TRANSFORMING NATURE'S SUBSIDY: GLOBAL MARKETS, BURKINABÈ WOMEN AND AFRICAN SHEA BUTTER

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ABSTRACT

In this dissertation I examine the sustainability of shea butter projects in the centre-west region of Burkina Faso, West Africa. Shea butter derives from the *Vitellaria paradoxa* tree, which grows in the semi-arid African savanna. Women living in this region have long collected and processed shea nuts into butter for household consumption and sale. Advocates for gender equality and sustainable development are thus pursuing the growing global demand for shea butter in the cosmetics industry to enhance the incomes of these impoverished female producers. Via 'shea butter projects', international donors and non-governmental organisations are facilitating the integration of shea butter producers into international markets, including those based on Fair Trade. As I argue in this dissertation, an understanding of the sustainability prospects of these aid interventions is essential to develop projects and policies that maximize the benefits of Fair Trade for producer communities.

Conceptually, the framework guiding my study draws upon scholarship on feminist political ecology, traditional ecological knowledge, commodity chains, and sustainable livelihoods. The methodology adopted involves observation, semi-structured (n=213) and informal interviews, participatory wealth rankings, and shea tree mapping and measurements in 62 fields under five different types of land uses. Fieldwork was conducted among Gurunsi, Moose, and FulBe women and men in the rural village of Prata, the peri-urban village of Lan, and the town of Léo, which are located in the centre-west province of Sissili.

My study addresses three specific objectives. The first is to investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered. Findings related to this objective show that Gurunsi and Moose agriculturalists hold detailed knowledge of shea agroforestry that is not visibly differentiated according to gender or ethnicity. Spacing, productivity, and shading effects were cited as primary determinants for the conservation of specific shea specimens on farmed lands. High shea tree densities and a prevalence of small shea specimens in Gurunsi fields and fallows and in the brush signal positive prospects for the species' regeneration and the ecological sustainability of shea butter projects.

My second objective is to analyse the conventional and alternative international shea nut and butter commodity chains originating in this same region. My analyses indicate that strong market demand for shea is engendering intense competition among actors involved in the trade. This is causing changes in customary nut gathering patterns, including renegotiations in access rights to shea nuts. Shea butter projects have brought economic benefits to participants involved in Fair Trade markets, yet these are unevenly distributed along the rural-urban continuum and among ethnic groups, with greater benefits accruing to urban producers and Gurunsi women.

My third objective is to assess the economic, socio-political, human development, physical, and ecological effects of shea butter projects in my three study sites. The primary project benefits I identified include producer remuneration in lump sums and non-economic effects such as stronger social bonds among female producers and within producer households, capacity building, and the creation of a female-controlled workspace in Léo. In turn, the ecological effects of shea projects remain ambiguous. The projects' positive non-economic effects play a key role in promoting project participation. In rural areas, where the projects' economic effects are meagre, project participation also remains strongly linked to a lack of alternate income-generating opportunities. In sum, shea projects demonstrate promising sustainability prospects by favouring desirable livelihood outcomes and increasing the asset stock of participants over time. This case study contributes a nuanced understanding of gendered livelihoods among small-scale producers in the Global South experiencing a process of global economic integration.

RÉSUMÉ

Cette étude a pour objectif d'évaluer la durabilité des projets karité dans la région centre-ouest du Burkina Faso. Le beurre de karité est un dérivé de l'arbre à karité, *Vitellaria paradoxa*, qui pousse dans la savane africaine semi-aride. Les femmes de la région collectent les noix de karité qu'elles transforment en beurre pour leur consommation personnelle et pour la vente. Au regard de la demande croissante du beurre de karité pour l'industrie cosmétique internationale, les donateurs et organisations non gouvernementales qui promeuvent l'égalité selon le genre et le développement durable mettent en œuvre des 'projets karité' dans le but d'améliorer les revenus de ces femmes africaines appauvries. Ces projets favorisent l'intégration d'associations de productrices de beurre de karité au sein de marchés internationaux, dont ceux du commerce équitable. Je démontre dans cette thèse que l'analyse approfondie des facteurs garantissant la durabilité de ces interventions est essentielle pour favoriser la mise en œuvre de projets et politiques de développement qui permettent aux productrices et producteurs des pays du Sud de bénéficier pleinement des garanties sociales et économiques promues par le commerce équitable.

Le cadre conceptuel qui guide cette recherche s'appuie sur plusieurs outils théoriques tels que l'écologie politique féministe, les savoirs écologiques traditionnels, les filières et les moyens de subsistance durables. La méthodologie repose sur diverses formes de production de données : l'observation, les entretiens semi directifs (n=213) et non directifs, le classement par évaluation participative de la richesse, la cartographie et les mesures d'arbres à karité poussant dans 62 terrains, classés selon cinq types d'utilisation de la terre. Le travail de terrain fut mené auprès de participantes et participants Gurunsi, Moose et FulBe dans trois sites de la province de la Sissili : le village de Prata, le péri-urbain de Lan et la ville de Léo.

Cette thèse vise trois objectifs spécifiques. Le premier est d'analyser les pratiques de gestion et de conservation de l'arbre à karité en zone rurale et le rôle du genre dans ces processus. Dans cette perspective, je montre que les agricultrices et agriculteurs Gurunsi et Moose détiennent des savoirs approfondis de l'arbre à karité qui ne sont pas visiblement différenciés selon l'appartenance ethnique ou le genre. Les personnes interrogées ont cité plusieurs principaux déterminants qui guident la sélection et la

conservation de spécimens d'arbres à karité dans les champs cultivés : l'espacement entre les arbres, la productivité et les effets d'ombrage des arbres à karité. Les fortes densités d'arbres à karité et la prévalence de petits spécimens dans les champs cultivés par les Gurunsi ainsi que dans leurs jachères, mais aussi en brousse, démontrent d'une part que l'espèce se régénère à ces endroits et révèlent d'autre part des facteurs favorables pour permettre la durabilité écologique des 'projets karité'.

Mon second objectif spécifique est d'analyser la filière conventionnelle et alternative des noix et du beurre de karité originaires de la région centre-ouest du Burkina Faso. Mes recherches montrent que la demande croissante pour les amandes et le beurre de karité engendre une forte compétition entre les acteurs impliqués dans ce commerce. On observe alors des changements dans les pratiques traditionnelles de collecte de noix et notamment une renégociation des droits d'accès aux noix de karité. Les 'projets karité' ont apporté des améliorations sur le plan économique pour les productrices de beurre qui sont impliquées dans les marchés de commerce équitable. Cependant ces bénéfices sont inégalement distribués entre zones rurale et urbaine et entre groupes ethniques, se faisant ressentir d'avantage chez les productrices urbaines et les femmes Gurunsi.

Mon troisième objectif est d'évaluer les effets économiques, socio-politiques, physiques et écologiques des 'projets karité' au niveau des trois sites de recherche. Les principales améliorations identifiées se traduisent par une rémunération sous forme de somme globale aux participantes, par le renforcement des liens sociaux entre productrices ainsi qu'entre ces dernières et leur maris, par le développement des capacités locales et enfin par la création d'un espace féminin au niveau du siège de l'association de productrices, à Léo. En ce qui concerne les effets écologiques des 'projets karité', ils demeurent ambigus. Les bienfaits non économiques des projets sont d'importants facteurs motivant la participation des productrices aux 'projets karité'. En zone rurale, où les effets économiques des projets demeurent faibles, la participation des femmes aux projets est également fortement liée au manque d'autres opportunités génératrices de revenus. Au final, je démontre qu'en renforçant dans le temps les différents types de capital de leurs participantes, la durabilité des 'projets karité' pourrait être prometteuse. Cette étude de cas offre une compréhension approfondie, nuancée et genrée, des moyens de subsistance des productrices et producteurs des pays du Sud s'intégrant à l'économie globale.

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ACRONYMS

ANOVA: Analysis of Variance

ANT: Actor-network theory

BACB: Agricultural and Commercial Bank of Burkina (*Banque Agricole et Commerciale du Burkina*)

CBE: Cocoa butter equivalent

CBI: Cocoa butter improver

CCA: Commodity chain analysis

CDR: Committee for the Defense of the Revolution (*Comité de défense de la revolution*)

CECI: Centre for International Studies and Cooperation (*Centre d'études et de coopération internationale*)

CGG: Global Commodity Chains

CIDA: Canadian International Development Agency

CIFOR: Center for International Forestry Research

CNCA: National Bank of Agricultural Credit (*Caisse Nationale de Crédit Agricole*)

CNR: National Revolutionary Council (*Conseil national de la révolution*)

dbh: Diameter at breast height

DFID: United Kingdom's Department for International Development

DYFAB: Project to Reinvigorate the Agro-food Commodity Chain (*Projet de Dynamisation de la Filière Bioalimentaire*)

EC: European Commission

EFTA: European Fair Trade Association

EU: European Union

FINE: FLO, IFAT, NEWS, EFTA

FLO: Fair Trade Labelling Organisations International

FOA: Food and Agriculture Organization

FTO: Fair Trade Organisation

GAD: Gender and Development

GIS: Geographical Information Systems

GPS: Global Positioning System

GTV: Management of Village Lands (*Gestion des terroirs villageois*)

GVF: Women's Village Work Group (*Groupement Villageois Féminin*)

ICRAF: International Centre for Research in Agroforestry

IEK: Indigenous ecological knowledge

IFAT: International Federation for Alternative Trade

IK: Indigenous knowledge

IMF: International Monetary Fund

INERA: Institute of the Environment and of Agricultural Research (*Institut de l'Environnement et des Recherches Agricoles*)

ISF: Engineers without Boarders (*Ingénieurs Sans Frontières*)

NEWS: Network of European World Shops

NGO: Non governmental organisation

NTFP: Non-timber forest product

ONEA: National Office for Water and (*Office Nationale de l'Eau et de l'Assainissement*)

PFM: Multifunctional Platform (*Plate Forme Multifonctionnelle)*

PPP: Purchasing power parity

PWR: Participatory wealth ranking

RAF: Agrarian Land and Tenure Reform (*Réorganisation Agraire et Foncière*)

SL: Sustainable Livelihoods

SMAG: Minimum wage for agricultural field work (*Salaire minimum agricole*)

Sn-Citec: New Society for Oils and Soaps Citec (*Société nouvelle huilerie et savonnerie Citec*)

SNV: Netherlands Development Organisation

Tech Dev: Technical and Development Organisation (*Technique et Développement*)

TEK: Traditional ecological knowledge

TEKW: Traditional ecological knowledge and wisdom

UGPPK*:* Union of Women's Groups of Shea Producers in Sissili and Ziro (*Union des Groupements des Productrices des Produits Karité de la Sissili et du Ziro*)

UNDP: United Nations Development Programme

UNIFEM: United Nations Development Fund for Women

UNPCB: National Union of Cotton Producers of Burkina (*Union Nationale des Producteurs de Coton du Burkina*)

WCED: World Commission on Environment and Development's

WED: Women, Environment and Development

WID: Women in Development

GLOSSARY

Arisan Revolving credit scheme in Indonesia that tends to be female-dominated.

Bambara Ethnic group primarily living in Mali.

Bas-fond Lowland that is seasonally waterlogged or flooded.

Beolse Moore women's personal farming plots.

Bissap Sweet drink made of hibiscus flowers.

Boodoo Moore term for maximal lineage, wherein people are related by patrilineal descent.

Chapolo Drink made with shea leaves believed to enhance children's energy levels.

Daba Moore term for hand-held hoe used in traditional Burkinabè agriculture.

Dolo Beer made of fermented sorghum.

FulBe One of Burkina Faso's 63 ethnic groups; nomadic or semi-nomadic pastoralists who inhabit the Sahel.

Ganlegre Custom practised by Mosse people in Watinoma, Burkina Faso, wherein baobab strings are used to encircle shea trees to signal a temporary prohibition against climbing these trees and gathering their fruit.

Gaoulia Pejorative Gurunsi expression used to refer to Moose migrants in Sissili meaning 'person of the bush'.

Gari Dried manioc; staple food in Ghana and elsewhere in West Africa.

Griot Bard.

Gurunsi One of Burkina Faso's 63 ethnic groups; indigenous inhabitants of the province of Sissili.

Harmattan Arid, dust-laden wind that blows south from the Sahara, creating occasional sand storms across the West African Sahel.

Imam Muslim cleric.

Karité French term for shea tree (*arbre à karité)*, shea nuts (*noix de karité*) and shea butter (*beurre de karité*)

Koura koura Snack made of groundnut paste prepared by Burkinabè women.

Laafi Moore term for health; the name of an association of shea butter producers located in Tenkodogo, south-eastern Burkina Faso.

Lobi Ethnic group living in south-western Burkina Faso.

Maggi Food flavouring cubes.

Marabout Muslim holy man.

Milpa Farming system adopted throughout Mesoamerica in which maize, beans and squash are the staple crops.

Mogho Mosse empire.

Moore Language of the Moose people.

Mosse Largest of Burkina Faso's 63 ethnic groups.

Naam Traditional mutual aid group among the Moose in which individuals from a given locality come together on the basis of age or gender.

Naba Moose chief.

Nakomse Direct descendants of the Moose invaders and conquerors of the Volta River basin.

Nassara White person/foreigner.

Néré French term for the African locust bean (*Parkia biglobosa*) tree, from which *soumbala* is made; one of the most common parklands species in Burkina Faso.

Nuna Largest subgroup of the Gurunsi people mainly inhabiting the provinces of Sissili, Sanguié, Boulkiemdé and Mouhoun.

Nuni Language of the Gurunsi people from the Nuna subgroup.

Nyonyose Descendants of the conquered farmers who inhabited what became Moose country.

Pio Gurunsi chief.

Qui-me-pousse Strong drinking alcohol which is sold but not locally produced in rural Burkina Faso.

Réorganisation Agraire et Foncière (RAF) Agrarian Land and Tenure Reform; most consequential tenure policy instated in Burkina Faso in 1984 under Thomas Sankara's leadership.

Salaire minimum agricole Minimum wage for agricultural field work, set at 177 fCFA per hour in Burkina Faso in 2010.

Songo Gurunsi term for maximal lineage, wherein people are related by patrilineal descent.

Songtaaba Moore term for mutual help; the name of the largest urban-based association of shea butter producers in Burkina Faso.

Soudure French term for the pre-harvest period of the agricultural cycle, often one of food shortages; termed the 'hungry' season.

Soumbala The most highly prized spice in Burkinabè cooking; derives from the *néré* tree (*Parkia biglobosa*).

Tam daaga Moore term for 'male' shea trees.

Tengsoba Moose earth priest.

Tiatiu Gurunsi earth priest.

Tô National staple of Burkina Faso, made of maize, millet, or sorghum.

Travaux forcés French term for the forced labour imposed upon the Voltaic population by the French administration during colonial times.

Vitellaria paradoxa Latin (botanical) name of the shea tree.

NOTES

Citations
Key informants who participated in informal conversational interviews or otherwise provided information for this study are cited as follows: (name, date in full). These participants agreed to have their names cited in this thesis, and are listed in Appendix II.

In contrast, semi-structured interview participants are cited in the thesis using pseudonyms in the following form (pseudonym, dd/mm/yr of interview). A complete list of these interviewees is provided in Appendices III to V.

Conversion rates
Burkina Faso's currency is the Franc CFA (fCFA).

On October 7, 2007, when I began writing this thesis, the following currency conversions rates were in order:

1 $CAD = 473.636 fCFA = 0.98195 $US = 0.7195 Euro

These exchange rates are used throughout the thesis.

Units of measurements
On local Burkinabè markets, agricultural goods are sold by volume, rather than by weight. Commonly used units of measurement are listed below.

Yoruba:	One Yoruba plate contains approximately 2.5 kilograms of shea nuts
Cartload:	Volume of produce contained in a full donkey cart.
'100-Kg' bag:	Given that the volume of these bags remains constant, their actual mass varies according to the density of the product they contain. The '100 Kg bag' contains 40 Yoruba plates of shea kernels.
Pat of shea butter:	The actual mass of one 'pat' of shea butter varies throughout the year, but an approximate seasonally weighted average is 50 g of shea butter/pat.

CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

In a remote village of Burkina Faso, Alimata struggles to make ends meet. An agriculturalist, she sells grain, vegetables, and processed tree derivatives on the local market. Financial returns from trading endeavours, coupled with her agricultural activities, barely suffice to ensure the adequate nourishment and health needs of her six children. As the most junior of her husband's three wives, she also performs most of the household duties and divides her time between these tasks, cultivating and trading, collecting water and firewood, and rearing her children.

In recent years, Alimata has become involved in a project developed by the international aid community to support women from her region in their trading activities. The project centres on the marketing of one particular commodity—shea butter—that is processed from a tree nut and sold locally by impoverished women. Breaking with the traditionally local aspect of shea butter sales, however, the project directly connects shea butter producers to international customers, some of whom are willing to adopt Fair Trade principles, such as higher producer remuneration, to improve the welfare of women like Alimata. This dissertation is about Alimata, her fellow shea butter producers, and their families and communities. Specifically, it examines whether the shea butter project referred to above is sustainable, and whether it is delivering its promised benefits to Alimata and her community. In so doing, the thesis questions the ability of such an intervention—which promotes the integration of small-scale female producers into the global economy—to effect positive and lasting changes for participants and their socio-political and physical environment.

The processes of globalization at play in such an intervention have received a great deal of attention in academia.[1] Although there are contesting views about the nature

[1] While there is no universally accepted definition of globalization, I adopt Giddens' (1991) concept of a 'stretching' of the relations between local and distant processes and events. This 'stretching' is engendered by worldwide processes such as trade liberalization, deregulation, decentralization, and the development of communication and transportation technologies that have facilitated extensive flows of information and material resources (Kelly 2000; Angelsen and Wunder 2003). Initiated in the late twentieth century, this phenomenon is distinct from what was called 'internationalization' in the late nineteenth century. In the

and extent of these processes, it is widely agreed that global market integration is engendering structural changes in northern and southern economies, and generating uneven outcomes in different sectors and localities (Angelsen and Wunder 2003; Challies 2008). For many rural households in the developing world, improved access to international primary commodity markets represents a unique and dynamic economic opportunity. Yet, in such locations, the social inequities and negative environmental impacts stemming from globalization are also coming to the fore (Murray and Raynolds 2000). Donors, non-governmental organizations (NGOs) and development aid agencies are therefore trying to assist small-scale producers of primary commodities in the developing world, such as Alimata, to raise their share of the returns derived from global market sales while respecting ecological objectives.

In this pursuit, donor-led interventions have tended to focus on micro-credit schemes, capacity-building programs, and on integrating producers into high-return market niches. The Fair Trade scheme mentioned above figures as one of these initiatives. Proponents of Fair Trade define it as a social justice movement establishing solidarity between consumers and producers. It represents a specialized niche market created to improve the remuneration and quality of life of small-scale producers in the Global South by directly linking them with (generally Western) importers or retailers willing to pay 'equitable' prices for superior-quality products (Whatmore and Thorne 1997; Raynolds 2000; Rice 2001; Bryant and Goodman 2004). Consumers then purchase the 'fairly traded' commodity, often recognized by the 'Fairtrade' seal it receives from the Fair Trade Labelling Organisations International (FLO), partly owing to its perceived social benefits.[2] Beyond its commercial aspect, Fair Trade also refers to the "often hidden but crucial ongoing development work that is undertaken to bring marginalised producers and their organisations up to the standards of FLO", and to advocacy work seeking to incite consumer action (Le Mare 2008: 1923).

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latter case, goods were mainly manufactured in one country and subsequently exported (Feenstra 1998). In contrast, in this period of globalization, trade is predominantly in services and sub-components that can be produced and assembled in different countries; a process requiring sophisticated forms of coordination (Kaplinsky 2004). For some of the debates surrounding globalization, see Dicken (1998), Held et al. (1999), Appadurai (2000), and Giddens (2003).

[2] The role of the Fair Trade Labelling Organisations International in the Fair Trade movement is discussed in Chapter 7.

Based on the belief that Fair Trade promotes social justice, rural development, and environmental conservation, great monetary commitments and a growing number of actors have become involved in promoting this model (Raynolds 2000; Rice 2001). Yet, previous development interventions have shown that if inadequately devised, donor-led projects such as those based on Fair Trade can generate counter-productive outcomes hindering producers' welfare and resulting in an over-exploitation of resources (Carney and Watts 1990; Schroeder 1999). Moreover, claims that Fair Trade may be counterproductive to producers in the long-run by prolonging dependence on goods with poor prospects and retarding diversification (Le Clair 2002; Booth and Whetsone 2007; Collier 2008) have cast some doubt on the long-term value of Fair Trade in improving producer livelihoods. The consequences of Fair Trade schemes thus require careful consideration.

Although research on the Fair Trade movement has begun to take off in the past decade (Rice 2001; Mendez 2002; Moore 2004; Parrish et al. 2005; Bechetti and Costantino 2008; Utting 2009), the existing literature underscores the need for greater attention to contextual variables (Mayoux 2001) and for empirically-founded analyses of the local effects of this trade model (Rice 2003; Maseland and de Vaal 2002). Further assessments of the strengths, weaknesses, and overall sustainability of donor-led Fair Trade projects with respect to producer communities are required to improve the livelihood prospects of participating producers, and guide NGO practitioners and policymakers in the development of appropriate projects and policies. Thorough analyses of the effects of Fair Trade are also essential to build consumer confidence in the movement.

Accordingly, this case study considers the sustainability of such Fair Trade projects involving shea butter, an African non-timber forest product (NTFP).[3] Since the 1990s, shea butter (French: *karité*) has become increasingly known in the West due to its growing integration in skin care products in the multi-billon dollar cosmetics industry.

[3] I refer to non-timber forest products (NTFPs) as "all the biological material (other than industrial roundwood and derived sawn timber, wood chips, wood-based panels and pulp) that may be extracted from natural ecosystems, managed plantations, etc., and be utilized within the household, be marketed, or have social, cultural or religious significance" (Wickens 1991: 3). There exist hundreds of NTFPs of chief importance to global trade, including essential oils, gum Arabic, honey, mushrooms, medicinal plants and nuts (such as shea), as well as fauna. The collection and sale of NTFPs involves the labour of millions of people, many of whom reside in impoverished rural areas of the developing world (Carr et al. 2000).

The product derives from the African tree *Vitellaria paradoxa* (Figure 1.1), which grows in 18 countries across a 5000-kilometer expanse of semi-arid savanna, south of the Sahara (Figure 1.2) (Hall et al. 1996).[4] The species is central to the region's agricultural peoples and ecosystems. It is valued for its medicinal properties, highly nutritive fruit, and hardwood, but its most prized derivatives are its nuts (Figure 1.3) (Dalziel 1937; Burkill 1985-2000). Butter extracted from these nuts (shea butter) provides the principal source of dietary fat for populations living in many regions of the species' range (Agbahungba and Depommier 1989; Lamien et al. 1996). Owing to their key nutritional (Crélerot 1995), medicinal (Abbiw 1990), economic (Chalfin 2004) and cultural (Kaboré 1987) functions, shea trees are among the only ones left standing when fields are cleared for agriculture. Thus, although the species is not planted, it has been actively selected for, managed, and protected in agro-silvicultural systems for over a thousand years (Dalziel 1937; Neumann et al. 1998; Kahlheber 1999).

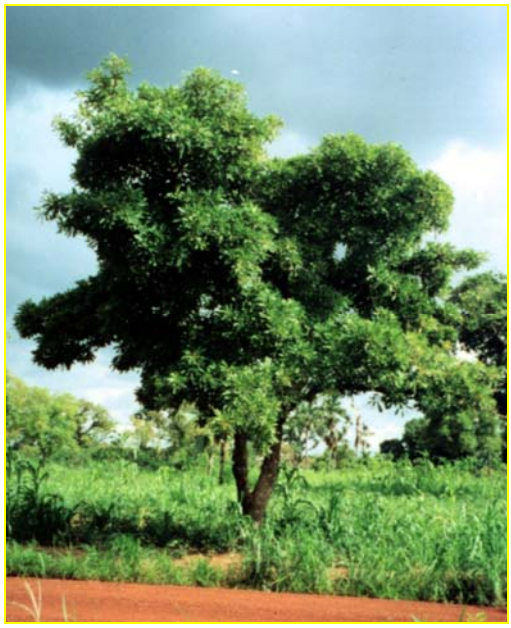

Figure 1.1: Shea Tree (*V. paradoxa*) (Source: Author 2001)

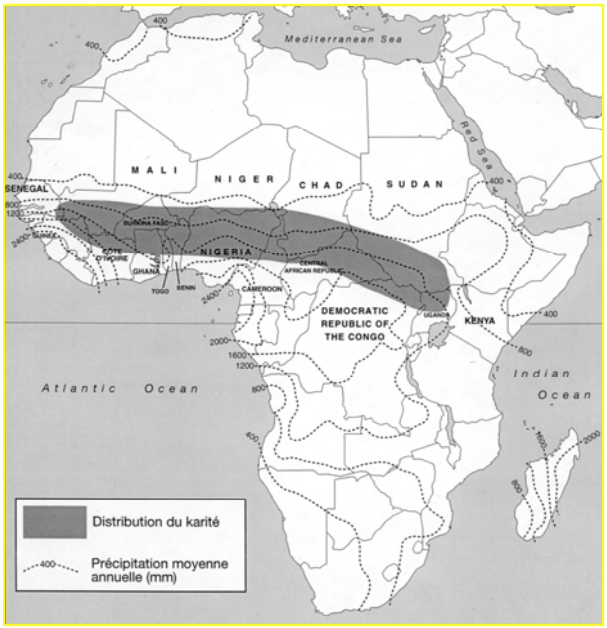

Figure 1.2: Shea Tree Distribution in Africa (Source: Elias and Carney 2004: 77)

[4] Nomenclature of the shea tree frequently refers to its earlier name, *Butyrospermum paradoxum* (C.F. Gaertn.). The subspecies *paradoxa* is present in the western Sahel in Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Ghana, Guinea, Guinea Bissau, Mali, Niger, Nigeria, Senegal, and Togo. The eastern *nilotica* subspecies occurs in Ethiopia, Sudan, Uganda and the Democratic Republic of the Congo (Hall et al. 1996).

