women must often sell the product when prices are seasonally lower.

Attempting to estimate the percentage of nuts actually consumed by rural Burkinabè households, Boffa *et al.* (1996) calculated that 60 to 90 per cent of a woman's collection is processed to feed her family. The remainder is marketed as raw nuts or butter. A more realistic estimate of female shea earnings takes this point into account and considers the 450–650 hours each woman typically labours to produce butter for household subsistence and petty cash sales. From this perspective, a rural woman earns only between 12,500 and 14,600 FCFA annually, or between US$23 and $27 per year from petty sales (Elias 2003).[4] While this may seem a pittance, the income from shea marketing still makes a contribution to the region's otherwise depressed farm incomes (Boffa *et al.* 1996).

Traders specializing in shea acquire the butter or raw nuts at local markets or directly from females selling from their homes or along the roadside. Chalfin (2001: 217) reports that female shea traders in one north-eastern Ghanaian town profit from proximity to commercial networks in south-east Burkina Faso and Niger. They typically buy in single transactions three to five calabashes of butter, weighing about 20 kg each, for US$15–20. They then sell to more capitalized merchant middlemen and wholesalers, typically men, who distribute the butter regionally or on the export market.

Research on northern Ghana's female shea traders also reveals buyer recognition of discernible differences in nut and butter quality (Chalfin 2000). At times this is the result of storage and preparation methods that result in nuts of low oil content. Ghanaian market women also show considerable savvy in noting regional and ethnic differences in the quality and taste of shea butter. In bringing together in one place the products from many localities and diverse ethnic groups, regional markets operate as sites for profiling butters of different quality. Near the border between Ghana and Burkina Faso, shea producers from the same

[4] Figures are based upon an exchange rate of 550 FCFA to US$1 (2006).

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

region occupy different parts of the market. Their butter is moulded into different shapes and sizes depending upon their geographical origin and ethnic background. These provisions render distinctions in shea butter characteristics and in butter traders' origins obvious to customers (Chalfin 2001).

The assortment of shea butters sold in markets reflects the place-based and culturally embedded heritage associated with butter production. But this cultural repository also includes the very management of the shea landscape, which involves the selection and management of shea trees. Indigenous agro-forestry practices contribute to the maintenance of shea biodiversity and have assured the conservation of the species across generations.

THE SHEA LANDSCAPE AND BIODIVERSITY CONSERVATION

Shea is a slow-growing tree. It can take as many as 15 years to produce flowers, and fruit production peaks between 45 and 50 years (Boffa 1999). The tree bears fruit from the end of the dry season into the rains (in Burkina Faso, from May until mid-September), at a time when farmers are busy with field preparation and farming (Ruyssen 1957; Terpend 1982; Schreckenberg 1996). A mature shea tree produces an average of twenty kilograms of fresh fruit annually, but the quantity and quality of the fruit can vary unpredictably over short-term cycles (Chalfin 2000: 992). Climatic, biophysical and human practices affect tree yields.[5] Local populations eat the fruit, while nuts are retained for butter making. With traditional techniques of production, 20 kg of fruit typically yield about 4 kg of dried nuts and between 0.7 and 1.5 kg of butter (Terpend 1982).

V. paradoxa is found on over one million square kilometres of savanna south of the Sahel, where annual rainfall ranges between 500 and 1,400 mm (Hyman 1991: 1248) (Figure 1). The current biogeographical range of the species extends nearly to the Atlantic Coast in The Gambia. Domestic animals as well as wild elephants, birds, ungulates, primates and bats contribute to its long-distance seed dispersal (Burkill 1985; Hall *et al.* 1996). So do human beings. The diffusion of the shea tree to The Gambia, for instance, occurred with the migration of ethnic groups from the west African interior who deliberately established the culturally valued specimen (Maranz and Wiesman 2003). *V. paradoxa* comprises two subspecies: subsp. *paradoxa* for the tree present in the

[5] Terpend (1982) discusses a three-year cycle in annual production, wherein production is good one year, poor the next, and mediocre the third. Seasonal variation in the harmattan – the arid, cool, dry season wind that blows south from the Sahara across the Sahel – also affects fruit yield. The tree's flowers are torn in years of pronounced winds, and subsequent production is reduced. Precipitation further influences yields, with high rains leading to increased subsequent production. Diseases, parasites and predators additionally decrease productivity. Anthropogenic factors responsible for lower yields include the setting of fires to clear land for agriculture during the shea tree's flowering period, which adversely affects the timing and quantity of flowers produced (Abbiw 1990).

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

western Sudano-Sahelian zone and subsp. *nilotica* (Kotschy) A. N. Henry *et al.* for its eastern counterpart (Hall *et al.* 1996).

In Burkina Faso, *V. paradoxa* extends across the country from the semi-arid north-east to the south-west, which respectively receive an average of 500 mm and 1,200 mm of rain per annum. Shea trees are estimated to occupy 6.5 million hectares of savanna woodlands in Burkina Faso, or one quarter of the country's total land area (Kessler and Geerling 1994). In addition to rainfall patterns, human land use regulates the density and distribution of the species. One study from the late colonial period in Burkina Faso showed average per hectare densities of 55 trees in the country's south-west, 25 in the densely settled central region, and 35 in the north (IHRO, cited in Terpend 1982). However, recent studies indicate that the number of standing shea trees has considerably decreased as a result of the shift to orchard crops in the country's south-west, the intensification of agriculture in the central region, and the expansion of cotton monocultures, ox ploughing and fuelwood scarcity elsewhere (Saul *et al.* 2003: 159). These surveys report densities between six and nineteen trees per hectare, a figure consistent with neighbouring Mali, where the per hectare average is fifteen (Boffa 1991; Maranz and Wiesman 2003).

Traditional V. paradoxa *conservation*

Traditional agro-forestry techniques do not involve deliberate establishment of the shea tree. Shea's prolonged growth and maturation periods, unreliable production, recalcitrant seeds and out-crossing breeding system favour other methods (Lovett and Haq 2000).[6] Nonetheless, groves were established in The Gambia during colonial rule and pilot plantations are under development in Burkina Faso (Saul *et al.* 2003; Carney and Elias, forthcoming).

Instead, the existence of *V. paradoxa* parklands results in considerable part from anthropogenic management and preservation of the species (Boffa 1999; Maranz and Wiesman 2003). Owing to their valued products, there exist many local taboos against cutting down *Vitellaria* trees (Lovett and Haq 2000). The Bobo in the western part of the country have long prohibited the cutting of valuable shea trees during the rainy season when they bear fruit. In other West African regions, customary law interdicts collection of shea nuts during certain periods (Lovett and Haq 2000; Boffa 1999). Bans on tree products with economically valuable environmental resources are typical of indigenous conservation measures reported in many areas of West Africa (Freudenberger *et al.* 1997). These cultural mechanisms promote the preservation and regeneration of valued species.

[6] 'Recalcitrant seeds' refers to the fact that seed viability drops very rapidly. For *V. paradoxa*, viability declines within a week of seed removal from the fruit and is completely lost within three to six weeks (Hall *et al.* 1996). Out-crossing complicates the selection for 'superior', 'true-to-type' individuals stemming from heterozygous parents.

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Managed landscapes of mixed vegetation and protected trees are known as agro-forestry parklands. They are the result of a calculated land management system among specific ethnic groups, which protects arboreal species providing desirable products when fields are cleared and burned for agriculture. The dominant tree species of parklands reflect local climatic, agricultural and cultural factors (Pélissier 1980). Livestock production may also be a significant component of these systems (Boffa 1999).

Along with *néré* (*Parkia biglobosa*) and gum arabic (*Faidherbia albida*, syn. *Acacia albida*), shea is found on cultivated and fallow lands throughout the West African Sudano-Sahelian zone (Breman and Kessler 1995; Boffa 1999). Shea and *néré* parklands are associated with agricultural societies that rely upon shea butter as their primary source of fat and cooking oil (Schrekenberg 1999). In contrast, protection of *V. paradoxa* is often not a priority among Fulani herders, whose diet is based on animal fat. They rely instead on *Acacia albida*, a leguminous tree that bears its leaves in the dry season, thereby providing shade and fodder for their animals (Seignobos 1982).

Among west African farming societies, shea tree conservation dates back to antiquity (Harlan 1992). At the end of the eighteenth century, Mungo Park (2000: 201) noted that in Mali's shea-dominated landscapes, shea trees were the only ones spared when forested land was cleared for cultivation. Recent palynological evidence from Burkina Faso suggests that the practice of preserving shea in cultivated fields was already occurring by 1000 AD (Neumann *et al.* 1998). Landscapes dominated by aged, slow-growing shea trees serve as testimony to longstanding *V. paradoxa* selection and parkland management.