Figure 1.3: Shea Fruit, Nuts, and Kernels (Source: Author 2001)

For centuries, Sudano-Sahelian women have collected shea nuts and converted them into butter (Lewicki 1974). In fact, shea is one of the few regional products whose extraction, processing and sale are under the control of women, with shea butter sales generating between 20 and 100 per cent of rural female revenues in key producing countries such as Burkina Faso, Benin, and Ghana (UNIFEM 1989; Schreckenberg 1999; Chalfin 2004). Advocates for gender equality and sustainable development are therefore pursuing the growing global demand for shea butter to ensure that female producers participate in emerging markets for the commodity, enhance their remuneration, and improve their quality of life.

Shea butter projects, sponsored by the United Nations Development Fund for Women (UNIFEM), the United Nations Development Program (UNDP), bilateral aid agencies and NGOs, have thus proliferated since the 1990s. Conceived within the 'Women in Development' (WID) development paradigm, shea butter projects promote standardized processing techniques for the production and sale of top grade shea butter through international—and when possible, Fair Trade—markets.[5] Donors attempt to link

[5] The 'Women in Development' approach emerged in the 1970s in an effort to include women in development interventions not through their roles in the reproductive sphere (where development agencies viewed them as mothers and dependents), but rather as "productive agents whose potential had been under-utilized under welfare-oriented approaches" (Kabeer 1992: 103). As discussed in greater detail in Chapter 2, the approach resulted in poorly conceived programming that mobilized women as sources of cheap labour and disregarded the opportunity cost of their participation (Leach 1991b; Kabeer 1992).

associations of shea butter makers directly with international importers willing to pay producers above-market prices for their product (Elias and Carney 2004).

However, despite increasing revenues, WID projects are often conceptualised without regard for the political economy of local communities. Former WID initiatives have been critiqued for ignoring key factors such as local power structures that bear directly on female access rights (in this case to shea nuts), decision-making, and resource management (Rocheleau 1987; Green et al. 1998). This leads us to question whether Women in Development shea butter projects are sustainable, or whether they too comprise the oversights critiqued in former WID interventions that could jeopardize long-term project success and viability.[6]

1.2 AIM AND OBJECTIVES

To address some of the shortcomings discussed above, *the aim of this research is to assess the sustainability of shea butter projects in the centre-west region of Burkina Faso*. This aim is pursued by way of the following three objectives:

1. To investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered.
2. To analyse the conventional and alternative international shea nut and butter commodity chains originating in the centre-west region of Burkina Faso.
3. To assess the economic, socio-political, physical, and ecological effects of shea butter projects to date in the centre-west region of Burkina Faso.

To situate these objectives conceptually, I draw upon four major bodies of literature. First, the field of feminist political ecology provides a general analytical backdrop for my study. At a more focused level, key ideas from scholarship on traditional ecological knowledge inform my first objective, while works on commodity chains help me address my second objective. Finally, I adopt the sustainable livelihoods approach to

[6] The concept of 'sustainability' was popularized in 1987 in the World Commission on Environment and Development's (WCED) Brundtland Report. According to the WCED (1987: 43), sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." In this study, 'sustainability' is assessed according to the sustainable livelihoods framework discussed in Section 2.5 of Chapter 2.

pursue my third objective. Combined, concepts from these four perspectives form the building blocks my conceptual framework, which is discussed in Chapter 2.

My three objectives and the questions they address stem from specific considerations regarding gendered shea agroforestry, shea commodity chains, and socio-economic and ecological issues pertaining to Burkina Faso's shea butter projects. This contextual information is briefly outlined below and detailed in Chapters 5 to 9. First, it is worth reiterating that, as noted earlier, Fair Trade refers not only to the commercial aspect of the movement but also to the developmental efforts mobilized to help producer associations achieve Fair Trade certification. In this study, it was not always possible to distinguish the effects of Fair Trade exports *per se* from those stemming from NGO assistance to shea producers or from the creation of the shea butter producers' Union, since these are all facets of an integrated project.

1.2.1 Objective 1 and Subsidiary Questions

- To investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered.

Despite the historical centrality of rural women in shea nut collection and processing, female agriculturalists have been repeatedly ignored in studies pertaining to shea agroforestry (Carney and Elias 2007).[7] In addition, although shea tree conservation is essential for continued shea butter exploitation, the variables causing male and female cultivators to maintain, or eliminate, shea trees in their fields have not been systematically studied. As Howard (2003: 33) explains, more generally, "some researchers have attempted to develop conceptual frameworks to assess which factors motivate indigenous or peasant farmers to conserve biodiversity, but to date these have neglected to consider gender relations as potentially significant." In the context of this study, these oversights are problematic not only because they undervalue women's knowledge, but also because aid projects, pursuing the dual goals of economic

[7] Agroforestry is the practice of integrating trees and shrubs with other cultivars. The term 'agroforestry' refers to the physical agroforestry system as well as to the practice of managing this system. In this thesis, I generally use to term to indicate the practice of shea tree management (with the related knowledge and social relations) in cultivated fields.

development and environmental conservation, are based upon an incomplete understanding of the gendered shea agroforestry system.

The first part of my study (Chapter 5) thus explicitly considers gender relations and women's role in shea tree selection and management. Drawing from concepts from scholarship on traditional ecological knowledge, I explore how women and men of different ethnic groups come to know, use, and manage shea trees, and how their activities are reflected in the physical features of shea parklands.[8] Specifically, my first objective addresses the following three questions:

1. What use and knowledge of shea do male and female Burkinabè farmers have, and how do they manage shea trees in their fields?[9]

This question refers to gendered management of factors such as tree productivity, tree and nut traits (phenotype), parasitism, and pruning, among others.[10]

2. What factors incite Burkinabè farmers to conserve particular shea trees in their fields?

With this question, I want to investigate how factors such as the characteristics of specific shea trees influence their retention in, or removal from, cultivated fields, and how this process of tree selection is physically manifested in the landscape.

3. How, if at all, do use, knowledge, and management of shea as well as shea tree conservation incentives vary according to gender and ethnicity?

In sum, these three questions begin to address the sustainability of shea butter projects, as shea tree management and conservation are essential for continued shea butter exploitation. Producer access to a vigorous and productive shea tree population represents a primary condition of project success. My investigation therefore examines the current state of the resource base as well as the long-term potential of shea butter projects to influence the species' conservation prospects in the Burkinabè context.

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[8] Managed landscapes of mixed vegetation and protected trees are known as agroforestry parklands. They are the result of a calculated land management system among specific ethnic groups, which protect arboreal species providing desirable products when fields are cleared and burned for agriculture (Boffa, 1999).

[9] 'Burkinabè' refers to people and things from Burkina Faso.

[10] Parasitic plants are a leading cause of mortality among shea trees among their northernmost range of Malian and Burkinabè populations (Boussim and Guinko 1993). In Burkina Faso, as many as 95 per cent of shea trees are host to four different vascular plant species, which stunt the growth of their host and reduce shea fruit production (Bonkoungou 1987; Boussim et al. 1993).

1.2.2 Objective 2 and Subsidiary Questions

- To analyse the conventional and alternative international shea nut and butter commodity chains originating in the centre-west region of Burkina Faso.

Shea nuts and butter circulate within diverse networks of actors and places before reaching consumers in the Global North. This study focuses on three such networks that draw their origins in the centre-west region of Burkina Faso: the conventional shea nut, conventional shea butter, and alternative shea butter commodity chains. It is this third commodity chain, centred on the alternative trade in shea butter, that shea butter projects have developed and promoted. In each chain configuration, there are winners and losers. Exploring the uneven power relations and distribution of rents among actors operating at different stages along the commodity's journey, and in similar stages of distinct commodity chains as shea travels from Burkina Faso to North America and Europe, reveals the opportunities and drawbacks distinct market niches offer for the livelihoods and well-being of shea producers.

For the stakeholders involved in shea commodity networks, shea carries an economic, but also a symbolic importance. As is also the case with other commodities, the meanings associated with shea nuts and butter change over time and in novel socio-economic conditions (Appadurai 1986). In this study, I investigate how shea nuts (Chapter 6) and shea butter (Chapter 7) are transformed materially, but also symbolically from their point of production to their final consumption. Further, I analyse how the meanings imbued in shea butter production, exchange, and consumption are renegotiated as the commodity chain adopts new configurations in alternative trade markets, including those based on Fair Trade and promoted by shea butter projects. These shifting meanings, within Burkina Faso and abroad, bear upon the sustainability of shea butter projects as they influence the appeal of partaking in these projects and the socio-political consequences projects carry for their participants.

In light of these considerations, I adopt a commodity chains perspective to address my second objective and its two subsidiary questions, which are:

1. How are the international conventional trade and alternative shea nut and butter commodity chains that draw their origins in Burkina Faso's centre-west region configured?

This question refers to the human actors involved in each of the three shea commodity chains mentioned above, including their gender, ethnicity, migrant or indigenous status, and rural-urban identity. It also concerns the distribution of rents along these commodity chains, and the benefits associated with participation in these networks.

2. What meanings does shea butter carry for the actors involved in the distinct shea commodity chains that draw their origins in Burkina Faso's centre-west region?

With this question, I investigate how the symbolic value of shea butter is transformed along successive nodes of the shea commodity chains, and how the meanings associated with the commodity influence and are influenced by the conditions of its production, exchange and consumption.[11]

1.2.3 Objective 3 and Subsidiary Questions

- To assess the economic, social-political, physical, and ecological effects of shea butter projects to date in the centre-west region of Burkina Faso.

Drawing on the sustainable livelihoods approach reviewed in Chapter 2, I unpack this objective into the following five questions, which I address in Chapters 8 and 9:

1. What are the effects (if any) of shea butter projects on the financial capital of female shea producers, their households, and communities in the centre-west region of Burkina Faso?[12]

Although previous studies have considered the incomes derived from NTFP marketing, considerably few have focused on the use of that income for improving personal, household and community welfare. In Chapter 8 of this study, I therefore examine the revenues shea producers are earning through participation in shea projects, but also how these revenues translate into short- and longer-term investments. Additionally, participation in shea projects can carry significant opportunity costs, which I factor into my analysis of project sustainability.

[11] In the commodity chain literature, 'nodes' refer to production operations in which raw materials or labour, power, transportation, distribution, and/or consumption are acquired or organized (Gereffi 1994: 2).
[12] I define the terms financial capital, social and human capital, physical capital, and natural capital in Chapter 2.

2. What are the effects (if any) of shea butter projects on the social and human capital of female shea butter producers, their households, and communities in the centre-west region of Burkina Faso?

Fair Trade projects, such as the ones on which I focus, mobilize substantial resources to consolidate producer associations and develop the capacities of their members. As a result, it has been argued that the impacts of Fair Trade are most evident when considering the social and human capital of their beneficiaries (Renard 1999; Rice 2001; Mendez 2002; Nelson et al. 2002). Attention to these social and human development effects, which can augment women's incentives to participate in shea projects, is thus essential to my assessment of the sustainability of shea butter projects. Hence, in Chapter 9 of the thesis I consider the effects of shea projects on conjugal relations and female labour, as well as the associative, organizational, and capacity-building outcomes of projects. I additionally examine issues of equity and social differentiation within the association.

3. What are the physical capital effects (if any) of shea butter projects on participant communities in the centre-west region of Burkina Faso?

To address this question, I focus on the ways the physical (human-produced) landscape has changed in my three study sites as a result of shea projects. These changes, detailed in Chapter 9, include the creation of infrastructure to facilitate shea butter production and sales. In addition, physical capital effects refer to the acquisition of productive equipment and consumer durables by individual female shea producers.

4. What are the ecological effects (if any) of shea butter projects in the centre-west region of Burkina Faso?

Environmentalists concerned with deforestation believe that enhanced revenues from NTFP sales can improve the natural capital of producers and their communities by favouring renewable use of the tree species (Cunningham 2001). Yet, projects promoting nut processing for export purposes may affect consumption of auxiliary woody species and of water, as large quantities of fuelwood and water are required for shea processing. Further, increasing the value of shea derivatives can intensify the harvesting pressure on shea nuts, and threaten species reproduction (Ferris et al. 2001; Angelsen and Wunder

2003). This third question, examined in Chapter 9, takes up these issues as they relate to the sustainability of shea butter projects.

5. What are the similarities and differences in the economic, social, human development, and physical effects of shea butter projects along the rural-urban continuum in the centre-west region of Burkina Faso?

This final question cuts across the other four to compare the effects of shea projects at the individual, household and community levels in the three study sites, which are described in the following section. Addressing these five questions as a whole facilitates an assessment of whether local shea projects do, indeed, carry long-term potential to improve producers' well-being while maintaining sound environmental objectives.

In the thesis' concluding chapter (Chapter 10), I draw on the information gathered to meet my three objectives to critically analyse the sustainability prospects of shea butter projects as they are currently carried out in the central-west region of Burkina Faso. Acquiring a fuller understanding of the factors that foster or hinder project sustainability is critical to guide the development of projects and policies that maximize the benefits of Fair Trade for producer communities and curtail possible pitfalls. By facilitating this understanding, my research highlights the opportunities and difficulties arising from the integration of rural African communities—with an emphasis on female producers—into global commercial circuits. The case study that is at the heart of my thesis is thus of broader significance for understanding the gender equality and livelihood implications as well as the patterns of rural development stemming from current donor emphasis on NTFPs, Fair Trade, and sustainable development.

1.3 STUDY SITE

As previously mentioned, this study is situated in Burkina Faso, the world's top shea exporter.[13] The country's shea trade must be understood within the context of specific socio-economic and geographic circumstances. Burkina Faso is a small, landlocked parliamentary republic and former French colony, which forms part of West Africa's drought-prone Sahel (Figure 1.4). Rainfall increases from 400 mm in the North (quite marginal for agriculture) to 1000 mm in the southern Sudano-Sahelian zone. The shea

[13] In the 1980s, Burkina Faso supplied 25 per cent of the global demand for shea (Terpend 1982; Booth and Wickens 1988). Other key exporting countries include Mali and Nigeria.

tree thrives within this environment. Burkina Faso is also one of the poorest countries in the world, and women are over-represented among the country's poor (UNDP 2003). Since the 1970s, the deteriorating international value of agricultural products and livestock, which represent Burkina Faso's primary sources of export revenues, coupled with International Monetary Fund (IMF)-mandated structural adjustments since 1991, have had severe economic consequences for the country. International shea sales are critical to the nation's depressed economy, with the commodity intermittently ranking third among Burkinabè exports since the 1980s after cotton and livestock (Terpend 1982; Booth and Wickens 1988).

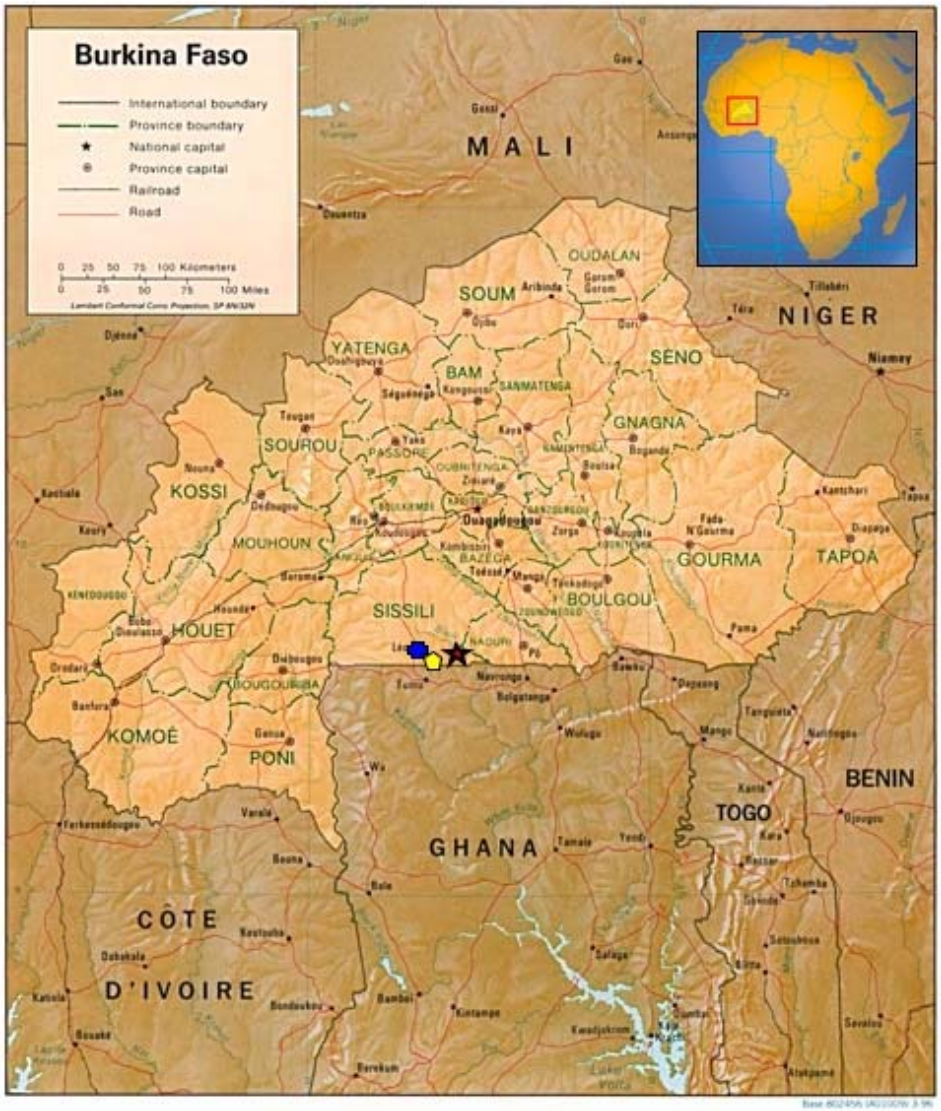

Figure 1.4: Burkina Faso and the Three Study Sites (Léo ✚ Lan ⬠ Prata ★)
(Adapted from the US Central Intelligence Agency, Retrieved online November 2009)

Against this backdrop, Burkina Faso has experienced a rise in international aid and development projects since the 1990s (Compaoré 2000). Projects centred on shea are popular within Burkina Faso, as they also address the gender concerns of aid agencies. Thanks to longstanding NGO support, Burkinabè shea butter associations are now known to supply a top-quality product and to lead in the Fair Trade shea butter market.

Shea is also deeply integrated in the cultures of agricultural Burkinabè peoples. The species is extensively managed in Burkina Faso, where it represents upwards of 80 per cent of the trees left standing in farmed fields. Shea parklands are found throughout the country, except at its northernmost tip (Boffa 1999). Based upon genetic studies, it has even been suggested that due to longstanding management of shea trees located in the country's Mossi Plateau, the region may represent the species' centre of domestication (Maranz and Wiesman 2003). The shea tree's profound integration within Burkinabè cultures was an additional factor motivating me to conduct this study in Burkina Faso.

As discussed in greater detail in Chapter 3, my three study sites are situated in the province of Sissili, near the Ghanaian border, in the centre-west region of Burkina Faso (Figure 1.4). Specifically, I focus on the small town of Léo (Figure 1.5), which is the provincial capital, as well as the neighbouring peri-urban village of Lan, and the rural village of Prata located 49 kilometres east of Léo. Together, these sites allow me to examine my three objectives across the urban-rural continuum of places where the shea projects on which I focus are taking place. The province of Sissili is home to a high density of shea trees. In addition, it has received a high influx of migrants from the Moose and FulBe ethnic groups, who have joined the province's original inhabitants of Gurunsi origin (Kristensen and Balslev 2003; Ouédraogo 2003a).

The three study sites have a decade-long history of NGO involvement, which is roughly representative of other rural Burkinabè villages involved in shea projects (A. Tagnan, July 2005). Léo houses the headquarters of the *Union des Groupements des Productrices de Produits Karité de la Sissili et du Ziro* (UGPPK), the association of shea butter producers upon whom this study is based (Figure 1.6). In turn, Prata is the birthplace of one of the first *Groupement Villageois Féminin* (GVF), or women's village

work group, to adhere to the UGPPK.[14] The number of women participating in Prata and Lan's GVFs is comparable to the size of women's groups involved in shea projects in other villages.

Figure 1.5: A Typical Street Corner in Léo (Source: Author 2006)

Figure 1.6: UGPPK Headquarters in Léo (Source: Author 2006)

[14] A GVF is an association of village women who work together toward common goals. The GVF structure and its origins are discussed in Chapter 3. The UGPPK regroups 33 GVFs from villages located in Burkina's provinces of Sissili and Ziro, making it one of the two largest shea butter unions in Burkina Faso.

1.4 Organisation of the Thesis

My three objectives and the research questions they address are analysed in results and discussion chapters 5 to 9. First, however, Chapter 2 sets the conceptual foundation for my study. Specifically, I review the literature on feminist political ecology, traditional ecological knowledge, commodity chains, and sustainable livelihoods. I draw upon key concepts from each of these fields to build a holistic conceptual framework that guides my research and interpretations. I additionally suggest ways in which my study can remediate some of the gaps in each of these bodies of literature.

Next, setting the groundwork for my analyses, Chapter 3 describes the Burkinabè context within which my study is situated. The discussion begins with an exploration of Burkina Faso's physical geography, demography, political history, and economy before turning to the livelihoods, social organization, and tenure rights of Burkinabè peoples. Focusing in on my three study sites, I conclude the chapter by describing the province of Sissili, and specifically the town of Léo and the villages of Lan and Prata.

The methodology I follow in this research is the object of Chapter 4. I detail the five different methods that dominate my data collection endeavours: observation, informal conversational interviews, semi-structured interviews, wealth classifications, and shea tree mapping and measurements. I highlight the ethical issues associated with the research, the reflexivity I practised throughout the process, language and translation issues, and methodological successes and challenges associated with my fieldwork and analysis.

The five subsequent chapters provide a critical analysis and interpretation of the empirical results of my study. Chapter 5 examines the shea agroforestry system to address the study's first objective and related research questions. I focus on the current state of Prata's shea parklands, as well as the gendered and culturally specific knowledge, management, and conservation of the shea tree.

The study's second objective and associated research questions are examined in Chapters 6 and 7, where I take a commodity chain approach to examine three distinct shea commodity chains. Chapter 6 describes the shea nut commodity chain, beginning with the nut collectors who sit at the chain's origin in the province of Sissili and extending to the Western agro-industries that import and transform shea kernels. Chapter

7 begins where Chapter 6 leaves off, as shea nuts are processed into butter. It compares the international conventional and alternative shea butter commodity chains, and considers the gains shea butter producers and other actors stand to earn within each of these chains. These two chapters further examine a range of socio-political issues surrounding the different nodes of the shea nut and butter commodity chains.

Next, Chapters 8 and 9 address objective 3 of the thesis and its subsidiary questions. The focus is on the local effects of shea butter projects on female producers, their households, and their communities. Drawing upon sustainable livelihoods frameworks, in Chapter 8 I examine the economic consequences of these projects, and in Chapter 9 I analyse the social, human, physical, and natural capital effects of shea projects at the three levels mentioned above.

In conclusion, in Chapter 10 I review the key results from this study and integrate the interpretations provided in the five previous chapters to present an overall assessment of the sustainability of shea butter projects in the central-west region of Burkina Faso. I demonstrate that these projects hold promise for improving producer livelihoods as long as they address a number of limitations explored in analyses Chapters 5 to 9. Finally, I provide policy recommendations based on these findings.

1.5 Conclusion

Due to their interface with multiple places, peoples and meanings, commodities provide a useful point of departure for linking localities to patterns of regional development, national production and international markets. Through a focus on African shea butter, this study enhances our theoretical and empirical understandings of the relationships between gender relations and resource conservation, as well as of sustainable development, NGO interventions, and Fair Trade in sub-Saharan Africa. Further, this research reveals whether an alternative economic opportunity emerging from global markets is truly creating a window for sustainable development that reaches the most underprivileged and inaccessible levels of society: rural women from the developing world.

CHAPTER 2

CONCEPTUAL APPROACHES TO STUDYING GENDERED LIVELIHOODS, FAIR TRADE, AND SUSTAINABILITY IN BURKINA FASO

2.1 INTRODUCTION

As discussed in Chapter 1, the overarching aim of this study is to assess the sustainability of shea butter projects in the centre-west region of Burkina Faso. The topic is complex and multi-dimensional, touching upon a range of issues from agroforestry and environmental conservation to gender, rural development, Fair Trade, and globalisation. Situating these issues conceptually and analysing their interconnections requires drawing from various fields of scholarship. The conceptual framework informing my study consequently builds upon four major bodies of literature. The first is the feminist political ecology perspective (Section 2.2), within which my study is broadly situated. At a more focused level, I draw upon key ideas from works on traditional ecological knowledge (2.3), commodity chains (2.4), and sustainable livelihoods (2.5). This chapter critically reviews the notions from these fields that found the conceptual basis of my study.