While farmers preserve shea trees, they cull other species in cultivated fields. This increases the relative abundance of shea with respect to other parkland species. In southern Burkina Faso, Boffa (1995) observes that the relative occurrence of shea trees in farmed fields is five times greater than that found in uncultivated savanna. In one area he compared, shea accounted for 83 percent of the woody individuals on farmed land, but only 16 percent of those in uncultivated bush. In Benin, well over 70 percent of the trees encountered in farmed parklands are shea (Agbahungba and Depommier 1989), while in northern Ghana, *V. paradoxa* trees constitute more than 80 percent of the wooded farmland vegetation (Lovett and Haq 2000).

Protection of the shea tree serves vital ecological functions. Its extensive, shallow root system preserves soil structure and drainage where the tree grows (Bonkoungou 1987; Boussim and Guinko 1993; Gray 2003) while its canopy buffers parklands from wind and soil erosion (Kessler 1992). The tree's resistance to fire also helps prevent devastation in the savanna woodlands when fields are burned for agriculture or pasture grass regeneration (Burkill 1985). The ecological importance of shea is underscored by the fact that the tree figures among the few savanna species whose physical presence is used as a vegetative

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descriptor throughout the Sudano-Sahelian parklands (Harlan 1992; Hall *et al.* 1996).

Local agronomic knowledge

Traditional management practices additionally shape the relatively large size of shea trees in parklands compared to those on uncultivated areas. Local agronomic knowledge guides the selection of robust shea trees that appear best adapted to local growing conditions. Those with undesirable characteristics are culled. Due to this practice, and to the enhanced growing conditions found in cultivated fields, shea trees found on farmed lands typically attain a diameter double those of the same age growing in uncultivated areas (Boffa 1995).

Local agronomic knowledge also affects butter quality. In a study comparing shea pulp traits from trees in Mali and Burkina Faso, Maranz and Wiesman (2003: 1507) show how strong local selection for desired fruit and nut traits led to selective tree preservation and the culling of specimens with undesirable traits. As shea is exploited principally for pulp and fat, three economically valued characteristics were investigated: pulp sweetness, which is desirable because fruits are eaten, as well as fat content of the seed and type of fat in the kernel, which bear upon shea butter processing and quality. Shea populations in central Burkina Faso displayed the highest kernel fat and saturated fatty acid content. The percentage of stearic acid is a measure of fat hardness, which makes the butter retain a solid state at temperatures that exceed 40 degrees Celsius. In most Burkinabè nut populations, there is a slightly higher percentage of oleic acid to stearic acid. However, the percentage is reversed in shea kernels from the Moose (Mossi) Plateau of central Burkina Faso, where stearic acid dominates (Maranz and Wiesman 2003). Such factors affect shea butter quality in foreign markets. A lower ratio of stearic acid results in soggy butter that does not hold its form as solid pats. The interplay between shea nut traits and processing methods in different geographical regions thus influences the quality of the butter produced. Both traits and processing methods are in continuous evolution. Shea tree management methods highlight the way cultural preferences and practices preserve individuals with distinct traits in different parkland environments. This also has implications for shea butter commercialization.

COMMERCIALIZATION OF SHEA PRODUCTION

Trade in African shea butter dates back at least to the fourteenth century, when Muslim travellers first recorded the practice (Lewicki 1974). The overseas export market for shea developed with the imposition of colonial rule in the nineteenth century. Demand grew with the use of shea as a cocoa butter equivalent in the manufacture of chocolate and margarine. While most of the colonial trade focused on nuts, butter exports steadily increased between 1932 and 1947. In 1937, at the height of the world depression, Burkina Faso continued to export shea:

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8,451 tons of shea kernels and 2,927 tons of butter were collected from the key producing areas of Ouagadougou, Bobo and Gaoua (in the central and western parts of the country) and exported to France (Massa 1995).

Following the country's independence in 1960, shea exports grew (Pehaut 1976; FAOSTAT 2006). By the 1970s, shea nuts and butter had become the country's third largest foreign-exchange earner (Saul *et al.* 2003). But the international shea market's volatility was one cause of a decline in exports in the early 1990s (World Bank 1989; Saul *et al.* 2003) (Table 1). Poor tree productivity, as well as the disorganization of the commercial shea sector, the artisanal nature of butter production and trade, and unreliable statistics for national output further account for the export fluctuations depicted in Table 1 (UNCTAD 2006).

Despite annual fluctuations, the export demand for shea nuts continues to increase. In the two years between 1995 and 1997, nut exports from Ghana leaped from 15,000 to 32,000 tons, which represented an increase from two to seven million dollars in foreign exchange revenues (Chalfin 2000). Burkina Faso's shea nut exports have likewise increased in the past decade, with average annual nut exports rising from 10,000 tons over the ten-year period 1984–94 to 15,000 tons in 1994–2004 (FAOSTAT 2006). Shea butter exports from Burkina Faso also climbed over the past decade, averaging 630 tons per year between 1997 and 2001 (ONAC 2001) (Table 1).

The contemporary shea market continues to be characterized by raw nut rather than butter exports (Conti 1979). Two reasons primarily account for this. First, many European companies prefer processing imported nuts with modern technologies that guarantee butter of a desired quality. Second, low producer remuneration confers on women little incentive to engage in arduous nut transformation activities for the export market. Thus, while millions of African women produce shea butter for household consumption and local trade, most of their production remains in Africa (Hyman 1991; Boffa 1995). The dominance of raw nut over butter exports perpetuates the pattern established with colonialism, where value-added processing activities occur outside the producing area.

International demand for shea derives from cosmetics and food industries in the North, which are mostly headquartered in France, Great Britain, Scandinavia, Japan and North America (Pehaut 1976). The chocolate industry still accounts for 90 percent of the international demand for shea, used as a cocoa butter equivalent (CBE) (UNIFEM 1997). The market for shea is thus closely linked to that for cocoa.[7] Shea sales are favoured in years of low cocoa yields and high cocoa prices, while the contrary is true of years of low cocoa prices. The availability

[7] Statistics on the international shea market for the food industry are difficult to obtain because the few firms that dominate production conduct their activities in a secretive manner. Four large European importers – Aarhus, Karlshamns, Unilever and Van Dermoortele – dominate the international shea market.

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TABLE 1 *Shea exports from Burkina Faso, selected years (1961–2004)*

Year	*Nuts (metric tons)*	*Butter (metric tons)*
1961	2,891	75
1962	2,572	681
1963	3,196	316
1964	6,681	773
1965	4,340	1,154
1966	11,611	1,142
1967	3,366	
1968	15,084	1,185
1969	12,342	1,024
1970	14,280	
1971	7,667	
1972	10,648	
1973	3,856	
1974	8,762	
1975	11,597	
1976	40,489	
1977	30,613	
1978	21,516	
1979	23,697	
1980	34,700	
1981	43,622	
1982	23,543	
1983	26,051	
1984	41,079	
1985	11,005	
1986	6,298	
1987	4,240	
1988	2,676	
1989	3,072	
1990	17,222	
1991	3,314	
1992	5,000	
1993	5,000	
1994	14,657	
1995	7,263	
1996	10,004	
1997	9,964	53
1998	20,663	2,367
1999	7,930	271
2000	11,575	190
2001	17,980	269
2002	34,975	
2003	26,686	
2004	11,891	

Sources: Péhaut (1976: 1319) (shea butter data 1961–9); FAOSTAT (shea nut data 1961–2004); ONAC (shea butter data 1997–2001)

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of a handful of other alternatives to cocoa butter further drives down both shea and cocoa producer prices. In 2000, the European Union ruled in favour of allowing up to 5 percent of cocoa butter substitutes into chocolate. This legislation has stimulated the demand for shea and other vegetal oils within the chocolate industry (Fold 2000). Yet, the labour involved in making shea butter and the low prices offered by agro-food industries do not provide female African producers attractive income opportunities under conventional marketing arrangements.[8]

Current market demand for shea butter by global cosmetics firms, along with fair trade contracts, is creating a demand for export-quality butter and shifting more of the product into the export trade. The popularity of shea butter results from its emergence over the past fifteen years as a key ingredient in lines of 'natural' cosmetics (Compaoré 2000). In this new market niche, West African producers could enjoy a potentially more advantageous position with buyers. However, the food-processing industry is also poised to produce the shea butter demanded by cosmetics firms through its raw nut imports and advanced refining technology. At the turn of the twenty-first century, about half the shea butter used in the cosmetics sector was supplied by European food-processing firms. The latter processed the nuts and sold shea butter to the cosmetics industry at double the market price for its use in food applications (Boffa 1999).