Figure 2.1 depicts the core concepts each scholarly tradition contributes specifically to one of my three objectives and more broadly to my overarching aim (refer back to Chapter 1). These notions are explored throughout the chapter, as I review the literature that supports my conceptual framework. Although Figure 2.1 portrays the four bodies of literatures in discrete boxes, the discussion that follows demonstrates that they are in fact intersecting and complementary. The conceptual overlaps among these fields are explored in the chapter's conclusion (2.6).

2.2 FEMINIST POLITICAL ECOLOGY

Political ecology emerged out of a concern to couch analyses of environmental change within their political economic contexts (Peet and Watts 1996; Forsyth 2003; Paulson et al. 2003). The sub-discipline finds its origins in a coupling of cultural ecology and environmental hazards studies—which emphasize biological ecology and earth sciences—with peasant studies and Marxist theory, which contribute a socio-political and economic focus to the field (Walker 2005). Although the appearance of the expression

dates back to the 1970s, formalization of the approach is attributed to two geographical monographs published in the 1980s: Blaikie's (1985) *The political economy of soil erosion in developing countries*, and a collection of essays edited by Blaikie and Brookfield (1987) entitled *Land degradation and society* (Watts 2009). The approach has since been widely adopted by scholars seeking to examine the nature-society nexus, particularly in rural areas of the Global South (Bryant 1992, 1998; Neumann 1992; Zimmerer 1994).

The political ecology approach, in its feminist turn, provides an analytical backdrop to my investigation of the sustainability of shea butter projects in Burkina Faso. Divided into two parts and three subsections, the following section reviews this sub-discipline and demonstrates its pertinence to my study. To begin, in Section 2.2.1 I define feminist political ecology, before moving on to its three central features: scale integration (2.2.1.1), an emphasis on gendered power relations (2.2.1.2), and an historical awareness (2.2.1.3). I then discuss how key concepts from the sub-discipline inform my research, while providing a critique of the feminist political ecology literature (2.2.2).

2.2.1 Defining Feminist Political Ecology

Political ecology emphasizes the politics and power relations that determine access to, and transformation and management of environmental resources across spatialities and scales over time. The perspective historically situates local divisions of labour and products within their environmental and political-economic structures (Blaikie and Brookfield 1987; Blaikie 1989; Bryant 1998; Peet and Watts 2004). It undermines apolitical views of ecological systems, focusing instead on the dynamics of "politicized environments" (Bryant 1998: 82). In so doing, political ecology emphasizes the social construction of environmental knowledge and natural resources, and the need to consider the perspectives of multiple resource stakeholders (Harvey 1974, 1977; Blaikie 1995).

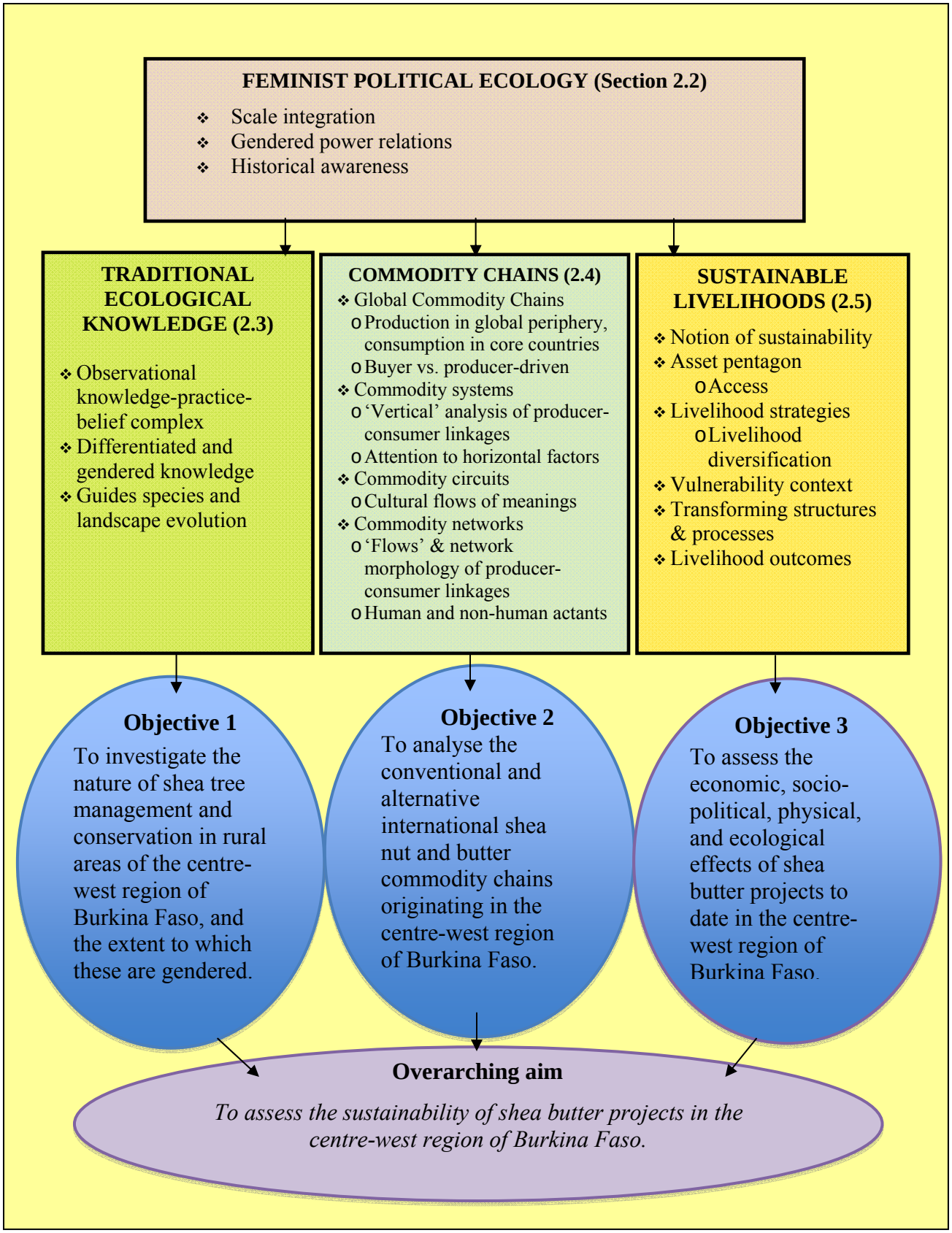

Figure 2.1: Conceptual Framework Guiding the Dissertation

Key themes in the political ecology literature include environmental production, knowledge, conservation, and control (Robbins 2004; Jones 2008). Scholars working in the field analyse the role of social relations in mediating access to natural resources (such as shea), and the negotiations, conflicts, and resistance that arise when access rights are reallocated or revoked (Carney 1988; Hecht and Cockburn 1989; Peluso 1992; Kull 2004). Others focus on the exchange networks of information, materials, and support through which people secure access to resources, improve resource use or resist unfavourable policies (Watts 1988; Zimmerer 2003). In its early days, political ecology research focused on landscape transformations occurring within post-colonial peasant societies in the throes of change. This 'change' was believed to originate primarily in macro processes, such as global economic integration (Watts 1983; Bryant 1998; Peet and Watts 2004). More recently, in what Rocheleau (2007) has called 'second generation' political ecology, themes have centred on the roles of activism and social movements in creating political resistance, engendering alternative development, and shaping the fate of environmental resources (Perreault 2003; Bebbington 2004). Likewise, scholars adopting a post-structural approach have examined discursive struggles over resources or the ways dominant and frequently scientifically questionable environmental narratives are used to advance political objectives of control over resources (Forsyth 2008; Jones 2008; Neumann 2008). Unifying all these studies is a concern for the ways the political-economic processes that marginalize resource users influence the use and management of environmental resources (Moore 1993).

The political ecology approach is empirically-driven, with local-level fieldwork drawing upon various methods to achieve a multi-dimensional, multi-scalar and integrative analysis of the role of men and women within ecosystems (Zimmerer and Bassett 2003). Emphasis is on producing a holistic view of the human-environment nexus rather than merely pointing to the proximate causes or symptoms of environmental change. As underlying issues of (in)equity and (un)sustainability in the distribution and control of natural resources come to the fore, aspects of nature-society relations become subject to challenge and reform (Robbins 2004). Robbins (2004: 13) thus describes political ecology as an emancipatory approach that extends beyond a body of literature to "something that people *do*, a research effort to expose the forces at work in ecological

struggle and to document livelihood alternatives in the face of ongoing change" (see also Walker 2006, 2007; Muldavin 2008; Rocheleau 2008).

> Within this field of scholarship, the *feminist* political ecology turn:
>
> > begins with the concern of the political ecologists who…have focused largely on the uneven distribution of access to and control over resources on the basis of class and ethnicity [but] treats gender as a critical variable in shaping resource access and control, interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for 'sustainable development' (Rocheleau et al. 1996: 4).

Combining perspectives from the fields of ecology, development, and politics with gender studies, feminist political ecology explores the gendered socio-political and economic contexts shaping environmental policies and practices (Carney and Watts 1991; Leach 1991b; Rocheleau et al. 1996; Byrant 1998; Pearson and Jackson 1998; Schroeder 1999). Three central components of feminist political ecology research are key to my own analysis of the sustainability of projects targeting marginalized female producers in a changing African society. Reviewed consecutively below, these are: scale integration (2.2.1.1), an emphasis on gendered power relations (2.2.1.2), and an historical awareness (2.2.1.3) (Figure 2.1).

2.2.1.1 Scale Integration

Feminist political ecologists, and political ecologists more generally, recognize the multi-scalar nature of 'politicized environments' and the need for scale integration, both temporal and spatial, to weave together social and environmental phenomena (Zimmerer and Bassett 2003; Robbins 2004; Rangan and Kull 2009). Having been influenced by household studies, political ecologists skilfully engage in micro-level analyses to gain insights into processes of resource allocation and the workings of poverty (Agarwal 1997; Schroeder 1999; Quisumbing 2003; de Haan and Zoomers 2005). Yet, while maintaining a grassroots focus on the resource users, research in the field elucidates how livelihood strategies and access to resources hinge upon larger-scale contextual variables. Scholars think across scales—from the global to the household and individual spheres—to understand the shifting nature and reworkings of social practices, gender ideologies, and power configurations that bear upon the resource user's environmental management

decisions.[15] In the words of Emel and Peet (1989: 60), political ecology analyses are "location-specific, place-based and conjunctural" all the while integrating "non-place based relations" such as market and class relations. While recognizing that scale can be produced by biophysical processes, political ecology scholars insist that scale is also an historically contingent and politically contested social construct (Zimmerer 2006; Neumann 2009; Rangan and Kull 2009).

In their seminal work on soil degradation and vegetation change, Blaikie and Brookfield (1987: 70) consider how an "exogenous" political economy shapes the (generally rural) 'land manager' or production unit's environmental behaviour and marginalization. The authors unpack this political economy using 'chains of explanation'; that is, they explain local phenomena (in this case, environmental changes) by linking them to conditioning variables at the meso (land use practices) and macro (the state and international economy) realms. The process of situating local environmental specificities in their historical and multi-scalar political economic contexts, known as 'progressive contextualization' (Vayda 1983), is a central tenet of political ecology (Blaikie 1985; Bryant 1998; Zimmerer and Bassett 2003; Peet and Watts 2004; Robbins 2004; Walker 2005). Attention to the gendered power relations inherent to these contexts is central to the feminist turn of the approach.

2.2.1.2 Gendered Power Relations

As previously mentioned, research in political ecology centres on the role of power relations—in the realms of material practices and meanings—in determining (in)equitable access to environmental resources. According to Bryant (1998: 86):

> Running through most political-ecology research is the notion of social and environmental conditions constituted through unequal power relations. At one level, power is reflected in the ability of one actor to control the environment of another. Such control may be 'inscribed' in the environment… Resistance to such control may also become 'embedded' in the environmental 'text'.

Unequal power relations are manifest across scales, such as between the state and peasantry, but also among members of a given group, such as within a household. Political ecology scholars analyse how these power relations shift and are resisted, how

[15] Bryant (1998) urges political ecologists to further extend this scale to the bodily realm—indeed a vigorous area of contemporary feminist scholarship (Grosz 1994; Nelson 1999; Longhurst 2005)—which should also be conceptualized within larger-scale processes.

they influence the control of labour and resources, and how these processes are reflected in the physical environment. Research in the field further elucidates how knowledge and power interlock. In this regard, studies explore the social construction of environmental 'crises', and the role of competing knowledge claims in legitimizing politics of control and exclusion on so-called environmental grounds.

For feminist political ecologists,

> interdependence between the socio-cultural relations of gender and the day-to-day realities of gendered resource use […] renders invalid theories that treat either "gender" or "environment" as independent variables in their relationship with one another (Leach 1994: 39).

Consequently, the approach is centred on the *gendered* power relations that frame resource use decisions. To this end, it integrates the concerns of political ecology with notions developed within the Gender and Development (GAD) and gender mainstreaming literatures. Due to their relevance to my study of female shea butter producers, I next briefly outline the origins of these fields and the key concepts they contribute to the feminist political ecology approach.

Since the late 1970s, concern about the role of women in development and in environmental management has grown. It has since been acknowledged that rural women's experiences with and knowledge of the environment—as agriculturalists and providers of water, fuelwood, and non-timber forest products—are distinct from men's, largely due to gender-ascribed roles in production and reproduction (Haraway 1991; Agarwal 1992; Jackson 1993a, 1993b). Based on these realizations, the 1970s saw the creation of a new development paradigm centred on women in the Global South. The 'Women in Development' (WID) approach—within which shea butter projects have been conceptualized—and subsequently the 'Women, Environment and Development' (WED) approach came to the fore positing, among other things, an essential connection between women and the natural world (Shiva 1989; Mies and Shiva 1993). Unfortunately, these approaches often resulted in inappropriate development interventions, which mobilized women as sources of cheap labour and ignored the opportunity cost of their participation in development projects focusing on the environment (Leach 1991b). Among other shortcomings, WID and WED failed to address the contingent, historical and context-specific nature of gender relations (Kabeer 1994). These development paradigms were critiqued for

nurturing essentialist notions of the female subject, depicting women as a separate and homogeneous group, and representing ethnocentric (middle class white and Western) gender relations as fixed and immutable (Pearson and Jackson 1998).

The subsequent re-conceptualization of the gender-environment relationship resulted in the 'Gender Analysis in Development' (GAD) approach. GAD rectified many of its precursors' shortcomings by focusing on gender *relations* rather than merely looking at women. Using gender as a 'lens' through which to understand the political economy of societies in transition, GAD analysis considers the ways gender is shaped by, and reproduced in, cultural norms and dominant discourses (Dolan 2001; Kabeer 2003). It provides insight into gendered asymmetries regarding tenure, labour, decision-making, and income opportunities (Carney and Watts 1991; Leach 1991a; Pearson and Jackson 1998; Schroeder 1999). The field thus offers a useful approach by which to contextualize local gender dynamics within the political economy and its constitutive power relations (Dalla Costa and Dalla Costa 1993; Hanson and Pratt 1995; Kofman 2000).

GAD provides significant improvements to development theory, including the recognition that a woman's social identity consists of multiple facets, including age, kinship and socio-economic status, of which gender is only one aspect. It further challenges the pervasive misrepresentation of women as villains, altruistic victims or resources to be used—without pay—in the face of environmental degradation (Leach 1991b). It also carries an emancipatory slant in seeking to reform the gendered constraints upheld by gender ideologies, the normative division of labour and resources, as well as larger-scale policies (Kabeer and Van Anh 2000; Kwan 2000; Rose 2000). A spinoff of GAD, the gender mainstreaming approach integrates these concepts from GAD scholarship, but underscores the need to place gender relations at the core of every stage of research, policy-making, program design and implementation, rather than as a separate component in these processes (Kabeer 2003).

Certain key concepts in the GAD and gender mainstreaming literature hold particular resonance for feminist political ecology research. Foremost is the notion of the differentiated household, whose members face different opportunities and constraints conditioned by gendered norms and ideologies (Folbre 1986; Guyer 1988; Thorsen 2002). Drawing upon revised models of household economics, feminist political

ecologists conceive of the household as "the site of separable, often competing interests, rights and responsibilities" rather than a unitary entity with a single set of preferences (Guyer and Peters 1987: 210).[16] Consequently, scholars argue for the need to consider women's and men's separate spheres of production, consumption, and decision-making, while also remaining attentive to how these relate to each other (Guyer 1980; Folbre 1986). Guiding them in this analysis is the concept of the 'conjugal contract'; the terms under which access to resources and services are negotiated and exchanged among household members (Whitehead 1981) (discussed further in Section 3.6.1, Chapter 3). In this understanding of the household, the head of the household cannot be assumed to altruistically represent the household members' best interests. While altruism may play a role in the intra-household allocation of resources, household resource flows more precisely reflect each member's 'voice' (bargaining power), and 'exit' options (alternatives awaiting each member in the absence of cooperation), among other dimensions (Folbre 1986; Udry 1996; Katz 1997; Carter and Katz 1997). Socio-economic changes, such as new economic opportunities—like the ones arising in the context of shea projects—or the introduction of new technologies, that alter the state of these variables can thus shift the balance of power within the household and affect collective and individual production and welfare (Doss 2001).

Feminist political ecology applies these notions to an understanding of human-environment interactions. The focus is on the gendered knowledge, responsibilities, rights, practices, and social movements surrounding the use of local resources, such as shea (Shiva 1989; Rocheleau et al. 1996; Gururani 2002). Scholars also consider how gendered power relations play out across scales, and as discussed below, over historical timeframes.

2.2.1.3 Historical Awareness

Research in political ecology emphasizes the historical specificity of relations of production. In the words of Donald Moore (1993: 382),

[16] This contrasts with Becker's (1981) household-welfare-function model—the best-known model of household resource allocation among economists—that sees household members as sharing common preferences and a single decision-making logic. Becker's model is also referred to as the 'common preference' or 'unitary' model.

> historical consciousness—how the past is remembered, constructed, and invoked in the present—as well as an "event history"—transformations in social relations of production, in state policy, and in the regional political economy—critically influence…cultural understandings and, with them, resource politics in the present.

Consequently, historical patterns are woven into analyses of contemporary resource use. Political ecologists adopt an historical perspective to examine access to, control over, and exclusion from natural resources (Leach and Mearns 2006). For instance, scholars examine the lasting influence of colonial policies on human-environment relations, in the symbolic and material arenas. This historical awareness reveals people's 'remembered pasts', as well as shifts in their relationship to place and in cultural understandings of resource entitlements (Moore 1993). In particular, attention to the historical factors shaping gendered customary rights to resources, resource-based livelihoods, and landscapes is central to feminist political ecological analyses.

2.2.2 Drawing from the Feminist Political Ecology Literature

Notions derived from feminist political ecological research are useful for illuminating the relationship of women-centred development projects to global demand for commodities as well as the environmental consequences of these projects. My study is informed by the approach in its attention to the ways dynamic **historical conditions** and **gendered power relations**, operating at **multiple scales**—with an emphasis on the household, community, and international realms—affect access, use, and management of shea and the sustainability of shea butter projects (Figure 2.1). In particular, I adopt a feminist political ecology perspective in treating gender relations as a central analytical variable influencing the sustainability of shea projects that are mobilizing women in the transformation and sale of a local resource.

Yet, feminist political ecology scholarship has been critiqued for depicting women as a homogeneous category (Green et al. 1998), and for being overly deterministic by omitting the roles that personal agency and social identity play in determining intra-household negotiations and resource flows (Dolan 2001). My research addresses these concerns by considering the traits influencing individual responses to shea projects as well as intra-household relations. Towards this end, in this thesis I

examine how multiple facets of shea producers' social identities, such as ethnicity and wealth status, influence the effects shea projects are having on these women.

Particularly in its early period, political ecology was also criticized for adopting an overly structuralist perspective. 'Land managers' were presumed to make resource-use decisions wholly dictated by the constraints placed upon them by meso and macro-scale variables, such as the State (Moore 1993; Bryant 1998). In this thesis I adopt a different perspective. I demonstrate in Chapter 8 that although the shea producers on whom I focus share a particular meso and macro context, their resource use and investment decisions vary according to their culture and personal preferences.

Finally, critics claim that political ecology lacks sufficient attention to the biophysical dimensions that shape human-environment interactions (Vayda and Walters 1999; Zimmerer and Bassett 2003; Walker 2005; Simon 2008). In this study, I examine the biogeographical features of shea landscapes and the influence of ecological factors, such as tree yields and parasites, on access to and management of shea, and ultimately on project sustainability. In so doing, I demonstrate how ecological and social factors intertwine and are mutually reinforced in explaining some of the localized effects of globalisation. As such, my research bridges previous studies on shea, emerging from various disciplines, which have focused either exclusively on the socio-economic or on the ecological aspects of the resource.

2.3 TRADITIONAL ECOLOGICAL KNOWLEDGE

Works on traditional ecological knowledge (TEK) contribute valuable complementary notions to the study of the sustainability of shea butter projects in the centre-west region of Burkina Faso. In particular, the literature on TEK provides a basis for analysing the first objective of my study in Chapter 5 of this thesis. This objective is to investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered. To this end, key concepts from TEK scholarship allow me to examine the traditional ecological knowledge on which men and women rely to manage and conserve shea trees.

Ethnobotanists, anthropologists, and geographers among others have detailed the extensive environmental knowledge possessed by societies that have long relied on

natural resources for subsistence (Berkes et al. 2000). Their findings have informed environmental policy, been integrated into environmental impact assessments, and founded the basis for co-management arrangements between states and local resource users (Freeman 1992; Stevenson 1996; Nadasdy 1999; Mauro and Hardison 2000; Houde 2007). Further, projects involving non-timber forest products such as shea nuts and butter as well as those focusing on endangered species and biodiversity conservation are drawing upon TEK to devise sustainable livelihood options for local people (Balée 1987; Denevan and Padoch 1988; Gadgil et al. 1993; Nabhan 2000).

Divided into four parts, this section critically reviews the literature on TEK and demonstrates its usefulness in informing this study on shea. To begin, in Section 2.3.1 I define TEK, and examine the observation-practice-belief complex that characterizes it. Next, in Section 2.3.2 I draw attention to the differentiated and gendered knowledges held within a community, and in Section 2.3.3 I underscore the role of TEK in guiding the evolution of floral and faunal species as well as landscapes. In conclusion (Section 2.3.4), I point to the ways the literature on TEK guides my study of shea in Burkina Faso, all the while identifying some of the shortcomings of this field of scholarship.

2.3.1 Defining Traditional Ecological Knowledge

According to Berkes (1999: 8), TEK is

> a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.

'Traditional' knowledge refers to the historical nature of this knowledge and to the fact that it is transmitted across generations (Hobson 1992; Castellano 2000). However, the term has been problematized as it tends to evoke notions of the static, archaic, and non-adaptive (Warren et al. 1995; Usher 2000). In defence of the term, Davidson-Hunt and Berkes (2001) specify that change does occur within traditions, but incrementally and over long time scales in response to changing political-economic and environmental contexts. Nonetheless, some authors prefer to use the expressions 'indigenous knowledge' (IK) or 'indigenous ecological knowledge' (IEK) to underscore the fact that TEK is locally bound, contextual, and particular to

a specific (indigenous) community (Agrawal 1995; Warren and Pinkston 1998; Antweiler 2004).[17] In this thesis, I adopt the terms TEK and IEK interchangeably to emphasize the specifically ecological nature of this knowledge, its ancient origins, and its inter-generational transmission as well as the *in situ* nature of this knowledge.

As mentioned in the above definition, TEK is rooted and gains meaning in a specific place. Historical ecological knowledge stems from the interaction of a people, its language and culture with the geography, biology and environment to which the cultural group belongs (Pierotti and Wildcat 2000; Pieroni 2003). This interaction results in meaningful cultural landscapes, which are integral to group identity and spiritual renewal (Lewis and Sheppard 2005). As these interactions are ongoing, TEK is adaptive, dynamic, and evolving (Davidson-Hunt and Berkes 2001; Raffles 2002; Pieroni 2003). It is continually fine-tuned in response to local contingencies, as the knowledge holders' intimate familiarity of the environment's idiosyncrasies can stipulate the need for minute adjustments in resource use. These adjustments can allow resource-reliant communities to survive in complex, non-linear, and fluctuating environments (Freeman 1992; Berkes 1993, 1998; Duerden and Kuhn 1998; Agrawal 2002).