While the 1999 import demand for shea by the cosmetics industry was estimated at only 200 tons (a figure well below the tonnage produced by Burkina Faso alone that year), the potential for integrating the butter in cosmetics products worldwide is estimated to reach 1,500 tons annually (Boffa 1999). With that in mind, international women-in-development (WID) projects are promoting new technologies to improve export butter quality by West African women's groups. The idea is to encourage cosmetics firms to purchase shea butter directly from the female producers, thereby building a marketing relationship based on 'fair' trade. With the middleman's profits eliminated, women's incomes are expected to rise. Contracts have already been negotiated with global cosmetics firms, such as The Body Shop and L'Occitane, willing to pay female producers superior prices for their product. In 2001 the French company purchased 60 tons of shea butter in Burkina Faso and planned to increase imports by another 90 tons in 2002 (Harsch 2001). The Body Shop is involved in similar contracts with producer groups in Ghana (TBS 1997). Such contracts have earned African women more than twice the prevailing market value per kilogram of shea butter (ANDINES 2002; Elias, fieldwork, 2005).

Those convinced that female income opportunities rest on the production of shea butter, rather than raw nut exports, have high

[8] Producer prices hover around 300 FCFA (US$0.60) per kilogram of shea butter (Elias, fieldwork, 2005). This price is inordinately low in the light of the fact that production of one kilogram of butter demands nearly 10 hours of female labour, (Crélerot 1995; Elias and Carney 2005).

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hopes that women will benefit from new niche markets. Wholesale trade figures from Burkina Faso reveal the potential. In 1997 one ton of unprocessed shea nuts sold domestically for FCFA 70,000 and externally for FCFA 100,000 while the same ton processed into shea butter obtained FCFA 148,000 (Harsch 2001: 6).

In providing new technologies to producer cooperatives, donor projects help to ease the labour and natural resource demands associated with shea processing and to improve product quality. Many Burkinabè cooperatives already have access to mechanical mills that grind shea nuts and some have acquired equipment to assist them in the nut crushing, heating and kneading steps. While these cooperatives have a greater capacity to turn out large quantities of quality butter and reduce fuelwood demand for processing, the technologies are not without some drawbacks. They demand costly fuel inputs and spare parts. When shea presses break down, cooperatives are left shouldering large debts to repay the initial capital investment and maintenance costs (Compaoré 2000).

For the time being, fair-trade shea projects have offered thousands of Burkinabè women a singular economic opportunity to earn more from butter preparation. Even though the bulk of shea continues to be traded conventionally as nuts, the market share of direct shea butter sales to cosmetics companies is rising. As new markets link female butter makers with consumers of the product across geographic space, the tentacles of the female commodity chain now reach to the very processes that have long formed the cultural heritage of shea.

Changing property rights with shea commercialization

Female income opportunities with shea butter depend fundamentally on access to the tree's nuts. As the shea tree is not deliberately planted, its distribution on different types of land confers varying access rights. Shea trees are found on household landholdings as well as on unclaimed land used by villages for pasture, fuelwood and the gathering of medicinals. In open-access forests, women collect nuts on a first-come-first-served basis. On cultivated or fallow fields, only women with privileged access hold the rights to gather the nuts.

Burkinabè rural households follow a tenure pattern typical of Sahelian common property systems (Carney 1988), dividing their landholding into personal and family fields. If a shea tree grows on her personal field, a woman is entitled to collect the fruits and the value of marketed butter (Terpend 1982). If the tree grows on family fields, the male family head grants female members of the household the right to gather shea fruits (Ruyssen 1957; Boffa *et al.* 1996). The decision to cut or leave shea in parklands is ultimately made by the household head and reflects existing policy measures, economic incentives, and the value of the tree and its by-products. For instance, the shade from a shea tree can reduce the yield of other crops such as sorghum by 44 percent and millet by 60 percent (Kater *et al.* 1992). Nut availability is jeopardized every time a male household head decides to fell shea trees on family land. Longstanding customary village taboos reduce the incidence of cutting

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down shea trees, and some West African countries legislate specifically against their removal, even if forestry departments are too often unable to enforce such laws (Schreckenberg 1999; Wezel and Haigis 2000).

Recent research suggests that shea commercialization is changing women's rights over nuts and the value derived from making butter. In southwestern Burkina Faso, near regional export markets in Côte d'Ivoire, nut collection remains a female activity. However, women are being made to share shea revenues with male household heads. Boffa *et al.* (1996) report this development in a quarter of households they surveyed in a village known for its shea production. In an additional 7 percent of the households, the male family head claimed the entire value of female shea nut sales (Boffa *et al.* 1996). The decline in cocoa commodity prices in Côte d'Ivoire has further led young men to enter into competition with women in collecting shea nuts. The men do not process the nuts, but sell them directly to wholesalers. These male nut collectors do not select high quality nuts nor do they put their harvest through the necessary pre-transformation steps to prevent nut germination. The deepening demand for nuts has thus adversely affected nut and butter quality (Bliss and Gaesing 1992, in Boffa 1999).

The extent of men's longer-term involvement in the shea commodity chain remains to be seen. History has shown that female-controlled crops can become the purview of men upon an increase in economic value, all the while maintaining women's role in their labour-intensive processing steps. Such was the case, for instance, with palm oil in Nigeria at the beginning of the twentieth century. As the product's export value increased, men gained control of the associated profits while assuming only superficial palm oil processing tasks. Meanwhile, women retained their traditional fruit transport duties and the bulk of oil processing responsibilities. In Martin's words (1984: 419),

> The entry of men into palm production made a difference to women mainly in that it deprived them of their right to initiate and control the production process and to control the use of the resulting oil. By the early twentieth century men were well established as the owners of palm fruit and of palm oil. Women were rewarded for their role in oil production by being allowed to keep some oil for cooking as well as the by-products of oil processing ... which had no major local use.

Will shea replicate the history of palm oil, where men captured the market for palm oil as well as the female labour required to process it?

Market mechanisms and biodiversity conservation

The longer-term impacts of shea markets and current land-use patterns on *V. paradoxa* conservation cannot yet be evaluated fully. However, a few trends are evident. High prices for shea nuts and butter – associated with fair trade and WID contracts – are encouraging the selection and conservation of shea trees on agricultural land. In contrast, shea trees are felled when alternative land use is more valued or the price and need for fuelwood exceeds that of shea products. The density of shea trees

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on farmed fields thus remains closely linked with the economic value of the tree's products to the household economy (Schreckenberg 2004a).

Gender issues also appear crucial in shea conservation strategies. Preliminary evidence suggests that more shea trees per hectare are found on personal fields controlled by women (Boffa, 1995). In Thiougou, male household heads maintain densities of 20 shea trees per hectare on their personal fields while female-managed areas averaged shea densities of 27 trees per hectare. Burkinabè income streams are gendered, and men do not customarily control the products of shea, as they do other parkland species. They may thus opt to cut down *Vitellaria* individuals to the detriment of the women who harvest the nuts (Boffa 1999). Tree felling may occur even though overall revenues from a typical parkland in Burkina Faso with five to ten shea trees and two or three *néré* trees is of the order of 8000 FCFA per hectare (Saul *et al*. 2003: 131).

Agricultural policies and extension packages that support draught animal traction and mechanized ploughing also adversely affect the incidence of shea trees (Kessler 1992; Boffa 1999). Tree removal facilitates the unimpeded movement of draught animals and avoids striking tree roots. As a result, such policies cause a drastic decline in tree densities on cultivated fields. In Thiougou, the average shea density on land farmed with hand cultivation techniques was 31 per hectare. Land ploughed with donkey or oxen reduced densities to 21–25 trees per hectare (Boffa 1995). Even fewer shea trees are maintained on land mechanically ploughed in northern Ghana (Lovett and Haq 2000). While farmers are encouraged to replant trees in non-ploughed areas, they opt for exotic fruit trees or fast-growing pole and timber species at the expense of slow-growing indigenous species whose value is associated with women (Schreckenberg 1999: 288).

Mechanical ploughing, however, should be seen as separate from the process of agricultural intensification. Agricultural intensification does not always result in the destruction of shea trees and a reduction in parkland biodiversity. In southwest Burkina Faso, land is becoming scarce and fallow periods are diminishing. Gray (2003) observes that the shortage of farmland has increased the worries of borrowers, predominantly migrants, who fear losing their fields or the privilege to farm if they leave fields fallow. Instead of clear-cutting the arboreal vegetation, vulnerable households are responding to the lack of permanent land rights and soil degradation with traditional agro-forestry practices. In the very area where landholdings are least secure, borrowing households are investing in soil quality to strengthen user rights to land to which they have few formal claims. A key component of their land-use strategy is to preserve specific tree species (shea, *néré* and acacia) for their economic and ecological value. The trees reduce soil erosion and water run-off as well as supplying the farmland with organic matter through leaf litter and root decay (Gray 2003). They also stand as sentinels, preserving the cultural identity of migrants – who rely upon shea butter – in their new environment.