Resource users acquire an understanding of the environment through their lifetime—what Usher (2000: 187) calls "living memory"—but also through oral traditions that convey information on the long-term evolution of the local landscape (Usher 2000; Houde 2007). Collective memories of the environment are preserved through descriptive place names, species names, and other ecosystem designations that are imbued with cultural value (Blench 2000; Hercus et al. 2002; Raffles 2002). Oral resource maps encode spatial knowledge of ancestral lands and their cultural and historic sites, and integrate ecological knowledge with locational information of resource use areas (Eythorsson 1993; Wavey 1993). Local stories

[17] There are, in fact, myriad terms to describe the concept, including: indigenous knowledge systems, indigenous technical knowledge, traditional environmental knowledge, ethnoscience, ethnoecology, folk ecology, rural knowledge, local science, and local knowledge (Langill 1999; Wohling 2009). These terms are all subject to debate. For instance, some claim that the term 'indigenous' excludes people who may be long-term occupants of a given area without being its original, or indigenous, inhabitants, while others specify that, in this context, 'indigenous' refers to the *in situ* nature of the knowledge rather than to the origins of its holders (Langill 1999).

and narratives recount diachronic variations in harvest levels, land use, population dynamics and distributions as well as the ecological factors influencing these changes. Finally, the material and spiritual ways in which indigenous people relate to their changing environment are elucidated in oral histories and customary teachings (Hobson 1992).

The stories, games, and songs that document TEK comprise an essential part of a child's education and form the basis for the inter-generational transmission of knowledge (Turner 2003). Transmission can occur in a structured and systematic way, such as through teaching by demonstration, example, and repetition. Children and adolescents also learn through experience and by replicating their mentors' actions (Ruddle 2003). Rocheleau (1991: 162) specifies that this "learning, storage, and transmission of knowledge about social, political, economic, and environmental change in the form of oral history, particularly in the naming of events" is a frequently neglected dimension of TEK.

In the three following sections I examine the knowledge-practice-belief complex, which forms the basis of Berkes' (1999) definition of TEK, cited above. Specifically, in Section 2.3.1.1 I focus on the observational knowledge of the local fauna and flora and of ecological phenomena. In Section 2.3.1.2, I turn to the component of practice, related to how people extract and manage their resources as well as the social institutions regulating these activities. Finally, in Section 2.3.1.3 I analyze the belief system or encompassing worldview that mediates the ways people relate to their ecosystem. Although these facets of TEK are treated separately below, they are inextricably linked and intertwined. While recognizing that TEK is as varied as are indigenous cultures, the following analysis highlights some of the generalities of TEK common to natural resource-reliant people.

2.3.1.1 Observational Knowledge

Via an ongoing process of observation, local people glean a rich understanding of climates, tides, ecosystems, floral and faunal species, their behavioural patterns, and their succession (Berkes 1993; Lalonde 1993; Berkes et al. 2000; Davidson-Hunt and Berkes 2001). This knowledge integrates empirical, long-term observations and learning via trial-and-error (Berkes 1993), and sometimes also from experimentation (Dove 2002). In this way, IEK is rooted in practical experience, 'embodied,' 'relational,' and 'affective'

or 'intimate,' due to the holistic understanding and close relationship the knowledge holder has of/with the known (Raffles 2002). This observational knowledge is further enriched and validated through interactions with other knowledge holders (Usher 2000).

TEK entails an awareness of individual species' traits and spatial distributions, as well as the roles these species play in ecological systems (Gadgil et al. 1993). With respect to shea, for instance, Ugandan agriculturalists are familiar with tree-wide fruiting patterns triggered by climatic factors, inter-tree fruiting distinctions, and also the fruiting behaviour of a tree's individual branches (Okullo et al. 2004). Likewise, Ghanaian farmers know the most productive shea trees in their area (Lovett and Haq 2000), and Burkinabè farmers attribute names to the healthiest shea specimens in their fields (Elias fieldwork 2005).[18]

Observational knowledge extends beyond individual species to the relationship between different resources, such as vegetation and livestock (Bollig and Schulte 1999, Nabhan 2000). TEK further encompasses an understanding of the relationships between living beings and their biophysical environment, as well as system-wide processes.[19] IEK of species fulfilling nutritional, medicinal, spiritual and/or ceremonial functions—as well as of their interrelationships—is reflected in indigenous lexicons and systems of species classifications (Berkes 1993; Raffles 2002). This varied and precise observational knowledge is key to ensuring household and cultural welfare (Howard 2003).

2.3.1.2 Practice

Observational knowledge is used to inform the ways resource-reliant people exploit and manage their resources, and the social institutions regulating these practices. Resource management strategies include, among others, discriminant burning, weeding, sowing, transplanting, pest management, soil fertilization, plant propagation, afforestration, and

[18] Elsewhere in Africa, Northern Kenya's Pokot people know the productivity, palatability, and digestibility of local fodder plants, while the Himba of Northern Namibia have named nearly every graminoid species, which they can also identify in their vegetative and generative states (Bollig and Schulte 1999). They value different plants according to their unique traits, such as their early yields or tolerance to drought.

[19] For instance, drawing upon their impressive expertise in complex rice farming systems, Gambian women exploit six different agroecological zones, and cultivate between 15 (among the Diola) and 30 (among the Mandinka) rice varieties. This feat requires thorough knowledge not only of different rice varieties, but also of soil types, marine tides, and of the spatial and temporal patterns of rainfall (Carney 1991). It is all the more remarkable given the variability and unpredictability of natural environments (Berkes et al. 2000).

resource monitoring and conservation (Blackburn and Anderson 1993; Fairhead and Leach 1995; Nadasdy 1999; Turner et al. 2000; McDaniel et al. 2005). In variable environments, sustainable resource use and management are generally flexible, responding to seasonal labour constraints and to fluctuations in the abundance and state of natural resources (Carney 1991; Eythorsson 1993; Gadgil et al. 1993; Agrawal 1995; Antweiler 2004; Lewis and Sheppard 2005). For instance, as discussed in Section 2.3.3, extractors gather the same product from various regions according to its seasonal occurrence and the controls sanctioning its use (Goebel 2003).

Local people also transform resources to render them usable and useful. For example, TEK holders may harvest and maintain stands or patches of plant species or use fire to maintain the successional stages that favour the productivity of certain floral species (Turner et al. 2000). Fire is also used in landscape-scale management pursuits to maintain the structure and composition of the savanna ecosystem (Kull 2004; McDaniel et al. 2005; Sheuyange et al. 2005). These feats reflect a detailed understanding of local soils, climate, the flora and fauna, and additional landscape characteristics.

Worldwide, indigenous women's TEK also allows them to improve the palatability or nutritional content of traditional foods (Daniggelis 2003). Turner et al. (2000: 1281) suggest that "the many facets of TEKW are woven together to provide ecologically sustainable, nutritious, and culturally valued food sources."[20] Food processing is often indispensable for the safe consumption of certain products, such as bitter manioc, which African communities detoxify prior to consumption (Chiwona-Karltun et al. 2004; Cox 2004). Processing is also required in the production of many medicinal cures. The fact that some communities, such as the Gurunsi of southern Burkina Faso, can count over 650 remedies in their repertoire (Kristensen and Balslev 2003) thus attests to their extensive knowledge of plant characteristics *and* processing. The know-how involved in harvesting and processing wild or cultivated foods and medicines is integral to the survival of local people.

Resource use and management are regulated by socio-cultural conventions, including gender, which vary over time, regionally, and according to ethnicity (Pélissier 1980; Boffa 1999). As Goebel (2003: 177) explains, "subsistence is intimately bound up

[20] Turner et al. (2000) refer to TEK as TEKW, or Traditional Ecological Knowledge and Wisdom.

with the use of natural resources, and hence is ecologically shaped through seasonality and the physical environment, but it is also mediated through multiple layers of institutions and other social relationships." Due to their close association with the component of belief, the institutions mediating resource use are discussed in the following section.

2.3.1.3 Belief

TEK is embedded in cosmology, and is imbued with symbolic meaning. It is founded in an encompassing worldview, which explains the place of humans in the world and the interrelations among living and non-living beings (Berkes 1998; Pierotti and Wildcat 2000; Usher 2000). People whose lives are closely interwoven with particular lands and waters often perceive the natural world as "an integral part of one's self" (Siwatibau 1984: 366) and humans as part of the ecological system (Pierotti and Wildcat 2000; Salmon 2000). In many indigenous cultures,

> the environment is seen as a whole; all the parts are interconnected in a seamless web of causes and effects, actions and outcomes, behaviors and consequences. People, animals, plants, natural objects, and supernatural entities are not separate and distinct. Rather, they are all linked to each other and to the places where they reside through cultural traditions and interactive, reciprocal relationships (Turner et al. 2000: 1279).

From this perspective, all aspects of the physical space, including landforms, the flora and fauna, are deemed part of the community and interrelated in a continual material and spiritual cycle. Humans are but one constituent of the web of life, within which "self and culture" are intertwined (Salmon 2000: 1328). In this cosmology, humans entertain familial relations with non-human organisms, which are considered kin and which form essential parts of the ecological community (Pierotti and Wildcat 2000; Salmon 2000).[21] The environment further provides "the physical manifestation of the vital link between the living and the dead" (Siwatibau 1984: 366).[22]

[21] As many creation stories attribute animal and plant ancestry to the human species, some non-human beings are even perceived as elders and teachers (Pierotti and Wildcat 2000).

[22] For instance, this is illustrated in the beliefs of the Akans who inhabit Ghana's forest-savanna transition zone, where the Supreme Creator Deity is believed to infuse forest resources with spiritual power, or *tumi* (Sarfo-Mensah 2002; Sarfo-Mensah and Oduro 2007). The close association between the ecological and the divine is also exemplified in sacred sites, which are found throughout Burkina Faso, where the spiritual presence is felt to be particularly strong (Lebbie and Guries 1995; Dovie 2003).

This belief system has ethical implications for human treatment of the environment (Wenzel 1999; Usher 2000; Houde 2007). In perceiving animals and plants as kindred relations and members of the same ecological community, humans come to honour and respect the natural world. Values of harmony, reciprocity, and symbiosis toward other beings tend to accompany an awareness of the interdependence of all life forms (Pierotti and Wildcat 2000; Salmon 2000).

Following such an approach, social institutions regulating resource use are enshrined in these belief systems and associated ethics.[23] These institutions may promote social justice by ensuring equal access to resources (Bollig and Schulte 1999) or disadvantage marginalized groups by denying them resources (Howard 2003). They further prescribe (generally sustainable) ways of accessing, harvesting, and using these resources. Rules of appropriate conduct are encoded in language, rituals, ceremonies and other traditions (Berkes et al. 2000). For instance, resource use frequently involves rituals that pay homage to the Creator(s) or spirits, such as those "expressing gratitude to those life forms that give their lives or parts of themselves to sustain humans" (Turner 2003: 138). These rituals may involve words, movements, and actions, such as during the administration of herbal medicines or drugs (Agrawal 2002).

The social institutions regulating local use of the valued shea tree are a case in point. In some regions of Burkina Faso, specific ceremonies sanction the opening of the shea nut collection period (Ruyssen 1957; Pageard 1971). Likewise, many rural Burkinabè communities enforce a strict two-week ban on early shea fruit harvesting, during which earth priests require people consuming fallen fruit to leave the nuts in place (Boffa 1999). This is the case in Watinoma, where Moose earth priests (*tengsoba*) perform the *ganlegre* custom. In this tradition, baobab strings are used to encircle shea trees as their nuts reach maturity to signal a temporary prohibition against climbing these trees and gathering their fruit (Vimbamba 1995). Such rituals favour the species' reproduction by ensuring that some mature shea nuts fall to the ground and are left to germinate. Moreover, sanctions such as the one mentioned above reveal how indigenous

[23] North (1995: 23) provides a useful definition of institutions, as:

> the rules of the game of a society, i.e. the humanly devised constraints that structure human interaction. They are composed of formal rules (laws and regulations), informal constraints (conventions, norms of behaviour and self-imposed modes of conduct), and the enforcement characteristics of both.

institutions can be responsive to seasonal labour bottlenecks. The ban on shea fruit collection keeps outsiders from removing shea nuts when rural women are busy preparing agricultural fields for sowing (Elias and Carney 2007). Seasonal bans on the early harvest of economically valued products have also been reported among indigenous conservation measures in other areas of West Africa (Freudenberger et al. 1997; Boffa 1999; Lovett and Haq 2000). Such bans promote cultural cohesion as well as ecological objectives.

Rituals also include prohibitions against the harvesting, planting, and culling of specific species in certain places. For instance, in some parts of Ghana and Burkina Faso, earth or land priests regulate access to shea trees located in sacred groves (Sanou 2003; Chalfin 2004: 47).[24] Moreover, throughout sub-Saharan Africa, many indigenous species are believed to belong to the 'bush', a powerful and ominous place, and adversity is said to befall whoever plants a 'bush' species (Blench 2000). As a case in point, the Sénoufo, Lobi and Tagban people of Ivory Coast believe (s)he who plants a shea tree will die once the tree comes to maturity (Diarassouba et al. 2008). Similarly, specific arboreal species (such as the baobab, ebony, and silk-cotton) are spared from the axe because they are believed to harbour spirits, and burning certain species is thought to induce madness, bring misery or attract lightening (Blench 2000; Kristensen and Balsev 2003). Sacred species differ across cultures as well as among members of the same ethnic group living in different areas (Kristensen and Balsev 2003).

Non-abidance to the rules of resource use or to social norms is believed to irritate the supernatural, which may retaliate with spiritual sanctions or the withdrawal of the community's ecological privileges (Turner et al. 2000). For example, in the chiefdom of Maane, Burkina Faso, the state of land degradation is believed to reflect a loss of morals and knowledge. According to indigenous Moose inhabitants, this lack of morality is evident in the gathering of unripe shea fruit and nuts, among other acts that upset the natural balance (Luning 2007).[25] In this way, the component of belief is drawn upon to explain ecological phenomena and ensure compliance with social protocols.

[24] In fact, access to sacred groves tends to be limited to spiritual leaders (Lebbie and Guries 1995) and reserved for ceremonies or for the harvesting of resources for particular spiritual needs (Dovie 2003).
[25] Likewise, the Pokot in Northern Kenya blame the degradation of pasture lands on social erosion, such as in the inappropriate behaviour of young men who covet older men's wives (Bollig and Schulte 1999).

Worldviews linking natural resources to the spiritual realm as well as cultural institutions mediating human-environment interactions have been instrumental to sustainable resource use and biodiversity conservation (Waliszewski et al. 2005). For instance, the shea fruit-harvesting ban described above encourages survival of mature oilseeds, thereby promoting the regeneration of shea trees in the surrounding parkland (Lovett and Haq 2000), and sacred groves are havens of biodiversity (Lebbie and Gurries 1995). Researchers are thus exploring TEK as a guide for sustainable institutional approaches to resource management (Balée 1987; Denevan and Padoch 1988).

Yet, IEK should not be idealized as necessarily promoting sustainable resource use, nor should indigenous people be uncritically assumed to exist in harmony with the natural environment. Wohling (2009: 3-4) cautions us that: "[i]ndigenous people have been relieved of their primitive and stone age identities only to be burdened with an equally irksome and romanticized new identity of 'spiritual wisdom and ancient ecological knowledge'" (see also Brosius 1997; Langton 1999). Historically and in contemporary times, there have been instances of indigenous societies causing environmental degradation through over-grazing, over-cultivation of the land, or over-hunting (Langill 1999). Many authors ascribe this contemporary environmental deterioration to rapid, wider socio-economic changes that lead to an erosion of traditional ecological knowledge and institutions regulating resource use (Grenier 1998; Luning 2007; Sarfo-Mensah and Oduro 2007). For instance, the unprecedented incidence of migration, sedentarization, market integration, and formal schooling among indigenous communities worldwide (Rocheleau 1991; Ruddle 1993; Wavey 1993; Hoffmann 2003; Malaza 2003; Bedigian 2004; Getty 2009) are generating a knowledge gap and reducing the perceived value of TEK as well as the status ascribed to TEK custodians (Hoffman 2003). Whatever the case may be, it is important to recognize that, like any other form of knowledge, TEK too has its limitations (Briggs 2005). As demonstrated below, it is also essential to recognize the differentiated nature of IEK held within a society.

2.3.3 Differentiated and Gendered Knowledge

Wooten (2003) stresses the need to recognize multiple ecological 'knowledges', rather than a single overriding knowledge shared by a population. Within a community, different individuals and groups possess distinct, socially prescribed forms of knowledge

of their environment (Turner et al. 2000; Raffles 2002). For instance, TEK varies according to gender, ethnicity, age, class, location of residence, kinship, and mode of livelihood, among other factors (Rocheleau 1987; Schroeder 1999; Raffles 2002; Kristensen and Balslev 2003; Wooten 2003; Schroeder and Suryanata 2004). As the most experienced community members, elders are usually respected as keepers of TEK (Eythorsson 1993; Lalonde 1993; Bollig and Schulte 1999).[26] There also exist community specialists such as healers, artisans, hunters, and gatherers (Lalonde 1993), whose particular knowledge confer them social status, reverence, and/or power (Leach and Fairhead 2002; Bissonnette 2003; Ertug 2003; Hoffmann 2003; Howard 2003; Pieroni 2003; Price 2003; Turner 2003). For a large region, TEK may thus "emerge as a mosaic of individual or family knowledge, whose totality may not be known by any single individual" (Usher 2000: 188).[27]

Due to the association of knowledge with authority and power, transmission of TEK may be partial or restricted to specific persons. Diffusion of TEK complies with, and reinforces, social norms and customary hierarchies (Leach and Fairhead 2002; Turner 2003). TEK may therefore be deliberately withheld among sub-groups of a population or among populations (Pieroni 2003). This phenomenon parallels the Western notion of intellectual property rights, with specialized knowledge being endowed only to certain individuals who develop and preserve the entity (Howard 2003).

TEK also comprises a gendered dimension. Due to worldviews ascribing distinct roles and responsibilities to men and women, including a gendered division of labour, resource use is primarily organized along gender lines (Goebel 2003; Howard 2003). Women and men collect and use different products, gather the same products in different spaces, or use the same product in different ways (Jackson 1993; Leach 1994; Fortmann 1996; Wangari et al. 1996; Rocheleau and Edmunds 1997). According to Rocheleau

[26] Grandparents are often responsible for transmitting traditional ecological knowledge to their grandchildren, while younger parents satisfy the family's subsistence needs (Turner 2003).
[27] Drawing upon the example of *Thaumatococcus daniellii* (thaumatin), Waliszewski et al. (2005) discuss the heterogeneous nature of observational knowledge that individuals may acquire according to the type of interaction they maintain with the species. Rural Ghanaians recognize the phenology, development, flowering and fruiting behaviour, as well as environmental conditions—light, slope, soil, rainfall—favouring the plant's growth. They further acknowledge the effects of different collection and management techniques on the plant's vigour. Yet, this knowledge is differentiated according to the resource user's specialization as a cocoa farmer, cultivator, or leaf and fruit collector.

(1991: 163), men and women have "separate, shared, and interlocking knowledge", distinct understandings of and responsibilities toward the natural world. For example, West African farmers' perceptions of species abundance and spatiality vary according to their gender (Wezel and Haigis 2000; Kristensen and Balslev 2003). As they are frequently the primary plant managers and processors, rural women hold a rich body of knowledge regarding breeding, selection, management, processing, storage and conservation of floral resources (Shiva 1993; Howard 2003; Zimmerer 2003). This TEK may earn them respect, and endow female specialists such as healers with a superior status (Ertug 2003; Kothari 2003; Turner 2003).

Gendered knowledge and exchange of natural resources, which Turner et al. (2000) identify as a major component and reflection of TEK, are also used to consolidate social networks and reciprocal relations (Ertug 2003; Howard 2003; Wilson 2003; Elias and Carney 2007). In Burkina Faso and elsewhere, women exchange wild foods they collect to strengthen relationships with their female peers (Ertug 2003; Elias and Carney 2007), or coordinate sowing times and the species they cultivate to maximize variety through crop sharing (Wilson 2003). Similarly, men and women share their complementary knowledge of the fauna and flora to help each other fulfil their gender-specific hunting (among men) or collection (among women) activities (Turner et al 2000). TEK also underlies gendered group activities, such as women's gathering of NTFPs of cultural importance (Ertug 2003; Turner 2003). As detailed later in this thesis, this culturally prescribed association between female knowledge, floral resources, and women's socialization process is significant to my study of shea producers in Burkina Faso. Gendered ecological knowledge is also significant for shaping natural environments, including the ones in which my study takes place.

2.3.4 TEK, biodiversity conservation, and species evolution

Over the centuries, indigenous management practices have increased the world's biodiversity and helped the evolution of natural resources and landscapes. Successive generations of TEK holders have affected the population size and dispersal of many important species, as well as the structure of ecological communities (Gadgil et al. 1993). The result has been the creation of anthropogenic landscapes even in seemingly 'pristine' environments (Hecht and Posey 1989; Denevan 1992; Anderson 1993).

Numerous examples demonstrate how, over time, indigenous practices of plant and crop breeding, management, cultivation, and selection have resulted in the regeneration, domestication, dispersal, and evolution of individual species (Turner et al. 2000; Zimmerer 2003). IEK has further enabled the in-situ conservation of plant genetic material in homegardens, fields or in the bush (Greenberg 2003). For instance, research in Burkina Faso and Mali elucidates farmer expertise in selecting and protecting shea trees with desirable characteristics in cultivated fields and managing wild specimens as genetic reservoirs (Lovett and Haq 2000b; Maranz and Wiesman 2003). Elsewhere in the world, people have intentionally selected plant and crop populations to increase the abundance, longevity, yield, and quality of resources, such as corn, for human use (Salmon 2000).[28] These cases substantiate Bedigian's (2004: S23) claim that, "it is not possible to separate the study of agricultural biodiversity from the study of culture that nurtures it."

The above examples further demonstrate that human management of species and landscapes—which constitute and reflect an extensive body of TEK—plays a role in landscape evolution and in enhancing and restoring some of the world's biodiversity (Gadgil et al. 1993; Turner et al. 2000). This facet of TEK, as it is applied to the evolution of the shea species in Burkina Faso, is further discussed in Chapter 5. First, the following section summarizes the key notions from the TEK literature that form the building blocks of my conceptual framework.

2.3.5 Drawing from the TEK Literature

The concepts outlined above guide my study of shea agroforestry in an African savanna society undergoing integration into international markets. In particular, I draw upon three key notions from the TEK literature (Figure 2.1). First, the **observation-practice-belief complex** that forms the basis of TEK informs my examination of the traditional ecological knowledge surrounding the shea tree. Second, the **differentiated and gendered nature of TEK** within a community is particularly relevant to my analysis. Scholarship has only begun to recognize women's extensive botanical knowledge, and

[28] In others cases still, management activities have resulted in the domestication of entire landscapes (Posey 1985; Blackburn and Anderson 1993; Turner 2003). For example, successive generations of Bambara and Malinke agro-pastoralists have produced seasonal mosaic patterns in the savanna of southern Mali. Through controlled burning, indigenous inhabitants have annually recreated patches of unburned, early burned, and recently burned vegetation that over the generations, have increased the landscape's patchiness and heterogeneity and enhanced local biodiversity (Laris 2002).

my research contributes to this effort by highlighting women and men's distinct and overlapping forms of knowledge of shea. My study further underscores the differences in shea-related knowledge and practices among ethnic groups adhering to distinct cultural norms and beliefs. Third, the role of **TEK** in **guiding species and landscape evolution** forms the basis for my investigation of the long-term effects of human management of shea on the species and its environment.

Despite its usefulness, I argue that the literature on TEK to date has two shortcomings in relation to my study. First, it pays little attention to the effects of globalisation and to ensuing changes in local power relations on arboreal management. Further, ethnobotanical research primarily focuses on the humid tropics, while neglecting desert and semi-arid environments (Bedigian 2004). By adding to studies exploring the sustainability of silvicultural practices in marginal environments in the context of global change (Fairhead and Leach 1996; Leach and Mearns 1996; Fairhead and Leach 2003), my research thus contributes to this burgeoning field of knowledge.

2.4 COMMODITY CHAINS

Adding further analytical purchase to my conceptual framework, the commodity chain approach offers a lens through which to study the unequal articulation of political-economic processes linking diverse geographic regions, people, and goods. In an increasingly integrated world economy, a focus on singular commodities—such as shea—that materially connect internationally dispersed actors promises to shed light on the local manifestations of global processes. Commodity chain analysis can be helpful in theorizing the sustainability of alternative trade schemes (Clarke 2008), such as the shea butter projects on which I focus. In this study, the perspective contributes notions of particular relevance to my second objective, namely of exploring the international conventional and alternative shea nut and butter commodity chains originating in the centre-west region of Burkina Faso. This objective is treated in Chapters 6 and 7, which focus on the shea nut and shea butter commodity chains, respectively.

In the following section (2.4) I critically review the literature on commodity chains, focusing on the key concepts it contributes to my study. I begin by defining commodity chains and some of the generalities of commodity chain analysis (CCA)

(2.4.1). I subsequently describe and differentiate between four traditions or strands of CCA that guide my study, namely Global Commodity Chains (2.4.2), commodity systems (2.4.3), commodity circuits (2.4.4), and commodity networks (2.4.5). In conclusion (2.4.6), I review how the core concepts from this body of literature help me analyse shea nut and butter commodity chains, and identify some of the ways my study can enrich this field of scholarship.

2.4.1 Defining Commodity Chains and their Analysis

Drawn from the work of Hopkins and Wallerstein (1986: 159), the most widely cited definition of a commodity chain is "a network of labour and production processes whose end result is a finished commodity". This network, which centres on a specific product, encompasses diverse actors situated at multiple geographical scales and spaces, ranging from the individual and household realms, to the spheres of enterprises and nation states. Commodity chains are composed of successive transactions, conceptualized as nodes or 'boxes', wherein inputs—in the form of materials, labour power, transportation, distribution or consumption—are acquired or organized. As the commodity in question travels from one consecutive node to the next, it is transformed materially and symbolically and profits are generated (Talbot 1997). The structure of the commodity chain is dynamic and shifts over time according to the strategic choices its economic agents pursue (Gereffi et al. 1994). Commodity chains are thus "situationally specific, socially constructed, and locally integrated, underscoring the social embeddedness of economic organization" (ibid 1994: 2).

Commodity chain analysis (CCA) focuses on the passages of commodities from their point of production to their point of consumption, at various scales and within the commodity's socio-economic and political contexts (Hopkins and Wallerstein 1986; Gereffi and Korzeniewicz 1994; McMichael 1995). The goal of CCA is to explore the socio-political systems within which a given commodity circulates by examining the sites where the commodity chain "touches down" geographically (Appelbaum and Gereffi 1994: 43; Hassler 2004; McSweeney 2004b). In this pursuit, CCA reveals the uneven power relations and distribution of rents among actors situated at different stages of the commodity's journey, in an effort to explain why some agents are able to extract more of the product's value than others (Ribot 1998; Shillington 2002). This form of analysis

highlights the changing configurations of production and exchange in the context of global organizational and policy reforms. It further offers an empirical "means of tracing historical connections and structural relationships in this era of both globalization and apparent disconnection and fragmentation" (Stone et al. 2000: 20).

The CCA approach has become widely adopted as an analytical tool in academic and policy circles (Jackson et al. 2006). Although its basic precepts have remained fairly constant, it has been refined since the 1980s and has given way to multiple new perspectives for analyzing the nature of relations linking production, distribution and consumption. Below, I differentiate between four such approaches to commodity chain studies, beginning with the **Global Commodity Chain** (2.4.2) tradition before turning to the alternative strands of **commodity systems** (2.4.3), **commodity circuits** (2.4.4), and **commodity networks** (2.4.5). From each of these traditions, I draw useful concepts for my study of shea nut and butter commodity chains.

2.4.2 Global Commodity Chains

Inspired by World Systems Theory (Wallerstein 1974), the Global Commodity Chain (GCC) approach sees commodities moving along linear chains from their point of origin in the 'periphery' of the global economy to its 'core' for retail and consumption (Gereffi 1994a; Gereffi and Korzeniewicz 1994). The approach considers how profits are unevenly distributed along the chain, with core countries retaining more of the surplus value created along the trade network (Raikes et al. 2000). In the GCC perspective, emphasis is on the dynamics linking producers and consumers within the global economic system, the geographic locales the chain connects, the reasons behind the chain's spatial configuration, and the implications of this spatiality for the appropriation of economic surplus (Appelbaum and Gereffi 1994). The analysis of GCCs focuses on the ways producers—such as shea butter makers—participate in the global division of labour, recognizing that it is the nature rather than the extent of their participation that determines their returns to production (Kaplinsky 2004).

Central to GCC is a concern with the ways key agents control networks of production and exchange within a wider regulatory framework. The power to determine the terms of trade within the chain and to realize a surplus is seen to lie mainly in the hands of leading agents who coordinate the chain's activities (Daviron and Gibbon 2002).

The study of the chain's governance structure, defined as "authority and power relationships between firms that determines how financial, material, and human resources are allocated and flow within a chain", thus takes on particular significance (Gereffi 1994b: 97). To explore this dimension, Gereffi (1994a, 1994b) proposes a useful distinction between buyer-driven and producer-driven chains.

Buyer-driven chains are those in which leading firms do not own production facilities, but govern a decentralized network of independent and quasi-independent producers (Dicken et al. 2001). In these increasingly common chains, large retailers such as those involved in the garments and consumer goods industries (toys, consumer electronics, footwear, handicrafts, and so on) specialize in design and marketing and subcontract production (Hughes 2000; Hassler 2004; Foster 2005). Leading firms (retailers) specify the characteristics and standards of production, have the power to exclude subordinate agents from the chain, and retain the 'lion's share' of the profits (Gereffi 1994b).

In contrast, producer-driven chains are vertically integrated. Large, usually transnational manufacturers own the entire chain of production and control backward and forward linkages to raw materials and into distribution. These chains are characteristic of capital and technology-intensive industries, such as automobiles, aircraft or heavy machinery (ibid 1994b). Large barriers to entry generate oligopolies in these sectors and shape the strongly skewed distribution of rents along the chain (Kaplinsky 2004).

The shea butter commodity chain conforms to Gereffi's definition of buyer-driven chains, as large-scale cosmetics companies purchase shea butter from producer associations on a contractual basis. Buyers in the Global North dictate chain dynamics and specify product prices and quality attributes. Power is concentrated among these leading firms, who have the capacity to exclude African shea butter producers from the network by opting to purchase industrially (rather than artisanally) transformed shea butter. As described in Chapters 6 and 7, shea producers attempt to increase their bargaining power by joining a Union of butter makers, but remain vulnerable to the whims of industry giants such as French firm *L'Occitane*. In this study, the concept of buyer-driven chains serves to highlight how the chain's governance structure contributes to the asymmetrical distribution of power along the shea butter commodity chain and to

the imposition of quality standards upon production processes. More generally, the GCC approach sheds light on the global power relations and negotiations occurring among the agents involved in the shea nut and butter commodity chains, as well as the implications that these processes carry for the appropriation of surplus value along these chains.

The GCC approach has been critiqued, however, for portraying commodities as passing through a deterministic, linear, unidirectional, and integrated sequence of value-added activities (Jackson 2002; Raynolds 2002a). The approach has also failed to acknowledge the critical roles played by supporting agents (Hughes 2000), such as non-governmental agencies working with producers in the shea butter case. Alternative conceptions of the ways commodities are produced, circulated, and consumed have thus arisen in response to these critiques, and to three prominent trends in agro-food studies. First, renewed interest in consumption processes has prompted a more balanced treatment of the different moments of commodity circulation and moderated earlier emphasis on the sphere of production (Goodman 2002). Then, a 'cultural turn' has led to a focus on the meanings, knowledge, and narratives surrounding commodities (Goodman 2002; Jackson et al. 2006). Finally, attention to the issue of food quality has arisen in line with the emergence of alternative commodity networks and certification schemes, as consumers, producers and the State have shown concern for the social and ecological sustainability of agro-food chains (Crewe 2001; Jackson et al. 2006; Challies 2008). In the following three sections, I consider the consequent re-conceptualizations of the commodity chain concept, beginning with the commodity systems approach.

2.4.3 Commodity Systems

The commodity systems approach emerged within sociological work on the 'new political economy' of food and agriculture at a time when agriculture was becoming increasingly specialized and the delineation of discrete 'systems' of agricultural commodities increasingly possible (Friedland 1984; Challies 2008). Drawing upon the notion of a commodity system to describe production-consumption relations, Fine and Leopold's (1993) 'systems of provision' approach begins with the idea that "each commodity is best understood through its own unique system of provision, comprising a (vertically integrated) array of economic and social processes particular to the production of that commodity" (Challies 2008: 382). Hence, the approach consists of tracing the

processes by which a particular commodity circulates between successive nodes of an entire trade system to highlight the interplay between a particular pattern of production and a specific form of consumption (Jackson et al. 2006). In this pursuit, the systems of provision perspective provides a deeper engagement with the cultural dimensions of consumption than afforded by GCC analysis (Goodman 2002).

Despite their focus on the sequence of activities comprising a commodity system, Fine and Leopold (1993: 35) acknowledge that:

> The vertical approach applied here…does not refute the presence and importance of horizontal factors that may be common to more than one system of provision. But it suggests that these are liable to play a different role within each system of provision.

These horizontal factors include variables such as gender, class, and ethnicity, among others, that influence the processes linking production and consumption. In particular, a number of authors emphasize the significance of the spaces, or *places*, a commodity occupies at different moments—or in different nodes—of the commodity chain in determining the meanings imbued in commodities and mediating the influence of other horizontal factors on commodity chain dynamics (Hartwick 1998; Leslie and Reimer 1999; Bush 2004). For one, Hartwick (1998) believes that commodity movements should in fact be envisioned as connecting different nodes that are *places* composed of diverse horizontal dimensions. She further argues that: "Moving to a geographical focus on place broadens commodity analysis giving it greater political potential as a critical tool" (Hartwick 1998: 425), and can lead to the development of regional policies tailored to particular commodities (Leslie and Reimer 1999).

Analyses of horizontal factors can be conducted by comparing practices occurring within a specific realm (production, consumption or other) for different commodities. Such undertakings can reveal the 'leakiness' of chains, or the ways commodity chains centred on different commodities intersect within certain nodes (Hartwick 1998). Alternatively, horizontal factors can be analysed across distinct chains of the same commodity to understand how the places the commodity travels and their regulations influence its trade dynamics (Glennie and Thrift 1992). While supporters of the systems of provision approach reject strictly horizontal analyses on the basis that they result in a predominantly descriptive account of producer-consumer relations and that "a degree of reality is lost as no one chain is the same as another" (Fine 1993, cited in Bush 2004: 39),

they do demonstrate the value of integrating a concern for horizontal factors within a vertical analysis of commodity chains. In so doing, the approach affords what Leslie and Reimer (1999: 405) consider "perhaps the most comprehensive elaboration of production-consumption relations".

Despite the useful concepts the systems of provision perspective contributes to commodity chain analysis, the 'system' metaphor has been critiqued for "suppress(ing) the significance of contextualized human agency—that is, people coping with the uneven nature of contemporary economic and social change" (Arce and Marsden 1993: 296). Some authors argue that the very notion of a system—a deterministic, self-sustaining entity reducible to a single logic—disregards issues of gender, labour, and intra-household negotiations that play key roles in determining production and consumption patterns (Leslie and Reimer 1999; Whatmore and Thorne 1997). Others believe that focusing on the vertical connections comprising single commodity chains masks the ways different chains articulate with one another. This is problematic because commodities and the meanings they carry cannot be understood in isolation; their interactions produce effects that cannot be traced back to any single chain (Glennie and Thrift 1993; Leslie and Reimer 1999). Yet, Fine and Leopold's attention to vertical *as well as* horizontal factors effectively addresses this critique.

Despite these critiques, Raynolds (2002a) suggests that the systems of provision perspective provides the best optic by which to examine producer-consumer linkages in Fair Trade networks, such as the one I investigate in this thesis. In this study, I draw upon the approach to sequentially examine the characteristics of all the nodes—and the vertical linkages connecting them—that constitute the shea nut and shea butter commodity chains that draw their origins in the central-west region of Burkina Faso. Recognizing the complementarities of vertical and horizontal analyses, I consider the role of horizontal factors in conditioning the commodity-specific dynamics of the shea nut and butter commodity chains. I specifically consider the importance of place and other horizontal factors such as gender and ethnicity in mediating the social relations and processes involved in chain dynamics. Finally, I compare the conventional and alternative shea butter commodity chains to explore the effects distinct forms of producer-consumer linkages bring to bear on the sphere of production and on the shifting meanings of shea

butter along its chains. To enrich my analysis of the cultural dimension of the shea trade, I draw additional insights from the commodity circuits perspective outlined below.

2.4.4 Commodity Circuits

Contrasting the linearity of the commodity trajectories suggested in the commodity chains and systems of provision approaches, the concept of a commodity circuit sees goods moving along a non-linear path with no clear beginning or end points, and with origins that are at best socially constructed (Jackson et al. 2006). Proponents of the approach advocate a greater integration of the cultural and political economic dimensions of commodity chains on the basis that, "the creation and distribution of value and rent are inseparable from the trade in representation and meaning" (Goodman 2002: 274). As a result, the approach articulates the semiotic aspect of commodities with the ontology of their production, their use (consumption) value, and exchange value (arising from capitalist production) (Appadurai 1986; Hartwick 1998; Long and Villareal 1998; Leslie and Reimer 1999). In so doing, it expands traditional Marxist analysis and other CCA perspectives by attributing the process of value creation not only to the producer's labour, but also to the meaningful ways in which commodities are consumed (Foster 2005).

In fact, the study of commodity circuits tends to centre on the sphere of consumption and commodity cultures rather than production. It considers how localized, contextualized and meaningful acts of consumption, such as the act of consuming Fair Trade shea butter, are linked with a variety of commodity chains that transcend actual product origins and reach into imagined places of production and exchange (Crang 1996). The goal is to reveal the "particular movements of things, people, ideas and capitals" within a "multidimensional space that is multiply inhabited and characterised by complex networks, circuits and flows" (Crang et al. 2003: 441).

Despite its usefulness in exploring consumption cultures, however, concerns have been raised around the idea of a "virtually endless 'circuit of consumption'" (Jackson and Thrift 1995: 205). As Leslie and Reimer (1999) argue, abandoning the concept of the 'chain' may involve a loss in the ability to expose exploitative conditions within the chain. Further, "if the aim of commodity chain analysis is no longer to determine what forces are driving the chain, we are left with a question as to why chains should be reconstructed at all" (ibid 1999: 407).

Nonetheless, the approach contributes useful concepts for my study. For one, I adopt the notion that the value of commodities extends beyond the product's surplus value derived from the phase of production. In Chapter 7, I argue that consumers also purchase the representation of Fair Trade shea butter as a luxury product that carries a valuable social content. The commodity circuits perspective reveals how affluent and socially conscious women in the Global North consume the imagined landscapes of Fair Trade shea butter, inhabited by exotic female producers who process 'natural' shea butter according to time-honoured traditions. In this way, the approach allows me to consider the shifting significance of shea butter production and consumption as the commodity enters alternative trade networks. Finally, I borrow from the approach an attention to the gendered knowledge imbued in the production and trade of shea butter and to the association between shea processing and the creation of female identity among Burkinabè agriculturalists. Capturing key notions from the commodity circuits perspective while transcending some of its critiques, the commodity networks approach to which I now turn provides additional building blocks to the conceptual framework informing my study.

2.4.5 Commodity Networks

The commodity networks perspective emphasizes the fluid, ramified, and multidirectional nature of the flows and ideological and material transformations of commodities as they circulate among producers, distributors and consumers (Raynolds 2002a). Drawing from actor-network theory (ANT) (Law 1986; Latour 1993, 2005; Callon and Law 1995), the commodity networks approach considers the performative nature of these networks and the agency of the (individual or collective) social actors who "ideologically and materially construct, maintain, and transform" them (Raynolds 2002a: 404). In addition to human actors, the dynamic nature of commodity networks is influenced by non-human 'actants' such as human-induced policies, standards, pricing structures, and other 'natural' and technological entities (Whatmore and Thorne 1997). These non-human actants, including material objects, are also perceived to have agency insofar as they have a "transformative capacity within the networks of which they are a part" (Hughes and Reimer 2004: 5). Networks are thus conceptualized as "interweavings of *situated* people, artefacts, codes, and living things and the maintenance of particular tapestries of connection across the world" (ibid 1997: 288, emphasis in original).

Focused on the geography of flows and departing from the 'chain' and 'system' metaphors, the commodity networks approach subverts the linear thinking that envisions production and consumption at opposite ends of a spectrum, and dismantles conventional binaries opposing 'core' to 'periphery' or 'local' to 'global' (Whatmore and Thorne 1997; Jackson 2002). In this respect, the perspective refutes the notion of commodity chains or systems that link distinctly local and global spheres together. Instead, this form of analysis considers global economic integration as a 'lengthening' of the spatial reach of the composite actions of numerous human and non-human actants that result in multiply sited webs of connections (Latour 1993). As Whatmore and Thorne (1997: 291) explain,

> a network's capacities over space-time represent the simultaneous performance of social practices and competences at different points in the network; a mass of currents rather than a single line of force. In these terms, actor-networks are best understood as 'by nature neither local nor global but [only] more or less long and more or less connected' (Latour 1993: 122).

With respect to this study, I adopt the commodity networks approach to highlight how human agents negotiate, interpret, and contest multidirectional flows of information, meanings, and knowledge along shea commodity networks. I further draw upon the commodity networks perspective to examine how actants such as shea nuts, which are subject to climate-induced quality fluctuations, and water, whose quality and supply varies regionally and temporally, affect shea butter production and trade. Further, product quality standards and consumer demands with respect to the social content of the product influence the nature of the given networks. Following Hughes (2000), I adopt the network metaphor as the most promising way to conceptualize the morphology of producer-distributor-consumer relations, and the notion of flows to describe the ways information, commodities, and other entities circulate between successive nodes within a network. In the conclusion that follows, I summarize the other core concepts from commodity chains debates that inform my study.

2.4.6 Drawing from the Commodity Chains Literature

As demonstrated throughout this section, scholarship on commodity chains provides a framework with which to analyse the conventional shea nut and butter commodity networks as well as the alternative shea butter commodity network, which includes

trading relationships centred on Fair Trade. This body of literature contributes to my examination of the shifting configurations linking shea producers, traders, and consumers in a context characterized by both conventional shea nut and butter market chains as well as emerging Fair Trade shea butter markets involving a new mode of production centred on a producer association. As depicted in Figure 2.1 and developed in Chapters 6 and 7, I analyse both vertical and horizontal factors, with a focus on how place, and relations of class, ethnicity, and particularly gender shape shea nut and butter networks. Pushing the boundaries of commodity chain theorization further than the four approaches discussed above, I adopt a gendered commodity chain approach

> to identify where women are the key agents at different nodes along the global commodity chain and to map the consequences of international and state policies for women's labor—paid and unpaid, the relationship of household politics to the politics of production and social reproduction, the cultural constructions, contestations, and negotiations around gender ideologies, and women's self-formative quotidian acts and organized resistance (Ramamurthy 2000: 554).

As gendered commodity chains such as the ones centred on shea butter—wherein women represent the commodity's producers and the consumers—remain under-theorized using the CCA perspective (ibid 2000), the novel, gendered approach I adopt promises to enrich this body of scholarship.

Specifically, key notions from the four strands of commodity chain analyses discussed above inform my study. The **Global Commodity Chain** tradition provides the useful concept of **buyer driven chains** to illuminate the asymmetrical distribution of power within shea commodity chains linking **producers from the global periphery to consumers in the core** of the world economic system. In turn, the **commodity systems** perspective offers a basic structure for my analysis of the **'vertical' connections** within the shea nut and butter commodity chains, while integrating attention the **horizontal factors**, such as gender and ethnicity, that contribute to shaping chain dynamics. I combine a concern for the sphere of production with an attention to each of the other moments of commodity circulation and consumption. The approach helps me to explore how international and local consumption patterns influence the nature of the shea trade network. In this endeavour, I compare Fair Trade shea butter networks with those centred on the conventional domestic and global shea trade. I additionally consider networks wherein shea butter producers also consume the product of their making. In so doing, I

respond to calls for a greater consideration of auto-consumption practices of commodities that are also destined for global markets (Raghuram 2004; Edensor and Kothari 2006).

Adding to these insights, ideas from the **commodity circuits** perspective, including an emphasis on the **cultural flows of meanings** commodities carry, enrich my study by affording a fuller treatment of the symbolism and knowledge residing within shea commodity chains. Drawing from this strand of CCA, I consider the representational processes of value creation within shea networks, including the marketing of Fair Trade shea butter as the product of ecologically and socially sound production practices. Finally, I borrow the terminology of a **commodity network** to describe the **network morphology of** shea butter **producer-consumer linkages**, as well as the notion of **flows** to describe how shea butter circulates among nodes. My analysis centres on the network's production node, where shea producers are influenced by, and responsive to, gender norms and ideologies, consumer preferences, quality standards, national and international policies, pricing structures, and other **human and non-human actants**. To further enhance my analysis of the local consequences of global and Fair Trade shea butter markets, I integrate these notions from the commodity chain literature with concepts from the sustainable livelihoods approach, explored below.

2.5 SUSTAINABLE LIVELIHOODS

In recent decades, academics, policy-makers, and development practitioners alike have broadened their understanding of poverty from an economic measure of income and consumption to a multi-dimensional and situated concept encompassing notions of deprivation, vulnerability, well-being, and meaning (Sen 1990; Chambers 1995; Scoones 1998; 1999: 210). Concurrently, development discourse has increased its focus on the environment and the sustainable use of natural resources (Reardon and Vosti 1995; Adams 2001; Angelsen and Wunder 2003). At the interface of works on poverty and the environment sits an emerging scholarship on sustainable livelihoods. Upheld by many large donors as the next development panacea, the sustainable livelihoods (SL) approach promises to enrich our understanding of development as well as practices seeking to alleviate poverty and ensure conservation objectives (Farrington 2001; Toner 2003).

Divided into four parts, this section critically reviews the SL literature. To begin, in Section 2.5.1 I provide a working definition of 'sustainable livelihoods.' In Section 2.5.2, the focus shifts to SL frameworks and their constituent parts, consisting of assets or capitals (Section 2.5.2.1), livelihood strategies (2.5.2.2), transforming structures and processes (2.5.2.3), and livelihood outcomes (2.5.2.4). The limitations of the SL literature are discussed in Section 2.5.3, before summarizing the key concepts that inform my study in the section conclusion (2.5.4). As previously mentioned, the SL approach is particularly useful for exploring the third objective for my study, namely to assess the initial economic, socio-political, and ecological effects of shea butter projects in the centre-west region of Burkina Faso. Notions from SL scholarship form the cornerstone for addressing this objective in Chapters 8 and 9.

2.5.1 Defining 'Sustainable Livelihoods'

The sustainable livelihoods approach emerged in the 1990s as a consolidation and expansion of prior policy-focused livelihoods approaches to poverty, such as entitlements analysis as well as asset-vulnerability and food security frameworks (Conway et al. 2002; de Haan and Zoomers 2005). Although its composite elements are not new, the SL approach's innovation is attributed to the integration of these elements into a comprehensive framework. The term 'sustainable livelihoods', then, refers to this framework, but also to a concept, and to a set of principles for international development (Farrington 2001). The following section reviews and highlights the strengths of the SL literature, beginning with the SL concept before turning to the SL framework and its components. A discussion of the literature's limitations then follows.

A major achievement of the SL approach pertains to its holistic concept of livelihoods. Following the SL perspective, livelihoods comprise the capabilities, tangible and intangible resources (assets), activities (or livelihood strategies), and the access to these, mediated by social relations and institutions, which individuals or households draw upon to gain a living (Chambers and Conway 1992; Carney 1998; Bebbington 1999; Ellis 2000).[29] Livelihoods can be considered sustainable if they can

[29] In this context, 'capabilities' refer to the ability of individuals to achieve their potential both physically and socio-politically (Sen 1993, 1997).

> cope with and recover from stress and shocks, maintain or enhance capabilities and assets, provide sustainable livelihood opportunities for the next generation; and contribute net benefits to other livelihoods at the local and global levels and in the short and long-term (Chambers and Conway 1992: 7-8).[30]

Sustainable livelihoods build upon the assets people have at hand to provide them with livelihood outcomes such as material well-being, a meaningful existence, and the capability to shape the larger context in which they live (Bebbington 1999).

This concept of sustainable livelihoods provides valuable insights. First, it highlights the fact that people draw upon various assets and activities to build their livelihoods, and evokes a link between assets and livelihood strategies (Carney 1998; Scoones 1998; Ellis 2000). Emphasis on the individual or the household reveals the micro-orientation of the approach, which Sneddon (2000: 533) claims provides a "much needed palliative to the more ethereal, national-level discussions typical of sustainable development discourses". The concept also contributes a multi-faceted and multi-scalar notion of *sustainability*, and adds a temporal component to prior works on livelihoods. Most importantly, however, in its holistic portrayal of livelihoods (including aspects of vulnerability and meaning), the SL notion transforms our understanding of *poverty*. The very goals of development are reframed as poverty shifts from being a strict income measure towards a multi-dimensional and partly cultural phenomenon, which includes situated perceptions of what constitutes well-being (Chambers 1995; Moser 1998; Whitehead 2002; Start and Johnson 2004; Bacon 2005).

2.5.2 The Sustainable Livelihoods Framework

Building on the SL concept, SL frameworks represent "analytical structures for coming to grips with the complexity of livelihoods, understanding influences on poverty and identifying where interventions can best be made" (Farrington et al. 1999: 1). The most familiar SL framework, designed by the United Kingdom's Department for International Development (DFID), is depicted in Figure 2.2. In this framework, the analysis is centred upon (usually impoverished) people, and how they draw upon their assets to engage in various livelihood strategies (Scoones 1998; Whitehead 2002; Toner 2003; Kanji et al.

[30] Chambers and Conway (1992: 26) also expand the notion of sustainable livelihoods with the concept of 'net sustainable livelihoods,' or "the number of environmentally and socially sustainable livelihoods that provide an adequate living in a context less their negative effects on the benefits and sustainability of the totality of livelihoods everywhere."

2005). The underlying assumption is that the poor behave as 'strategic managers' who pursue a set of livelihood outcomes by choosing among a range of available activities within the constraints of their given locality and context (DFID 1999; Farrington 2001). As part of the approach, SL analysis considers the role of this context in shaping people's access to assets, the set of feasible livelihood strategies, and resultant livelihood outcomes (Farrington et al. 1999). The goal of the analysis is to paint a dynamic picture of how people subsist and to depict how contextual constraints to achieving sustainable livelihoods can be lifted and poverty overcome. Disaggregating the SL framework into its building blocks, which I do next, can improve our comprehension of the approach.