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HERITAGE PRODUCT: SHEA AND GEOGRAPHICAL INDICATORS AS A MARKETING STRATEGY

In its burgeoning cosmetics niche, shea's cultural heritage is explicitly valorized as a marketing strategy. African-American retail outlets as well as global firms such as The Body Shop emphasize shea butter's African origins. Their publicity describes the inherited skills African women employ in the commodity's production. Shea's central role in Sudano-Sahelian lifestyles and traditions renders it an ideal addition to the growing number of 'heritage products' linking consumers to 'authentic' place-based heritages (Bessière 1998). The novel forms shea butter assumes within elaborate Western cosmetics combine these African traditions with modern innovations.

As international interest in culinary heritages grows, does shea's cultural heritage hold additional promise within the food industry? Predominantly within the European Union, accreditation of food products by origin, preparation and identity is prevalent. Ranging from labels specifically designed to highlight sound environmental or labour practices in food production to a product's geographical provenance, these markers foster consumer confidence in goods bearing a tradition of quality. Such is the case, for instance, for France's *produits du terroir*. This distinguished niche market draws upon the notion that some of France's regions are specialized in the preparation of particular foods with distinct characteristics (Bessière 1998; Roussel and Verdeaux, this volume). These distinctive culinary traditions are the result of *in situ* cultural heritages similar to those exemplified by shea in Africa. They result from different methods of food preparation, which affect product characteristics. The *Appellation d'Origine Contrôlée* (AOC) label highlights the regional origins of these *produits du terroir* within France to consumers (Bessière 1998). While an analogous tradition exists for shea in Africa, what are the prospects for a comparable market valuing shea butter's place-based culinary traditions?

The esteem the international community places on shea's traditional function as cooking oil is uncertain. Even within West Africa, the consumption of shea butter is waning where alternatives such as sesame, groundnut, cottonseed and palm oil are found (Hall *et al.* 1996; Schreckenberg 2004a, 2004b). While shea butter is often the most affordable local cooking oil, many Africans prefer the taste of its alternatives, with shea retaining a specialized use only in commemorative meals. Internationally, there is no evidence that expatriate African populations in Europe or North America place the same value on shea butter in cooking as they do on palm oil or *néré*. The foreign market for it as a food product thus appears unviable, unless its role in chocolate manufacture can be linked to current fair trade initiatives.

There is, nonetheless, a current attempt in West Africa to link the chemical characteristics or 'signature' of shea nuts and butter to their geographic origins. Sponsored by the Common Fund for Commodities, the Dutch government and the Food and Agriculture Organization

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

(FAO), the Pro*Karité* project aims to document the distinct traits of shea nuts and butter originating in specific regions. The aim is to improve the 'trace-ability' of shea products along the shea commodity chain should a specialized market for the product emerge (Pro*Karité* 2004; Masters 2005).

Rather than focusing on regional production specialties, however, the current trend for international shea butter sales is one of standardization. To secure international markets for shea butter, producers must comply with high quality standards. Shea butter must be of reliable quality and reflect a low percentage of impurities, humidity and acidity. In Burkina Faso, WID projects advise women on the production of a quality product meeting strict international demands. Workshops given to female producer associations call for a standardization of processing techniques – the very indigenous methods that have long resulted in the different types of butter produced regionally and by diverse ethnic groups. For instance, all butter producers are encouraged to boil their nuts rather than to bury them. Women are similarly dissuaded from smoking their nuts and advised to subject the shea paste to multiple washings. This yields a product with fewer impurities but demands considerable amounts of water.

The advent of new technologies further standardizes the production process and final product quality. As steps are mechanized, the cultural heritages embedded in traditional shea nut transformation are erased. As such, these technologies reduce the need for the specialized gendered knowledges that inform processing practices (Biquard 1992). In standardizing the butter-making process, new technologies open the door to marketing entrepreneurs who wish to capitalize on the products of women's labour and emerging market opportunities (Biquard 1992).

Official certification by the Fairtrade Labelling Organization (FLO) International will provide additional momentum to the standardization of shea butter production. Fair-trade shea butter is not yet officially certified by FLO. Yet the organization is currently establishing criteria to regulate the way butter sold on the fair-trade market should be produced and traded.[9] Producer associations desiring certification need to demonstrate compliance with established social and ecological regulations, including biodiversity and sustainable harvesting requirements related to shea nut collection and processing. Certified importers, similarly, are required to respect a set of trade criteria, including a minimum price per kilogram of shea paid to producer associations. Official labelling of fair-trade shea butter in North America and Europe is likely to increase product pricing and foster this market niche by building consumer awareness and confidence in the product. The economic returns and ecological requirements of fair-trade shea

[9] Inaugurated in 1997, FLO (Fairtrade Labelling Organizations International) is an umbrella organization that regroups 17 fair-trade labelling initiatives throughout the world. FLO sets global standards for, and offers third-party certification of, fair-trade products. For more information on the organization, see: <http://www.fairtrade.net/>.