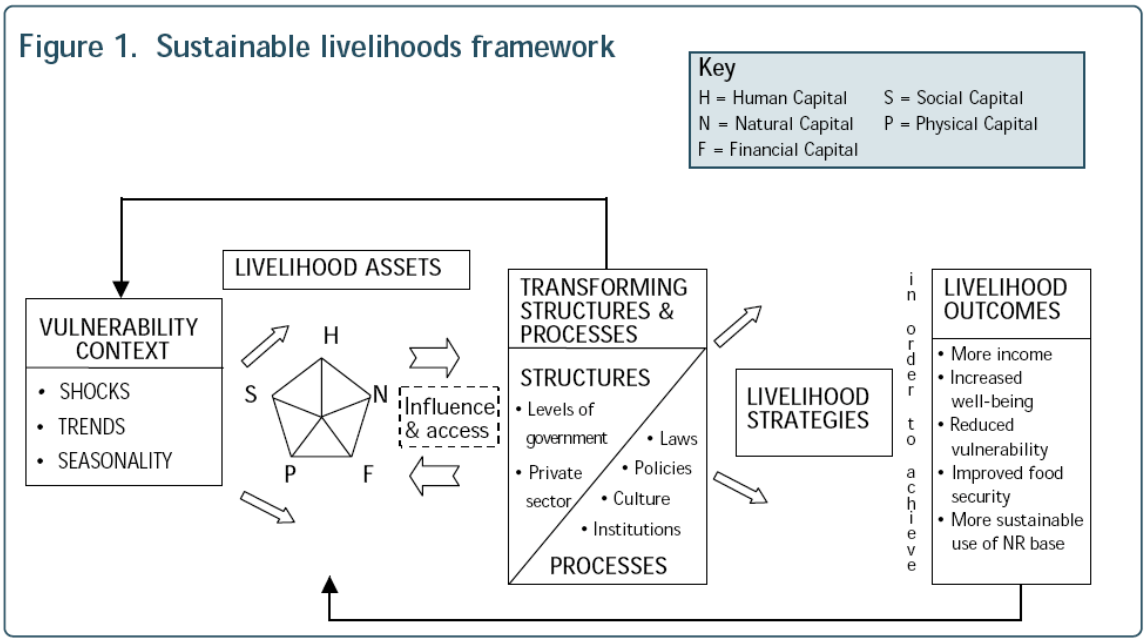

Figure 2.2: Example of a Sustainable Livelihoods Framework (Source: DFID 1999: 1)

2.5.2.1 Assets/Capitals

Assets, or resources, are the cornerstone of SL frameworks as they are seen to govern the individual or household's feasible set of livelihoods strategies. Drawing from an economic metaphor, scholarship on sustainable livelihoods refers to these assets as 'capitals', which can be accumulated and invested in pursuit of livelihood outcomes. These capitals are "not simply resources that people use in building livelihoods: [but] assets that give them the capability to be and act", and that imbue their lives with meaning (Bebbington 1999: 2029). The notion of capitals supports a broad view of what

comprises poverty and livelihoods by illustrating that although the poor may have meagre incomes, they have a range of other assets which provide them with livelihood options and well-being (Farrington et al. 1999). By calling attention to what people *do* have, rather than what they lack (as in needs-based approaches), the SL approach also adds optimism to development discourse (Gilling et al. 2001; Rakodi 2002). Five types of capital, known as the 'asset pentagon', are generally cited in SL frameworks; natural, physical, financial, human, and social (Carney 1998; Bebbington 1999; DFID 1999; Helmore and Singh 2001; Toner 2003).

Natural capital refers to the local stock of environmental resources, including land and water, upon which livelihoods can be based. In the present study, access to shea nuts, which represent a form of natural capital, is essential for participation in shea butter projects. One of the SL literature's strengths has been to underscore that marginalized groups, such as the landless and women, are particularly dependent on natural capital in the form of common property resources (Chambers 1995; Rocheleau and Edmunds 1997; Rakodi 1999; Gilling et al. 2001). The SL framework also comprises physical capital: human-produced capital goods (productive resources), such as infrastructure, tools, and machinery that facilitate production processes and market exchanges. In the SL literature, this form of capital is discussed primarily for its role in agricultural intensification and in facilitating the integration of rural areas into national and international economies (Ellis 2000). I demonstrate in Chapter 9 that one of the contributions of shea butter projects has been to develop the physical capital of shea producers, thereby facilitating their participation in international shea butter markets. Next, financial capital includes savings, credit, remittances, and pensions, which are valued for their convertibility into other types of capitals or consumption goods. In turn, human capital refers to a person's education level, skills, and health status, and the resultant quantity and quality of labour individuals or households can draw upon to fulfil their productive and reproductive duties (Rakodi 1999; Ellis 2000). The fifth asset of the pentagon—social capital—has been heralded by the World Bank as perhaps the 'missing link' of development (Serageldin and Steer 1994; World Bank 2001; Perreault 2003). Because of its centrality to the SL framework and to my study of a female shea butter producer association, it is discussed in more depth below.

Since the identification of the concept of social capital within sociology (Bourdieu 1977, 1984; Coleman 1988) and its diffusion largely due to Putnam's (1993) *Making Democracy Work*, social capital has assumed various definitions (Perreault 2003).[31] In the SL literature, social capital generally refers to "the rules, norms, obligations, reciprocity and trust embedded in social relations, social structures, and society's institutional arrangements, which enable its members to achieve their individual and community objectives" (Narayan 1997: 50) and secure resources (Woolcock 1998; Portes and Landolt 2000). As this definition suggests, *social relations and networks*, operating at various scales, have a functional value and investing in these can represent a deliberate strategy to secure access to the resources, opportunities, and institutions upon which livelihoods are based (Berry 1989; Bebbington 1999, 2002). Social capital can be produced and bred formally—such as through participation in the shea butter producers' association—and/or informally—such as in traditional mutual aid arrangements shea butter makers pursue during butter processing. Like other forms of capital, social capital is subject to accumulation and depletion (Berry 1989; Portes 1998; Grootaert et al. 2002).

Social capital retains its worth only within its specific spatio-temporal setting, as the ability to draw upon it requires a shared understanding of the meanings imbued in social relations. In relation to this point, Bourdieu (1977, 1984) has called 'cultural capital' the shared meanings, symbolisms, and values embedded in cultural practices that (re)produce a group's social distinction/identity.[32] Although cultural capital is explicitly highlighted in some SL frameworks (Bebbington 1999; Perreault 2003), in others it is subsumed under the banner of social capital for its role in deciphering, validating, and honouring the value of social networks (Carney 1998). Similarly, political capital, consisting of patronage and political relationships, is sometimes conflated with social capital. Yet, other theorists believe that a complete definition of sustainable livelihoods requires a more in-depth understanding of political aspects per se, in which political capital should be examined in its own right (Carney 1988; versus Baumann and Subir 2001).

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[31] For an overview of the debates surrounding the notion and forms of social capital, see Portes (1998), Edwards and Foley (2000), Woolcock and Narayan (2002), Adler and Kwon (2002), and Turner (2007).

[32] Cultural capital refers to the knowledge, education, skills, expectations, and values that confer status to an individual. Parents transmit this capital in its various forms (embodied, objectified, institutionalized) to their children through socialization. For a discussion of cultural capital, see Bourdieu (1977).

The notion of social capital is fundamental to the SL literature because of its relation with the concept of access. Access, in turn, has been referred to as "the key issue in the conceptualization of livelihoods and, therefore, the key to unravelling poverty" (de Haan and Zoomers 2005: 27). Social capital and networks determine access not only to resources (such as land of adequate quality), but also to the prospects of transforming resources into livelihoods (for instance, through markets), to the conditions under which resources contribute to livelihoods (terms of trade, for example), and to the institutions that facilitate all other forms of access (Bebbington 1999: 2028). Seen in this light, access itself becomes the most essential resource for alleviating poverty, and social capital is a primary means of securing it. Studies on sustainable livelihoods have advanced our understanding of the significance of social capital to poverty alleviation and of the ways in which access varies in space and time, and according to identity features such as gender and ethnicity (Perreault 2003; de Haan and Zoomers 2005).[33]

Social capital and the other four capitals comprising the asset pentagon are inter-related and the acquisition or exploitation of one asset may hinge upon the ability to mobilize another (Rigg 2001). For instance, social capital mediates access to natural resources, whereas human capital is required to bring land into productive use. Livestock (physical capital) can be sold for money (financial capital) in times of need. To some extent, capitals can also be substituted for one another, with different assets having distinct potentials for substitution. Purchased fertilizer (physical capital), for example, can be used to compensate for declines in soil fertility (natural capital) (Rakodi 1999). Substitutions can similarly occur within asset categories, such as by reallocating labour from domestic duties to production for sale (Moser 1998). As livelihood strategies rarely draw upon and enhance all types of capital at once, their sustainability must be considered in light of the combinations of, and substitution between, these capitals and their overall stock through time (Serageldin and Steer 1994). Studies have demonstrated that the capacity to substitute among assets is critical for coping with shocks and seizing new opportunities (Reardon and Vosti 1995; Ellis 2000). Attention to these capital linkages and substitutions can reveal "the tradeoffs between economic growth, human

[33] Silvey and Elmhirst (2003: 866) argue, however, that "social capital is generally conceived in gender-blind terms that give little attention to gendered intra-household issues of power and hierarchy".

development, social integration and environmental integrity that are implied by different development options" (Bebbington 1999: 2031).

2.5.2.2 Livelihood Strategies

Livelihood strategies allow individuals and households to use, transform, and reproduce their capital stock in pursuit of livelihood outcomes. Scoones (1998) suggests that the livelihood strategies theoretically available to rural dwellers can be conceptualized as a continuum, within which livelihood diversification occupies the most prominent position. At either end of the continuum, livelihood diversification is flanked by agricultural intensification or extensification, and migration. Because of the prevalence of livelihood diversification among the poor—including the shea butter producers who participated in this study—the topic has received significant attention in the SL literature and merits attention in this review.

According to Ellis (1998: 4), livelihood diversification is "the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living." Diversification may occur at the individual level, with a single person pursuing various activities such as farming, trade, and contractual labour. It can also occur at the household-level such that, while household members may specialize in a particular activity, the household's aggregate activities comprise a diverse portfolio of livelihood strategies (Ellis 1998, 2000; Whitehead 2002). Diversification occurs within and across sectors. For instance, agriculturalists cultivate a variety of crop species and fields in different micro-environments to take advantage of complementarities between crops, reduce the risks of crop failure, and increase food security, while also partaking in non-farm activities (Scoones 1998; Rigg 2001).[34] Migration is common, and results in a multi-spatial organization of livelihood activities (Stark and Lucas 1988; Ellis 1998, 2000). As with capital assets, the relative importance of different activities changes over time within a given household, and across households and regions (Adger 1999; Shackelton and Shackelton 2003).

[34] Non-farm income represents a large proportion of average household income even in rural areas, and its share of household revenues continues to grow (Barrett et al. 2001).

Studies have shown that people diversify their assets, incomes, and activities for various reasons (Ellis 1998, 2000; Barrett, Reardon, and Webb 2001). 'Push' factors include the need to mitigate risks, increase safety nets, and resist and/or cope with shocks and stresses (Ellis 1998; Moser 1998).[35] Pursuing diverse livelihood strategies allows individuals and households to stabilize their income and smooth consumption during seasonal shortfalls and times of crisis (Bacon 2005). This is the case among shea butter makers, who sell butter to the butter producers' Union as one facet of a complex portfolio of livelihood activities. People may also diversify their livelihoods in response to 'pull' factors, such as new opportunities (like the advent of shea projects), or to build strategic complementarities among their activities (Start and Johnson 2004). This is more frequently the case among the relatively rich, who pursue multiple livelihood strategies as an accumulation strategy (Reardon 1997; Ellis 1998; Barrett et al. 2001). Finally, a person or household may pursue selective diversification by flexibly engaging in certain livelihood strategies at opportune times and withdrawing from them during other periods (Turner 2007). This strategy is also demonstrated among some of the butter producers who participated in this study. The recognition that diversification plays a central role in people's livelihoods, and that the 'rural' is not strictly synonymous with an agricultural lifestyle, represents a major strength of SL scholarship.

2.5.2.3 Vulnerability Context and Transforming Structures and Processes

Another strong point of the SL literature is its attention to the ways the external environment frames people's livelihood options and strategies. Some SL analysts divide this environment into, first, an exogenous 'vulnerability context' over which people have little or no control, and second, socio-political aspects endogenous to the norms and rules of larger society, called 'transforming structures and processes' (DFID 1999, Gillian et

[35] According to Start and Johnson (2004: 31), "the risk a livelihood faces is a function of external hazard and the (varying) internal vulnerability among households to a given hazard." Ex-ante risk-management—or the activities a household adopts to anticipate and reduce its vulnerability to risk—and ex-post coping strategies—which are a survival response to a shock such as a crisis or disaster—represent distinct states (Carter 1997). Each of these states involves livelihood diversification (Narayan 1997; Bacon 2005). In fact, risk-related concerns are central to the livelihood strategies of the poor, and often represent the primary motive for livelihood diversification (see for example Valdivia et al. 1996).

al. 2001; Conway et al. 2002; Start and Johnson 2004).[36] The 'vulnerability context' refers to people's exposure to human-induced or 'natural' shocks and stresses such as droughts; trends such as fluctuating resource stocks (for instance, oscillations in shea nut yields) and population growth; and seasonality (Blaikie et al. 1994; Moser 1998; Adger 1999; Bacon 2005).[37] In turn, 'transforming structures and processes' can be divided into 'structures' that include public and private organisations such as the government, NGOs (such as those involved in shea projects) and commercial enterprises; and 'processes', which are the laws, policies, culture, and institutions that shape human interaction (Rakodi 2002: 15).[38] Attention to these external conditioning variables provides the link between the framework's micro and macro elements, and is the launching pad for policy-based interventions (Scoones 1998; Carney 1998; Ellis 2000).

2.5.2.4 Livelihood Outcomes

As previously mentioned, one of the contributions of the SL approach is a holistic concept of sustainable livelihoods, which urges us to rethink the desired ends of 'development'. These ends, or sustainable livelihood outcomes, include:

> income, dignity, power, and sustainability: or in other words… consumption levels that reduce [people's] poverty; living conditions that imply an improved quality of life according to people's own criteria; human and social capabilities to use and defend assets ever more effectively; and an asset base that will continue to allow the same sorts of transformations (Bebbington 1999: 2029).

[36] Reardon and Vosti (1995) group these contextual elements into one category, which they call 'conditioning factors.' In contrast, Ellis (2000) distinguishes between social relations, institutions and organizations, and trends and shock factors.

[37] Vulnerability also has internal dimensions relating to the sensitivity, or intensity, with which individuals or households feel an external stress and their ability to adapt to this stress (Blaikie and Brookfield 1987). The SL framework's 'vulnerability context' refers to the exogenous dimension of vulnerability rather than its internal dimension.

[38] It is worth expanding North's (1995: 23) definition of institutions, provided in Footnote 14 of this chapter, below to distinguish between these institutions and organizations:

> [Institutions] are the rules of the game of a society, i.e. the humanly devised constraints that structure human interaction... By contrast, organizations are the players: groups of individuals bound by a common purpose to achieve objectives. They include political, economic, social and educational bodies.

In this view, the capitals that serve as inputs to livelihood strategies are also livelihood outcomes; they represent the means to and the ends of poverty alleviation and environmental conservation.[39] This two-way notion is a strong point of the SL literature.

2.5.3 Critique of the Sustainable Livelihoods Literature

While painting a dynamic picture of rural livelihoods, poverty and the environment, SL scholarship faces certain limitations. A general shortcoming of the SL literature is its weak description of the relationship between poverty and sustainable livelihoods. Although the concept of poverty is intrinsic to the discussion of livelihoods, no explicit mention is made of the ways poverty fits into the notion of sustainable livelihoods (Ashley and Carney 1999). Moreover, the different ways in which people define poverty are under-emphasized. Some authors also feel that a focus on assets offers privileged research and programmatic attention to the poor who have some assets at the expense of the destitute who have little in the way of capitals (Rakodi 1999). Further, the SL literature focuses on the characteristics of enabling environments that facilitate capital accumulation, but pays little attention to the safety nets required to protect people from impoverishment (ibid 1999). I focus the following critique on what I consider four of the most important shortcomings of the SL literature: its treatment of capitals, power relations, livelihood choices, and sustainability.

2.5.3.1 The Problem with Capitals

While broadening our conception of poverty, the notion of 'capitals' is somewhat contentious. For instance, Beall (2002) argues that 'capitalizing' all aspects of people's lives using the language of neo-classical economics is reductionist and problematic. In like vein, Whitehead (2002) suggests that using economic terminology to understand decisions about resource use and household subsistence is questionable. From an anthropological, sociological or political economy perspective,

> assets are of course relational: systems for access and distribution and systems of exclusionary access are intrinsic to the idea. They become torn out of their relational context in the shift to the language of neo-classical economics to explore livelihoods (ibid 2002: 577).

[39] This perspective echoes Sen's (1999) concept of development as 'freedom', where freedoms such as access to education and health care or the right to articulate political views, and the meanings these freedoms imbue in people's lives, represent both a means to, and an end of, development.

In light of the economic metaphor used to describe both tangible and intangible resources, it is perhaps unsurprising that works on sustainable livelihoods tend to understate the deployment of capitals for non-material goals (de Haan and Zoomers 2005). For instance, conceptualizing human capital merely in terms of labour inadequately reflects its value as its own end: to enhance the capability to question, challenge, and transform the world (Sen 1997; Whitehead 2002). The same criticism applies to the concept of social capital, which is rarely considered for its intrinsic value; giving voice, stimulating participation, and enriching lived experience, thereby reducing the experiential dimension of poverty (Sen 1997; Bebbington 1999). The SL literature also tends to ignore the 'dark side' of social capital, whereby it enables certain groups to deny others access to resources and opportunities (Beall 1997, 2002; Portes 1998; Portes and Landolt 2000; Turner 2005).

There are additionally practical concerns with the asset pentagon. Defining, measuring, and calibrating across assets is complex. Likewise, assessing the trade-offs between capitals is difficult given that some capitals are tangible resources whereas others are processes (Scoones 1998). The SL literature thus fails to thoroughly engage in the linkages and substitutions between different capital assets (Maqueen 2001; Conway et al. 2002; Toner 2003; Kanji et al. 2005; Scoones 2009).

2.5.3.2 Neglected Power Relations

Perhaps the greatest shortcoming of the SL literature is its failure to discuss power relations. According to Toner (2003: 772), the SL concept provides an "individualised," "depoliticised" and "benign" portrayal of how people make a living and manage their resources. The SL frameworks' "cleansed, neutral" perspective on power issues (Ashley and Carney 1999: 35) stands out against the ways configurations of power actually (re)produce poverty. For instance, the concept of transforming structures and processes generally lumps together the entire range of socio-political aspects that bear upon livelihoods. With notably few exceptions (see, for example, Ellis 2000), published SL frameworks thus underplay the significance of social institutions such as gender in

understanding poverty and livelihoods.[40] Power configurations and property relations, as well as full potential for action, can thus be "lost" from the analysis (Ashley and Carney 1999: 33).

2.5.3.3 Rational Choice versus Structuralist Theories

Another questionable aspect of the SL literature is the premise that people act as 'strategic managers' to rationally select among a range of livelihood options within given contextual constraints. This assumption is refuted by structuralists who believe instead that cultural, historical, and social forces supersede individual agency in explaining behavioural patterns. In this view, alluding to livelihood 'strategies' is contentious, as it overstates people's ability to choose their fate rather than react to the power configurations and structures that condition their lives (Rakodi 1991). Structuralists question whether having to choose between extremely limited, dire alternatives (for instance, starvation or prostitution) truly represents a choice (Start and Johnson 2004). They contend that the SL literature's emphasis on social agency underplays the fact that, although people do build their own livelihoods, they do so under historical, macroeconomic, geographical, agro-ecological, institutional, and social conditions that are not necessarily of their choosing (Scoones and Wolmer 2002; Toner 2003; de Haan and Zoomers 2005). Personality-based preferences and skills do consciously influence choice, yet cultural and ideological factors also condition behaviour (Rakodi 2002). Considering livelihoods as products of strictly rational strategies overlooks these considerations.

2.5.3.4 A Vague Notion of Sustainability

A final substantial drawback of the SL literature pertains to its discussion of sustainability. In theory, sustainability is a fundamental concept in the SL literature. According to Sneddon (2000: 534), "the SLs framework is thus far the most detailed discussion of how the abstract notion of sustainability might be operational in the context of the actual lives of people within third-world societies". Indeed, the SL literature does contribute valuable insights about the multiple dimensions of sustainability, considered in

[40] Ellis (2000) partly addresses this issue by explicitly distinguishing the social relations, including gender, caste, age, ethnicity, and religion, from the institutions (rules and customs, land tenure, and markets) and organisations that shape the set of feasible and socially acceptable livelihood strategies.

terms of the combinations and substitutions of the five capitals over time. Yet, the discussion quickly reaches a standstill, leading some authors to question whether, despite its title, the SL approach truly attempts to integrate sustainability with other concerns (Ashley and Carney 1999).

The main drawback with the SL literature's discussion of sustainability is its lack of clarity about the relative importance of sustainability components as capital stocks and livelihood strategies change (Macqueen 2001; Rakodi 2002). For instance, do sustainable livelihoods require certain environmental features to be sustained? Sustaining some aspects of livelihoods may also be undesirable; social sustainability, for example, can support the status quo, yet social change (redistribution of resources) may be more appropriate for alleviating poverty (Rakodi 2002). SL scholars recognize that livelihood strategies can be sustainable at some scales but not others and that tensions exist between short and long-term livelihood goals. They do not, however, discuss how to handle these trade-offs (Farrington et al. 1999). Finally, the temporal dimension of sustainability remains poorly theorized from an SL perspective.

Some of these critiques can be tempered by remembering that no single model can depict lived experience, poverty, and the environment in all their complexity. What is more, the SL approach is descriptive and aims to improve our qualitative understanding of livelihoods, sustainability, and poverty rather than to provide a prescriptive measurement tool. Despite its shortcomings, SL scholarship does advance our understanding of livelihoods and sustainability, and combining its insights with other approaches may palliate some of its limitations. I pursue this endeavour by bringing together key aspects from the literature on SL (discussed next) with those on feminist political ecology, TEK, and commodity chains in the final section of this chapter (2.6).

2.5.4 Drawing from the SL Literature

Works on SL yield important insights for my assessment of the sustainability of shea butter projects in the centre-west region of Burkina Faso. Key notions drawn from this literature are summarized in Figure 2.1, as they provide an analytical foundation for this thesis. To begin, the approach offers a valuable, if rudimentary, **notion of sustainability** that guides my study of the sustainability of the shea projects on which I focus. Moreover, in Chapters 8 and 9, I borrow from SL scholarship to consider the effects of

shea butter projects on each of the assets comprising the **asset pentagon**, while emphasizing the centrality of **access** in determining the **livelihood strategies** available to rural dwellers. In so doing, I draw upon the concept of **livelihood diversification** in my analysis of the range of activities—among which shea butter sales figure prominently—shea butter producers pursue to make ends meet. I examine how the importance of the shea trade in women's livelihood portfolios varies according to a number of social identity features, including wealth and place of residence.

Attention to the **vulnerability context** of shea producers additionally enriches my study by contextualizing the significance of shea projects in an unpredictable socio-economic and natural environment. Emphasis on fluctuations in shea yields—over which shea producers have little influence—further illustrates the insecure nature of the trade and the need shea producers share for safety nets and insurance in a shifting environment. Shea projects are conceptualized as the **transforming structures** that, given enabling **transforming processes** such as appropriate policies, may generate promising livelihood opportunities for shea butter producers. Finally, I theorize the effects of shea projects as multi-faceted **livelihood outcomes**, which move beyond mere income measures into dimensions of meaning, power, and sustainability.

In light of the shortcomings of the SL literature discussed in Section 2.5.3, in this study I expand upon the approach by examining the symbolic meanings imbued in the five capitals and their deployment, and emphasizing the linkages and trade-offs involved in mobilizing these capitals. Further, I respond to calls for greater attention to power relations by considering the ways gendered power relations in particular, as well as relations among different ethnic groups, determine access to the different capitals and mediate the local effects of shea projects. In response to the structuralist critique of the literature presented in Section 2.5.3.3, I focus on the limited options rural shea butter makers face, the historical importance of shea production for rural Burkinabè women, and the role these factors play in persuading female agriculturalists to pursue shea sales, at times even in non-profitable circumstances. Finally, I attempt to operationalize the notion of sustainability in all its complexity, and explicitly consider its time component in my analysis of the sustainability of shea projects in Burkina Faso. I adopt a multi-scalar approach, with a focus on the micro scale, to explore how shea butter projects affect the

capital stock of female shea producers, households, and communities. I additionally demonstrate how changes in capital assets at any one of these levels affect the capital stock at other levels. Enriched with an attention to these considerations, the SL literature contributes valuable elements to my study of female shea producer livelihoods, and can reveal entry points for sustainable poverty alleviation interventions. As discussed below, additional insights can be gained by combining the approach with the other scholarly traditions reviewed in this chapter.

2.6 Conclusion: Integrating the Literatures

This chapter has critically examined the literatures on feminist political ecology, traditional ecological knowledge, commodity chains, and sustainable livelihoods that conceptually underpin my study of the sustainability of shea butter projects in the central-west region of Burkina Faso. Drawing from the above discussions, Figure 2.1, at the start of this chapter, summarized the key concepts from these fields that form the building blocks of my conceptual framework. In this final section, I review these core concepts and explore some of the overlaps among the four scholarly traditions to strengthen the analytical purchase of this study.

As depicted in Figure 2.1, I began the chapter in Section 2.2 by explaining how attention to **scale**, **gendered power relations**, and **history**, which represent the central precepts of scholarship on feminist political ecology, provides the foundation for my examination of shea butter projects in Burkina Faso. I subsequently demonstrated, in Section 2.3, the importance of three core concepts from the literature on traditional ecological knowledge for this thesis. First, the **observation-practice-belief complex** that characterizes traditional ecological knowledge systems enhances my understanding of the cultural and physical dimensions of shea agroforestry systems. Then, the notion of **differentiated and gendered ecological knowledges** illuminates my analysis of distinct female and male knowledges of shea among different ethnic groups. Finally, emphasis on the role of **TEK in guiding the evolution of species and landscapes** sheds light on Burkina Faso's shea landscapes, created through centuries of shea tree management.

In Section 2.4, I considered the relevance of scholarship on commodity chains for my study. I reviewed four different strands of commodity chain analyses that emphasize

distinct dimensions of the processes linking producers to distributors and consumers. From the **Global Commodity Chains** strand, I borrow the notion of skewed power relations within the shea commodity chain that favour **consumers in the global core** at the expense of African shea butter **producers in the periphery**. I further draw on the concept of **buyer-driven chains** to conceptualize how the shea commodity chain's governance structure affects the distribution of rents along the chain. In turn, from the **commodity systems** tradition, I retain an interest for the **vertical dimensions of** shea **producer–consumer linkages**, and for the influence of Fair Trade consumption practices on production patterns. I additionally integrate **horizontal factors** in my analyses. Hence, Chapters 6 and 7 examine both the connections between successive nodes (vertical dimension) of the shea nut and butter commodity chains, and the role place, ethnicity, class, and gender relations (horizontal factors) play in shaping the dynamics of producer-consumer linkages. Next, the **commodity circuits** approach contributes an attention to **cultural flows of meanings** in shea networks. Finally, I adopt the notion of a **commodity network** to describe the **network morphology** linking shea butter producers and consumers in the global economy and the notion of **flows** to describe how commodities circulate within these networks. Drawing from this strand of CCA, I consider how both **human and non-human actants**, including shea nuts and butter, affect chain dynamics.

Lastly, sustainable livelihoods debates contribute a basic working **notion of sustainability**, which I adopt in my assessment of the sustainability of shea butter projects. SL scholarship additionally reveals how interlinked capital assets that constitute the **asset pentagon**—and, importantly, how **access** to these capitals—are mobilized in pursuit of **diverse livelihood strategies** (including shea butter production) to yield **livelihood outcomes** that include increased incomes, material well-being, meaning, and capabilities. These processes occur within a wider **vulnerability context** characterized by shocks and stresses, and are framed by **transforming structures and processes** such as organisations, regulations, and institutions that influence livelihood activities and their outcomes. In sum, these notions inform my study of the contribution of shea butter production and commercialization to a diverse portfolio of activities rural female producers pursue to make ends meet, and of the outcomes ensuing from this livelihood strategy.

Although treated separately in this chapter, the four bodies of literature reviewed above share a number of conceptual overlaps. Key themes running across these fields include the significance of contextual elements and of place in understanding local phenomena; a focus on agency; the need for multi-scalar analyses; an attention to power relations, with emphasis on gender relations; the cultural construction of commodities, resources, and landscapes; the social differentiation of local experiences; and an attention to historical factors. Combined, these four approaches thus provide a comprehensive framework to study the processes I investigate in this thesis, including

> how particular forms of globalisation and associated processes of production and exchange – historically from colonialism to contemporary neo-liberal economics – create both processes of marginalisation and opportunity. In such a view 'the global' and 'the local' are not separated–either physically or analytically–but intimately intertwined through connections, linkages, relations and dynamics between diverse locales (Scoones 2009: 188).

In the rest of this thesis, I operationalize this conceptual framework to investigate the themes mentioned above through a case study on shea butter. To begin, in Chapter 3 I situate these themes within the contextual environment of shea butter projects in the central-west region of Burkina Faso. Specifically, I explore the locales where this framework will be utilized, and the wider ideological and regulatory context embedding these locations, within which *in situ* variables connect through time and space.

CHAPTER 3

CONTEXTUALIZING THE STUDY: BURKINA FASO, THE 'LAND OF RIGHTEOUS PEOPLE'

3.1 INTRODUCTION

The sustainability of Burkina Faso's shea butter projects must be considered within the physical geographical, socio-economic, political, and historical context in which they are embedded. As phenomena occurring at the national, regional, local, and household levels are affected by contextual variables at every other level, this chapter provides a multi-scalar examination of the country and its people. The discussion sets the stage for a holistic understanding of shea agroforestry, shea commodity chains, and the effects of shea butter projects in the central-west region of Burkina Faso.

To begin the chapter, I detail the physical geography of Burkina Faso (Section 3.2), before turning to Burkinabè demographics in Section 3.3. Next, I consider the country's political history (3.4) and economy (3.5). In Sections 3.6, 3.7, and 3.8, respectively, I analyse the social organization, tenure systems, and gendered livelihoods of Burkinabè peoples, with emphasis on the Gurunsi and Moose people, who were the primary participants in this study. Having understood the countrywide context and challenges that bear upon shea projects in the previous sections, Section 3.9 concentrates on the province of Sissili, the geographic focus of my study. In conclusion (3.10), I review the relevance of these contextual considerations to an analysis of the sustainability of shea butter projects in the central-west region of Burkina Faso.

3.2 PHYSICAL GEOGRAPHY

Burkina Faso is a small (274 200 km^2), landlocked francophone country in West Africa (Figure 1.4). It lies between 9°20' and 15°3' of latitude North, 2°20' of longitude East and 5°3' of longitude West (UNEP et al. 1999). The country shares borders with Niger to the East, Mali in the North and North-West, Ghana to the South, Ivory Coast to the South/South-West, and Benin and Togo to the South-East.

The country's relief is flat, with an average elevation of 400 meters above sea level, and its highest point reaches 749 meters above sea level (UNEP et al. 1999). A

central plain (latitude 11°N to 14°N, longitude 3°W to 1°E), commonly referred to as the Central or Mossi Plateau, covers one quarter of Burkina Faso's territory (70,668 km^2) and encompasses half of the Burkinabè population (Maatman et al. 1996; Batterbury 2005). It is flanked by two lateral plateaus.

Burkina Faso's northernmost region forms part of West Africa's drought-prone Sahel (average annual precipitation below 600mm), while the rest of the country lies within the transition zone between Sahelian and Sudanic climates. The country's tropical climate is comprised of a dry season, from October to April, and a wet season lasting from May/June to September. Rainfall follows a distinct gradient, increasing from 300 mm in the north (quite marginal for agriculture) to 1100 mm in the southwest. It is highly irregular both spatially and temporally. Annual precipitation cycles consist of droughts followed by abundant rains. The poor distribution of rainfall events within the agricultural season can compromise the country's livestock and agriculture, even in years of sufficient rain. As discussed in Chapter 5, precipitation patterns also influence shea tree yields, which bear directly on the success of the shea butter projects discussed in this thesis. During the cool dry season, the Harmattan—an arid, dust-laden wind—blows south from the Sahara, creating occasional sand storms across the West African Sahel (UNEP et al. 1999; Atlas du Burkina Faso 2001).

Burkina Faso's location within the Sudano-Sahelian transition zone predominantly accounts for the marked latitudinal variations in its vegetation. While desert steppes and savanna shrublands characterize the country's northern zone, woodland savannas and forested woodlands cover its central and southern Sudanian ranges (Figure 3.1) (UNEP et al. 1999). The Burkinabè environment is additionally shaped by human intervention, as local people have long gathered plants and tree products, sown crops, managed tree species, and raised livestock. Trees found in cultivated Burkinabè fields reflect an anthropogenic selection for species yielding culturally-valued products (Freudenberger et al. 1997; Boffa 1999; Maranz and Wiesman 2003). The shea tree—*Vitellaria paradoxa*—is well adapted to this environment. Other indigenous species including *Parkia biglobosa* (*néré*)*, Tamarindus indica* (tamarind), *Faidherbia albida* (apple-ring acacia), *Adansonia digitata* (baobab), and *Lannea microcarpa* (*raisinier*), as well as introduced species such as *Mangifera indica* (mango),

Azadirachta indica (neem) and *Eucaplyptus camaldulensis* (eucalyptus), also figure prominently in Burkinabè landscapes (Lamien et al. 1996).

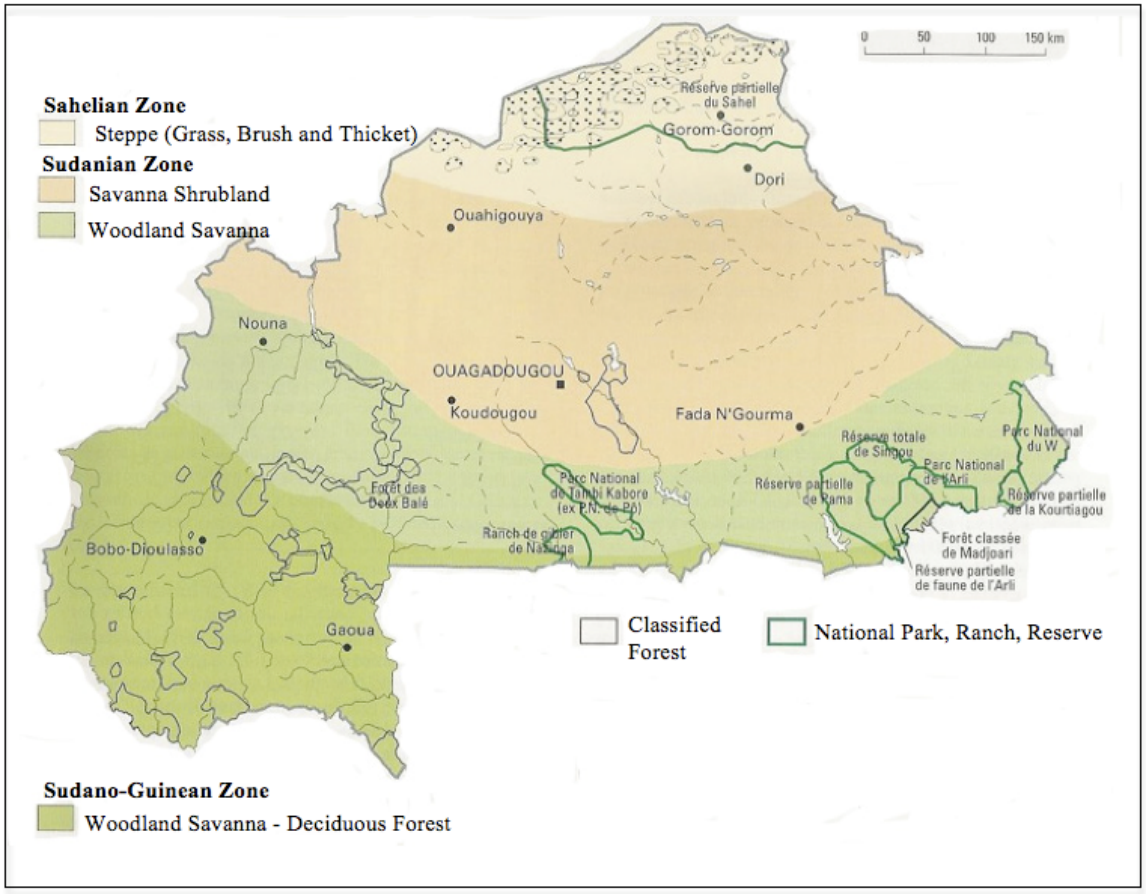

Figure 3.1: Vegetation Zones of Burkina Faso
(Adapted from Atlas du Burkina Faso 2001: 21)

The country's fragile soils are primarily composed of ancient weathered sands. Sandy, poorly developed soils are found in the north, while acrisols (clay-rich soils of limited fertility) and luvisols (also clay-rich, but more suitable for agriculture) cover the central and southern regions. These soils are deficient in organic matter and minerals, especially phosphorus and nitrogen, are subject to acidification, and have a low water-holding capacity (Scoones and Keeley 2003). Yet, they benefit from nutrient deposition from dust carried during the Harmattan (Pieri 1989).

Burkina Faso's parched lands are watered by three principal rivers and divided into three watersheds. The Volta basin (178 000 km^2) covers the country's Central Plateau and comprises the Nazinon and Nakambé rivers—formerly the Red Volta and the

White Volta, respectively—as well as the Mouhoun—previously the Black Volta—which is the watershed's only perennial water source (Compaoré 2000). The Niger (79 000 km^2) and smaller Comoé (1700 km^2) watersheds cover the rest of the country with their predominantly seasonal rivers (UNEP et al. 1999). Given the seasonality of the river flows, attempts at large-scale hydro-agricultural land flooding projects since the 1970s have failed to generate their anticipated benefits (Compaoré 2000).

Although a meagre hydroelectric power potential limits Burkina's prospects for industrial development, the country's promising mining potential is drawing the interest of international mining companies. In particular, Burkina Faso holds large gold reserves, some diamonds as well as ferrous (iron, magnesium, nickel) and non-ferrous (copper, lead, zinc, titanium) metals (Atlas du Burkina Faso 2001). Mines represent a source of employment for some of the country's nearly 14 million inhabitants.

3.3 DEMOGRAPHY

Burkina Faso's small surface area coupled with its 13.9 million inhabitants render it one of the most densely populated countries in Sahelian West Africa (Human Development Report 2008). In 1999, Burkinabè population densities varied between 11 people per square kilometre in the northern, Sahelian zone, and 122 people per square kilometre in the central, Sudanic zone's Kouritenga province, while the national average was 33 people per square kilometre (UNEP et al. 1999).

With respect to urban agglomerations, the country's largest centres are the national capital, Ouagadougou, which is home to nearly one and a half million people, and Bobo-Dioulasso, with close to half a million inhabitants. The country also comprises a dozen mid-sized towns of 11,000 to 52,000 people (INSD 2006). Nevertheless, over 80 per cent of the population remains rural and has poor access to goods and services (Human Development Report 2008). In light of the socio-economic indicators provided in Table 3.1, it is perhaps unsurprising that Burkina Faso ranks 176th out of 177 countries according to its Human Development Index (HDR 2008). This lack of development is relevant for understanding the significance of shea butter projects in the country.

Table 3.1: Socio-Demographic Indicators of the Burkinabè Population

Population	13.9 million
Annual population growth rate	2.8 per cent
Fertility rate	6.4 births per woman
Infant mortality rate** -poorest 20%	97 per 1000 live births
Infant mortality rate** -richest 20%	78 per 1000 live births
Mortality rate for children under five** -poorest 20%	206 per 1000 live births
Mortality rate for children under five** -richest 20%	144 per 1000 live births
Maternal mortality ratio**	700 per 100,000 people
Population undernourished**	15 per cent
Children under five underweight for their age**	38 per cent
Life expectancy	51.4 years
Population under age 15	46.2 percent
Population aged 65 or older	3.1 percent
Rural dwellers	81.7 per cent
Urban dwellers	18.3 per cent
Adult literacy rate -female**	16.6 per cent
Adult literacy rate -male**	31.4 per cent
Population with access to improved sanitation**	13 per cent
Population with access to improved water source**	57 per cent
Physicians	5 per 100,000 people
Population living below 1$US per day**	27.2 per cent
GDP per capita	391$US
Purchasing power parity (PPP) per capita	1213$US

(Source: Human Development Report 2008: 232, 237, 240, 246, 250, 254, 256, 264, 280)

Stars (**) denote that the given indicator is targeted by the Millennium Development Goals (MDGs). The MDGs are eight aims and specific targets agreed upon globally and by international development institutions to improve the standard of living of the world's poorest by 2015.

The Burkinabè population comprises approximately 63 ethnic groups and languages, with French serving as the official language. Ninety per cent of local languages derive from the Sudanic language family. Major resident ethnic groups include the Moose, who represent approximately 49 per cent of the population, followed in descending order of percentage by the FulBe (eight per cent), Bobo (seven per cent), Gourmantché (seven per cent), Bissa-Samo (six per cent), Gurunsi (six per cent), Lobi

(four per cent), Bwaba (three per cent), and others (Janin 2008).[41] The Moose dominate the north-central Plateau, and wield most of the country's political power. Sedentary and semi-nomadic pastoralists, such as the FulBe and the Touareg, predominantly inhabit the arid north. Yet, due to their mobility in search of pastures for their livestock, the FulBe have a history of interaction with other Burkinabè ethnic groups. In recent years, many FulBe have settled among farmers in the southern parts of the country, including the province of Sissili where my research takes place (SIDA 2004). In the context of this study, it is worth noting that since the shea tree is located throughout the territory with the exception of the country's northernmost tip, women of nearly all Burkinabè ethnicities are involved in shea nut collection and butter processing.

The major religions in Burkina Faso are Islam, animism, and Christianity, to which 50, 40, and 10 per cent of the population adhere, respectively (Atlas du Burkina Faso 2001). Nonetheless, animism remains the guiding philosophy even among followers of other religions. The spiritual importance of nature and of the ancestors associated with animist beliefs underlie the relationship Burkinabè peoples have with the shea tree. The adoption and spread of Islam and Christianity in the sub-region is owed to centuries of trade, conquest, colonialism, and migration, which are examined in the following section.

3.4 BRIEF POLITICAL HISTORY

For ease of discussion, Burkina Faso's political history can be broadly separated into its pre-colonial (Section 3.4.1), colonial (3.4.2), and post-colonial (3.4.3) periods. As demonstrated below, the country has experienced many political upheavals since colonial times. In the following overview, emphasis is on the colonial legacy and independent Burkina Faso, the military coups, and the range of political systems the country has faced. In particular, I focus on the Burkinabè revolution and the post-revolutionary period, which are most consequential in terms of setting the stage for the development and effects of shea projects in Burkina Faso.

[41] In this study, I refer to the Moose, Gurunsi, and FulBe people upon whom I focus by their autonym. However, in the literature these ethnic groups may also be encountered, respectively, as the *Mossi* or *Mossé* (French), the *Gourounsi* or *Grounsi* (French or English), and the Peuhl (French) or Fulani (English).

3.4.1 Pre-colonial History

Dating back to the 12th century, the Moose Empires of the inland delta of the Niger River were formed when warriors from Ghana rode north and conquered the Volta River Basin (Skinner 1958, 1989; Izard 1970, 1988). Characterized by their powerful, centralized and hierarchical political structures, these Moose kingdoms extended over the central plateau and northern region of the current Burkinabè territory. Their warrior strength permitted the Moose to assimilate several groups of people including the Dogon, Lela, and Kurumba (Houis 1961; Conombo 1989).

For centuries, the Moose Empire (Moore: the *Mogho*) represented a major trade centre for south-bound caravans carrying Sudanese and Saharan goods, which returned with forest products such as shea butter to the arid north (Skinner 1962, 1989).[42] Moose chiefs levied a transit tax on traders, which contributed to the Mogho economy (ibid 1962). Despite losing many of its strongest people to the trans-Atlantic slave trade (Nunn 2005), the Moose Empire remained powerful and resisted the movements of Muslim FulBe armies (Houis 1961).[43] The Mogho's sophistication was praised by Arabs and Europeans alike (Zahan 1967).

At the end of the 19th century, powerful Moose kingdoms stretched throughout Burkina Faso's central-north area, while several ethnic groups with decentralized political systems—such as the Dogon, Bwa, Bobo, Kassena, Lela, Lobi, Nuna, Nunama, Toussian, Turka, and Winiama—inhabited the country's south and west. The most powerful Moose Empire encompassed and continues to cover the Moose capital and capital city of Burkina Faso: Ouagadougou. To this day, an emperor, who is referred to as the *Mogho Naba* in Moore, rules this empire, inhabiting its capital (Skinner 1958, 1960; Houis 1961).

3.4.2 Colonial Times

France colonized Upper Volta—present-day Burkina Faso—in the 1890s through repeated military campaigns. Upon conquering Ouagadougou in 1896, the French seized

[42] Moore is the language of the Moose.
[43] The trans-Atlantic slave trade lasted between 1400 and 1913, during which time approximately 12,750,000 slaves were exported from Africa (Nunn 2005). Based on data from La Torre (1979), Nunn (2005) reports that around the 1840s, approximately 60 per cent of the slaves imported into the Kingdom of Asante (in present-day Ghana) for export from Asante ports were Moose.

control of the Mogho's elaborate and ramified political system (Soeur Marie-André 1937; Skinner 1960; Butler 1981). By way of Moose chiefs, a single administrative official could 'supervise' 60,000 Africans. The system was tailored to make optimal use of Upper Volta's abundant population, believed to be the main riches of the resource-scarce colony (Skinner 1960; Kohler 1972; Amin 1973; Massa 1995).

Colonial policies led to a reorganisation of local agricultural systems, increased female and young men's work burdens, and undermined food security (Skinner 1960). Three policies chiefly accounted for these changes: forced labour, taxation and crop requisitions. Voltaic peoples served as a labour reservoir for the rich cocoa plantations, infrastructure works and labour-demanding endeavours in adjacent French colonies, including Ivory Coast, Sudan, and Senegal.[44] The population was forced to provide a number of workdays per person per year for infrastructure development (Cordell and Gregory 1982). For instance, between 1920 and 1932, over 50,000 workers—mostly young men—were sent to toil on the Abidjan-Niger railway (Massa 1995). To ensure a continued labour supply to neighbouring colonies, the colonial administration further refused to develop industry in Upper Volta or infrastructure that would compete with the railroad designed to supply labour to the coast. Voltaic men were recruited to work in the *Office du Niger* irrigated cotton schemes in present-day Mali, and compelled to provide military service during the World Wars, in Indochina, and in Algeria (Finnegan 1980; Massa and Madiéga 1995). Other young men fled to the British Gold Coast (Ghana), where colonial rule was not as exacting (Skinner 1960; Cordell and Gregory 1982). Drafts contributed to a massive exodus of the most productive sector of the population. Village elders recall with aversion their work in the former French Sudan and the *travaux forcés* (forced labour) to which they were subjected in neighbouring colonies (Kohler 1972). Massive Burkinabè migrations to adjoining coastal countries, particularly Ivory Coast and Ghana, in search of work continue to occur (Remy 1973; McMillan 1987b).

Crop requisitions compounded the negative effects of forced labour on agricultural production. Peasant households were forced to produce kapok, timber, hay, and millet for the army without pay or to sustain colonial works, while products of European interest, such as cotton, shea, and groundnuts, were obligatorily collected but

[44] Voltaic refers to the people of Upper Volta.

(unfavourably) remunerated by the French administration (Massa 1995; Cordell and Gregory 1982). In fact, each village was forced to produce a given amount of cotton per year to ensure a steady supply of the product to France (Bassett 1988; Gray 2003; Scoones and Keeley 2003). Households then disbursed their meagre revenues in payment of a head tax. Taxation was not new to the Moose, who were accustomed to paying taxes in kind to the Moose Emperor. However, the French per capita tax was exorbitant and had to be settled in minted currency, which was not easily accessible to Africans (Skinner 1960). Colonial taxation thus further compelled peasant households to engage in cash cropping or to migrate to Ivory Coast and the Gold Coast to sell their labour (Kohler 1972; Cordell and Gregory 1982).

As occurred elsewhere in West Africa, new production patterns emerged as labour shifted from subsistence to cash production within peasant households. Men became particularly involved in cash crop production to pay taxes, while the brunt of subsistence production fell upon women (Skinner 1960; Bukh 1979; Rau 1991). Crop production also became increasingly gendered spatially as men toiled increasingly in economic fields whereas women laboured on subsistence plots (Guyer 1984).[45] As they became progressively more responsible for food security, women were left with less time to pursue their own-account agricultural activities (Skinner 1960).[46] The elderly equally saw their agricultural duties rise, as able bodied-men were removed from the agricultural labour pool (Cordell and Gregory 1982). Communal help arrangements, whereby household labour shortages were palliated with the assistance of relatives and marriage partners, dissolved as each production unit had to compensate for the loss of its men (Skinner 1960).

Compounded, these changes undermined local food security. Cash crop expansion affected the quality and quantity of subsistence agriculture; smaller areas were farmed, weeding was reduced, and less grain was harvested and stored (Rau 1991). An increasingly large surface area, frequently of highly fertile land, became planted with cash crop monocultures at the expense of mixed-cropped food production. As agricultural

[45] Women also frequently assisted men in cash cropping, albeit without controlling the ensuing revenues (Guyer 1980; Okali 1983; Davison 1988).
[46] A woman's 'own account' activities are those from which she controls the ensuing revenues or the use value of the goods produced.

surpluses from earlier years were depleted, households became increasingly vulnerable in years of unfavourable climate or blights (Cordell and Gregory 1982). As demonstrated in Section 3.8.1, these changes left a lasting legacy on Burkina Faso's contemporary agricultural systems.

Spatially, the colony underwent several territorial reorganizations. Between 1904 and 1919, it formed part of the colony of *Haut Sénégal-Niger*, which was subsequently fragmented into the colonies of Niger, the French Sudan, and Upper Volta. In 1932, Upper Volta was further divided between the French Sudan, Niger and Ivory Coast, with the latter gaining the greatest share of the land. The idea was to facilitate labour flows towards the coastal plantations and the irrigation schemes in Niger (Speirs 1991). Prompted by traditional leaders and intellectuals motivated by a nascent sense of nationhood, Burkina Faso's current borders were instated in 1947, just over a decade before the country gained its independence (Duperray 2004).