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

butter also promise to assist local communities in protecting the natural heritage passed down from their ancestors. Yet, to comply with global product norms, producers must adopt standardized processing techniques that stray from the distinct and specialized cultural traditions developed regionally by butter makers over the centuries.

CONCLUSION

As this article has sought to demonstrate, the shea tree constitutes a botanical and cultural African heritage. Owing to its myriad functions and valued by-products, the species plays an integral role in African subsistence and is embedded with cultural meaning. The tree's local significance ensures its anthropogenic selection and preservation in what have become shea parklands. For more than a thousand years, successive Sudano-Sahelian farming communities have managed and shaped these parklands. Now globalization has reached these areas. Expanding shea markets, new European Union legislation concerning the use of CBEs, international women-in-development advocacy groups, and agricultural extension programmes are affecting the very management systems of these ancient parklands. As changes sweep over the socio-cultural shea landscape, what will be the future outcome of this African natural heritage? Who will be the beneficiaries as shea parklands are transformed?

While both men and women use, value and protect *Vitellaria* trees, shea is above all a female heritage. Across the Sudano-Sahelian zone, the species is a marker of gender identity. Women acquire knowledge of shea trees, nut collection and processing at a young age; over their own life cycle they bequeath this knowledge to their daughters, who in turn renew the tradition. The significance of shea to female identity and livelihoods is commemorated in a song sung by butter makers in Mali (Biquard 1992: 173–4).

> Shea is women's wealth . . . shea is women's wisdom.
>
> Confide in it before speaking to your husband.
>
> Wild shea, born of this very earth;
>
> This shea has stayed with the village, has given it all its riches and protection.
>
> Shea was already present when the Ancestors founded this place, composing with nature the harmony we must each reproduce.[10]

As this refrain tells us, the roots of the shea tree reach deep into culture and nature. With each year, the transformation of nature's subsidy into shea butter also roots the identity of Sudano-Sahelian women into place.

[10] Authors' translation.

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press

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ABSTRACT

The shea tree (*Vitellaria paradoxa*) is indigenous to Africa's Sudano-Sahelian region and crucial to savanna ecosystems and peoples. African women have long collected, marketed and transformed shea nuts into a multipurpose butter. The growing global trade in shea butter destined for the Western food and cosmetics industries thus represents an opportunity to bolster impoverished female incomes. However, such international sales are also prompting changes in the west African shea landscape. This article examines the role of shea as a female heritage in Burkina Faso, West Africa's largest shea exporter. It focuses on the knowledge systems informing the management, conservation and processing of shea. It also considers the effects of global shea commercialization on the maintenance of traditional agroforestry practices, tenure rights, and butter-making techniques. In so doing, the article illuminates the cultural and botanical heritage of shea as well as the significance of this species in biodiversity protection, African natural heritages and female knowledge systems.

RÉSUMÉ

Le karité (*Vitellaria paradoxa*), arbre indigène de la région soudano-sahélienne, est crucial pour les écosystèmes et les peuples de la savane. Depuis longtemps, les femmes africaines ramassent, commercialisent et transforment la noix de karité en beurre multi-usage. L'essor du commerce mondial du beurre de karité destiné aux industries alimentaires et cosmétiques occidentales représente donc une opportunité d'améliorer les revenus des femmes appauvries. Or, ce

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commerce international entraîne également des changements dans le paysage ouest-africain. Cet article examine le rôle du karité en tant qu'héritage féminin au Burkina Faso, premier pays exportateur de karité en Afrique de l'Ouest. Il examine les systèmes de savoir qui sous-tendent la gestion, la conservation et la transformation du karité. Il étudie également les effets de la commercialisation mondiale du karité sur le maintien des pratiques agroforestières traditionnelles, les droits fonciers et les techniques de fabrication du beurre. Ce faisant, l'article met en lumière l'héritage culturel et botanique du karité, ainsi que l'importance de cette espèce dans la protection de la biodiversité, les héritages naturels africains et les systèmes de savoir féminins.

https://doi.org/10.3366/afr.2007.77.1.37 Published online by Cambridge University Press