3.4.3 Post-colonial Period

Upper Volta achieved independence on August 5, 1960, led by president Maurice Yaméogo. Shortly after his ascension to power, Yaméogo—whose political platform had mirrored the French liberal democratic model—imposed a corrupt one-party system. His policies aimed at reducing the power of traditional chiefs and labour unions eventually led to his downfall. Following labour strikes, he was ousted in 1966 in the first of successive military coups that mark the country's contemporary history (Englebert 1996). Two subsequent coups in the early 1980s preceded Burkina's socialist revolution, which was instigated by a third coup in 1983 by the charismatic Captain Thomas Sankara.

Sankara's *Conseil national de la révolution* (CNR) (National Revolutionary Council) pursued nationalist and socialist policies aimed at producing an autonomous and egalitarian country. As its main objective, the government sought to promote agricultural and economic self-sufficiency. Towards this end, it increased spending on agriculture and raised producer prices, notably through the creation of state product marketing boards. Emphasis was placed on the implementation of small-scale agricultural projects by village cooperatives. Among its agrarian reforms, the administration issued the *Réorganisation agraire et foncière* (Land and agrarian reorganization) that appropriated all land for the State, thereby reducing the power of traditional chiefs (Speirs 1991).

During the revolutionary years, the country gained a sense of pride and identity. In 1984, Upper Volta was renamed Burkina Faso, meaning 'land of righteous people.' To promote national unity, the name was derived from a combination of Moore, spoken by the Moose, and Gur, spoken among the Bobo. The national anthem, flag, as well as the country's administrative names were also altered at this time. The CNR's reforms attempted to eradicate corruption and increase public participation in human and village development initiatives through new institutional frameworks: the *Comités de défense de la révolution* (CDRs) (Committees for the Defense of the Revolution). Under Sankara's leadership, Burkina Faso made advances in public housing, public health, and women's rights. Additionally, the country experienced significant socio-economic restructuring, with attempts to reduce the inflated salaries of state bureaucrats (Speirs 1991).

Although the population originally welcomed several of the reforms, the frequently repressive nature of the CDRs and Burkina Faso's growing isolation through its self-sufficiency policies infringed upon the interests of certain constituents, including government officials. The revolution ended in 1987 with Sankara's assassination in a coup led by *Front populaire* (Popular Front) leader Captain Blaise Compaoré. Compaoré, who had been Sankara's second in command, has since been at the head of the country.

Compaoré's *Front populaire* initially pledged that it would pursue the revolution, while submitting it to a process of "rectification" (Englebert 1996: 62). Yet, the government has since veered away from Sankara's socialist policies. In the early 1990s, the *Front populaire* renounced Marxism-Leninism and restored multiparty politics and free trade (Speirs 1991; Gearon 2004). Following decades of political upheavals, Compaoré has maintained the country's leadership for over two decades, albeit without enjoying the popular support of his revolutionary predecessor (Gearon 2004).

At the turn of the twenty-first century, Burkina Faso is a parliamentary republic. It comprises 45 administrative provinces, each of which is governed by an *Haut-commissaire* (High Commissioner). These provinces are sub-divided into 335 *Départements* (Departments), which are headed by a prefect, and further sub-divided into 8500 villages ruled by customary chiefs (UNEP et al. 1999). The national legal system is based on French civil law and local customary laws. Akin to the Queen of the United Kingdom, the Moose Emperor retains his traditional significance and a ceremonial role,

although his official political power is limited. The *nakomse*, who are direct descendants of the Moose invaders and conquerors of the Volta River basin, still hold political significance. *Nabas*, or chiefs, control regions of Moose territory and defer to the emperor. Local officials collect taxes from the people, including the agricultural *nyonyose*, descendants of the conquered farmers who inhabited what became Moose country (Kohler 1972). These taxes contribute to the country's suffering economy, which I examine next.

3.5 ECONOMY

Burkina Faso is one of the poorest countries in the world. The country's average GDP per capita is US $391, and approximately 71.8 per cent of the Burkinabè population survives on less than US $2 per day (Human Development Report 2008). Women figure prominently among the country's poor (SIDA 2004). Impoverished Burkina Faso is part of the West African franc-zone whose currency—the fCFA—is pegged to the Euro (formerly to the French franc). In 1994, the zone devalued its currency by 50 per cent. While this increased the competitiveness of Burkinabè exports, it concomitantly raised the cost of imported goods, and left the populace in an even more precarious state than before (Scoones and Keeley 2003).

Burkina Faso's economy is dominated by agriculture and livestock rearing, in which 90 per cent of the population is engaged. These sectors account for 40 per cent of the country's GDP, and provide 65 per cent of export revenues (Ministère de l'Économie et des Finances 1998). Consequently, the Burkinabè economy is extremely susceptible to global price fluctuations in primary commodities, such as shea. Since the 1970s, the deteriorating international value of these products has had dramatic consequences for the national economy.

Burkina Faso suffers from a swollen debt burden as well as balance-of-payments deficits and has been under structural adjustment since 1991. Money from donors represents a key contribution to the Burkinabè economy. Consequently, donors possess substantial political sway. At the turn of the 21st century, international aid to Burkina Faso has proliferated into numerous development projects (Compaoré 2000). The shea butter projects on which I focus have garnered significant international support as they

focus on one of the country's few primary resources, while addressing concerns for gender equality and environmental conservation.

Since colonial times, cotton has been Burkina Faso's most important export commodity. As sub-Saharan Africa's largest cotton producer, the country generates approximately half of its export earnings through the commodity's sale (Yartey 2008).[47] Additional export crops such as groundnuts, sugar cane, tobacco and shea nuts provide Burkina Faso with an opportunity to earn much-needed foreign exchange. Despite these exports, however, the country remains a marginal player in the global economy.

Prospects for increasing Burkina Faso's role in the international commodity trade are meagre due to its scarce resources, landlocked geography, and poorly developed infrastructure; while technological challenges, inadequate formal education, and low literacy rates thwart the country's participation in the knowledge economy. In fact, Odedra et al. (1993: 25) have termed the whole of Africa a "technical desert" and "the 'lost continent' of information technology." Sub-Saharan Africa has the least developed telecommunications infrastructure in the world and five times fewer telephone lines than the average for low-income countries. Burkina Faso follows suit. Along with other Sahelian countries, Burkina Faso has as few as two phone lines per 1000 people versus 583 lines per 1000 people in high-income countries (Okunoye and Karsten 2003). In contrast, cellular phone coverage has skyrocketed in Burkina Faso since 2000. Notwithstanding, Internet use is unreliable, and dial-up connections are notoriously slow, at times with entire institutions relying on a single phone line. Electricity represents an additional constraint, as its daily amount can be limited and the electrical network unreliable (Jensen 1999). These impediments weigh upon all aspects of international commerce, including the shea trade and the integration of shea producers into the global economy (Elias et al. 2006).

[47] In 2008, following field tests begun in 2003 (Vitale et al. 2008), Burkina Faso sanctioned the introduction of transgenically-modified *Bacillus thuringiensis* (Bt) cotton. Bt cotton has since boomed among the country's exports: whereas in 2008, it represented merely two per cent of the total Burkinabè area sown to cotton, by 2009 it represented 29 per cent of the country's cotton acreage, and was projected to cover as much as 80 per cent of the total area sown to cotton the following year (Fibre2Fashion 2010; GMO Compass 2010).

3.6 SOCIAL ORGANIZATION

Faced with precarious economic circumstances and little formal assistance, rural West African communities have developed elaborate supportive institutions, social networks and ties to support them in their daily struggles (Rau 1991; Dembélé et al. 2001). Age and gender hierarchies (Section 3.6.1) as well as kinship (3.6.2) structure social relations, while configurations such as the household (3.6.3), the village (3.6.4), and associations (3.6.5) provide rural dwellers with social security and minimize the risks accompanying changes in the local political economy (Scott 1976; Rau 1991; Ellis 2000; Dembélé et al. 2001; Grootaert et al. 2002). A set of rights and responsibilities corresponds to each person's position in the social web and moral codes sanction appropriate behaviour. In the following sections I analyse these networks and forms of social organization.

3.6.1 Age and Gender Hierarchies

In Burkina Faso, life is strongly hierarchical. Two dominant hierarchies underlie all other forms of social organization. The first is an age hierarchy. Burkinabè societies are gerontocratic; older members are greatly respected by their juniors and political weight and access to resources, including labour, increase with age (Ancey 1977; Gruenais 1985). Rites of passage that mark the coming of age, such as young girls or pubescent boys' initiation rituals, marriage, and the birth of a first child, are critical turning points in a person's life (Gruenais 1985). Throughout their life, Burkinabè people are part of an age-set, which may be an informal group of peers or an organized, gender-segregated cohort whose members undergo initiation rites together. Age-sets provide emotional support and play an educational role, as boys and girls of a given cohort mould each other's social behaviour without adult intervention (Roost Vischer 1997).

Gender is the second, superseding hierarchy, which is of fundamental importance to this study on female shea producers. In Burkina Faso, men and women are socialized according to highly patriarchal norms to have differentiated statuses, rights and obligations (Soeur Marie-André 1937; Kevane and Wydick 2001). In fact, Burkina Faso is ranked 154th out of 177 countries in terms of its UNDP Gender-related Development Index, indicating that it is one of the countries with the most inequality between women and men (Human Development Report 2008). Burkinabè men wield a marked authority

over their female counterparts, even if the latter are older.[48] In a non-reciprocal fashion, men can draw upon the labour of women, just as older men can recruit the labour of their juniors (Guyer 1980, 1984; Jackson 1993).

Understanding the gendered nature of daily life in rural Burkina Faso is facilitated by Ann Whitehead's (1981) concept of a 'conjugal contract'. Briefly put, this 'contract' of sorts draws attention to underlying power relations and to the broad pattern of agreement that characterizes the gendered rights and responsibilities that structure work, resource allocation and decision-making processes in West African households. For instance, as will become evident later in this thesis, it may be acceptable for men to requisition their wives' labour without compensation for certain activities but not others. Female and male roles and interests in the productive and reproductive spheres may be cooperative or conflicting (Sen 1990).[49] Although these roles are implicit at the time of marriage, conjugal rights and obligations can be contested and renegotiated over time as the household's socio-economic circumstances evolve (Martin 1984; Carney 1988; Jackson 1995). The outcome of contradictory interests depends on a negotiation process structured by gendered power relations and marriage as well as by descent group politics (Leach 1994).

Within the household, gender, age and order of marriage are key determinants of a person's bargaining power, ability to mobilize labour, and the ensuing division of labour (Folbre 1986; Thorsen 2002). A woman's status is defined according to her relationship with her husband and with other female household members. The allocation of resources to, and contributions from, different household members reflect and propagate the value attributed to men and women and to different age groups. Gender norms, as well as the age hierarchy described above, also underlie wider organizing structures, such as kinship, in Burkinabè society.

[48] One notable exception is between a man and his mother and his maternal aunts, who command the man's respect and protection and council him (SIDA 2004).
[49] The reproductive sphere refers to all activities required to maintain the labour force (generally consisting of household members), such as cooking, cleaning, and so on, and not strictly to childbearing.

3.6.2 Kinship

The majority of Burkinabè ethnic groups, including the Gurunsi and the Moose upon whom this study focuses, have a social organization based on kinship. Appropriate socio-political organization is dictated by the ancestors, whose spiritual presence and sanctions are ubiquitous among the living. In reference to the Moose, Hammond states (1982: 229-230),

> it is the kinship system that structures nearly all facets of family life. And it is the ancestors who sanction the organization of the kinship system. Those who abide by its rules as the ancestors have set them down can live out their lives within a supportive social network that stabilizes and guides their personal lives and assures their protection by the potent spirits of their deceased agnates as well as the permissive indulgence of the spirits of their mothers' patrilineal antecedents.

In Gurunsi and Moose societies, the lineage (what anthropologists refer to as maximal lineages; Moore: *boodoo*; Gurunsi: *songo*), wherein people are related by patrilineal descent, is the most meaningful unit of rural social organization (Hammond 1966; Izard 1966, 1988; McMillan 1995; Kibora 2003). Members of a lineage share a common founding ancestor and it is through membership in a lineage that a person gains access rights to the land, and establishes one of the most significant social arrangements: marriage (Hammond 1966; McMillan 1995; Kibora 2003).

Both Moose and Gurunsi marriages are exogamous, meaning that they occur between members of different lineages rather than within a lineage. Marriages serve to strengthen inter-lineage alliances and unite not two individuals, but two families and two lineages (Vinel 2000). Lineage members gain access to women from another lineage through a nexus of reciprocal gift exchanges (Skinner 1961; Izard 1966; Kibora 2003). Procreation is the ultimate achievement and status symbol, and lineages flourish by securing the greatest number of women for their members. Acquiring a wife demands resources to shower favours upon members of the wife-giving lineage and polygamy is traditionally favoured among men who command sufficient resources (Skinner 1960; Breusers 2001). As discussed below, however, the makeup of Burkinabè marriages, and ultimately of the household, has been changing over time.

3.6.3 The Household

The household represents the basic unit of organization within rural Burkinabè society. Because of its variable nature, defining the household is notoriously difficult. Yet, attention to household dynamics is important to this study as these affect the ability of shea butter producers to participate in shea projects, the ways shea butter makers and their spouses perceive the projects, as well as the importance of shea revenues to women's well-being.

The rural Burkinabè household can be conceptualized as a corporate group in production and consumption. This group is mainly composed of members of the same family who share their living quarters, meals, as well as activities related to reproduction and child-rearing, and who satisfy common requirements for vital commodities (Messer 1983; Thorsen 2002). Members can provide each other with mutual support, and their relations are structured so as to ensure the household's productive and reproductive success (Nieves 1979).[50] Household composition changes over time, seasonally and in response to events such as migration (Rogers 1990). Yet, members traditionally consist of the oldest man—who represents the household head and makes the family's most important decisions—and his spouse(s) and descendants, married or single adult male dependants, their female spouses, and their children (Rohatynskyj 1988; Conombo 1989). Membership may also extend to the male head's younger brothers and their families, to some of his older, dependant, relatives, as well as widows and migrants' wives (Conombo 1989). Due partly to greater social mobility within Burkinabè society and to migration in search of work, households are becoming increasingly nucleated and of varied membership (Hannequin 1990; Rohatynskyj 1988). Female-headed households are also on the rise in Burkina Faso and sub-Saharan Africa (Booth and Protais 2000).

The household's living quarters, referred to as the 'compound', is the hub of household life. Although their architecture may vary somewhat, compounds are enclosed by mud walls and surrounded by fields. They encompass the household's dwellings or

[50] While many definitions have been put forth, there is not one definition of the household that applies to all household forms in Burkina Faso or sub-Saharan Africa (Messer 1983). For instance, the unit of consumption does not always correspond exactly with the unit of production, nor do either necessarily perfectly overlap with the group of people who live together. Large compounds may include several eating units and/or more than one farming unit, while small compounds may join forces and cultivate together (SIDA 2004).

sleeping quarters, the cooking area, as well as the granaries. Whereas Moose dwellings consist of circular huts with thatch roofs (Figure 3.2), the Gurunsi inhabit rectangular constructions with mud roofs (Figure 3.3).

Figure 3.2: Moose compound (Source: Author 2006)

Figure 3.3: Gurunsi Compound (Source: Author 2006)

Burkinabè cultures are predominantly patrilocal (or virilocal), meaning that a woman moves to her husband's place of residence upon marriage. Husband and wife may share a dwelling until the birth of their first child or until the man marries a second wife, in polygamous marriages. At that time each woman and her children—who represent a hearth-hold—move into their own dwelling within the compound, with an adjacent personal granary of cereals she and her children produce. It follows that men may be attached to more than one hearth-hold, as in polygamous marriages or in multi-generational households wherein married sons are part of their mother's and their wife's

hearth-hold (Ekejiuba 1995). A new wife who does not yet have children is part of her mother-in-law's or of the first wife's hearth-hold (Thorsen 2002).

Polygamy is prevalent in rural West Africa. In 1996, over 50 per cent of Burkinabè women and 31 per cent of the men were reportedly part of polygamous marriages (INSD 2000). Whereas some women enter into polygamous marriages by force, others do so willingly for the practical advantages they confer (SIDA 2004). Co-wives have a well-drawn division of labour, with set days during which each wife is to cook for her husband and the other wives. As co-wives relieve each other of certain duties, each wife has more time to pursue her own-account activities. In addition, co-wives look after each other's children, and can enjoy each other's companionship (Gruenais 1985; Rohatynskyj 1988). Generally, a Burkinabè man will have no more than two wives, but he may have as many as four. He is expected to treat all his wives equally (SIDA 2004), yet in practice, men often have a favourite wife who receives more of his favours. Although arranged polygamous marriages remain the norm in rural areas (Hannequin 1990), urban dwellers are increasingly able to choose their own partners and polygamous marriages are diminishing (Vinel 2000). Co-wives frequently participate in shea projects together, and as discussed in Chapter 7, may have mutual aid arrangements in the production of shea butter. Nonetheless, each wife retains the revenues from her own-account activity.

It is important to note in the context of this thesis that West African households are not homogeneous units where all members enjoy equal opportunities, carry equal responsibilities, or share a common set of preferences. Numerous authors have stressed that economic models that conceptualize the household as a unitary entity acting altruistically on behalf of all its members are inherently flawed (Rogers 1990; Sen 1990; Udry 1996; Kanzianga and Wahhaj 2010). In fact, households do not attempt to optimize the use of inputs such as labour and capital to maximize common household welfare, economic gain, health, and other outputs. Rather, implicit norms specify the rights and obligations of each household member based on age, gender, marital status, and other identity features (Rogers 1990). Rogers (1990: 10) explains that, "as in conventional contracts, the balance of rights and obligations is determined in part by the alternatives

available to each member and in part by their relative power." Expanding upon this idea, Saito et al. (1994: 14) state that:

> In contrast to other parts in the world, where households customarily function more like a single economic unit with common goals, resources and benefits, the pervasive practice in the African region is that family members have separate, and sometimes competing, own-account activities. Thus, the individual rather than the household constitutes the basic unit of production in sub-Saharan Africa.

Among the Moose and the Gurunsi upon whom I focus, male and female household members carry complementary labour and financial responsibilities. Spouses earn money separately, make discrete investments, and frequently have little knowledge (often purposefully) of each other's earnings. There is, however, a strong notion of complementarity within the household. In the peasant economy in which this study was carried out, men theoretically provide the staple crops (millet and other cereals), settle the taxes, and assume household construction costs and tasks. In comparison, women provide the meal condiments, which may need to be purchased, pay for daily household expenses, and perform domestic duties (Thorsen 2002; SIDA 2004). Women are responsible for purchasing their own clothes and frequently their children's clothes, cooking utensils, and spices, and paying for milling expenses (de Beij 1986). School fees and miscellaneous expenses such as medicines and funerals may be shared between the spouses. As previously documented in West Africa (Carney 2004; Thorsen 2002), and reported in Chapter 8 of this study with respect to shea producers and their husbands, financial and productive responsibilities are renegotiated—sometimes aggressively—when new opportunities arise or when spouses are unable to fulfil their expected roles.

The following example clearly reveals the limited nature of income sharing within the rural Burkinabè household. Saul (1981) describes how Moose men sell their wives sorghum grown on cooperatively cultivated household fields, while women process this sorghum and sell the resultant beer back to their husband for cash income. Thus, as Guyer (1988: 171-172) elucidates drawing from case studies throughout West Africa,

> If a couple's budget can be regarded as a single fund, it is not through the literal pooling of cash, but through the ongoing process of bargaining about the organization of interpersonal transfers and responsibilities under shifting conditions… Management of different responsibilities, with their different timing, has tended to be gender-specific in societies with a pronounced division into male and female spheres. But the specialization is never complete; it oscillates according to each sex's ability to cope with its own sphere, and its ability either to tap into the other or to shift responsibilities.

The strong tradition of gendered economic spheres of activity in Burkina Faso and other sub-Saharan African countries (Guyer 1980; Rogers 1990) perpetuates the existence of certain gendered production patterns and the need for female shea producers to earn an independent income to satisfy their and their children's basic needs (Whitehead 1981; Folbre 1986; Jackson 1995).

3.6.4 The Village

Mirroring the organisation of the household, Burkinabè villages, which are typically composed of 100-1500 people, are headed by a senior male chief. This chief, who may be hereditary or appointed from specific lineages, is frequently administratively integrated into the State (Ribot 1999). For instance, Moose chiefs maintain an active role in local and national politics (SIDA 2004).

Seconding the chief, councils of male elders play a significant role in most Burkinabè village societies. The way these councils are formed varies between Burkinabè ethnic groups. Some cultures, such as the Moose, the Gourmantché and the FulBe, have had hierarchical and centralized institutions since pre-colonial times. Descent groups within these societies dictate an individual's place in the social hierarchy, and chiefs and councils stem from the village's founding lineage. As most Burkinabè societies are patrilineal, this kinship is generally recognized according to the father's lineage. Among other cultures, such as the Gurunsi, the Bobo, the Bwa, and the Senufo, villages are more egalitarian and decentralized. Important village decisions are made by councils of male elders which are composed of representatives from all the villages' descent groups (Savonnet-Guyot 1986). These councils may or may not represent the appointed local dignitaries who sit on the tribunal courts (French: *tribunaux coutumiers*) where infringements upon traditional laws can be tried (SIDA 2004). Councils of male elders

continue to oversee village life and assume social, political, and ritual responsibilities, such as dispute arbitration and marriage arrangements (Butler 1981).

Aside from the chiefs and councils, village members recognize the authority of respected figures such as earth priests, *Imams* (Muslim clerics), *marabouts* (Muslim holy men), *griots* (bards), successful merchants and more (Bassett and Crummey 1993; Ribot 1999). Among many Burkinabè ethnic groups, authority figures have the right to receive goods and labour from their subordinates, but must provide for them and offer them protection in times of need (Fiske 1990). Although in good times juniors may find this arrangement exacting, it affords them invaluable security when hardships strike (Scott 1976).

In addition to these patronage relations, villagers minimize the risks associated with crop failures and political economic changes through participation in horizontal structures, such as mutual help arrangements and associations (Zahan 1967; Pochettino 1995). These informal arrangements, which often exist on a seasonal or periodic basis, favour social cohesion and represent critical safety nets in an impoverished country lacking publicly funded social security programs (Dialla 2005). As is the case in other African regions, traditional Burkinabè associations may promote income-generating activities, involve labour exchanges, offer revolving loans to their members, or pursue a mix of activities (Thomas 1988).

Village associations are ubiquitous in Sub-Saharan Africa and tend to form along gender and sometimes age lines (Gruenais 1985; Thorsen 2002). African women are known to form particularly strong collectives, allowing them to alleviate the two most severe production bottlenecks they face: the lack of cash and of labour (Staudt 1986; Thomas 1988; Hannequin 1990).[51] In the Burkinabè context, the success and centrality of the Moose's traditional *naam* groups—wherein individuals from a given locality come together on the basis of age or gender—have been particularly well documented (Pochettino 1995). *Naam* groups have been at the root of much of Burkina's rural activism and State as well as international interventions have drawn upon these groups to reach the rural populace (Dialla 2005). In fact, donor initiatives, such as the shea butter

[51]The strength of female-dominated associations has also been reported in other developing regions. For instance, *arisans*, or revolving credit schemes, also tend to be female-dominated in Indonesia (Turner 2003).

projects on which this study is based, are increasingly piggybacking upon such pre-existing, traditional associations to reach the Burkinabè population (Pochettino 1995). The robustness of these institutions owes to their development and refinement over many centuries. This is also the case for local tenure systems, which are the focus of the following section.

3.7 TENURE SYSTEMS

Derived from the Latin *tenere*, or to hold, tenure denotes the rights associated with the use of and control over natural resources. These rights are the result of human interactions and social institutions which dictate how an individual or entity is to act with respect to a given resource (Bruce et al. 1985). Any attempt to understand agricultural societies and agro-ecosystems must carefully consider the rights and responsibilities encoded in the local tenure system. In Burkina Faso, as elsewhere in West Africa, formal, or statutory (Section 3.7.1), and customary (Section 3.7.2) tenure systems overlap. Uncertainties surrounding tenure thus stem from the fact that, although states have laws regulating land rights, *de facto* control is often held locally (Toulmin and Quan 2000; Gray 2007).

3.7.1 Statutory Rights to Natural Resources

Since independence, Burkina Faso has adopted numerous policies allocating formal access rights to land and natural resources. These include the *Politique forestière nationale* (National Forestry Politicy), the *Code forestier* (Forestry Code), the *Code de l'environnement* (Environmental Code), the *Code minier* (Mining Code), and the *Code pastoral* (Pastoral Code) (Diallo 2002). The government's most consequential tenure policy, the *Réorganisation Agraire et Foncière* (RAF) (Agrarian Land and Tenure Reform), was instigated in 1984 under Sankara's leadership.

The RAF nationalized Burkinabè lands in order to subsequently attribute the *Domaine Foncier National* (national lands) to those who worked the land and to marginalized agriculturalists. The intent was to put an end to feudalism and land speculation, and to make land freely accessible to subsistence farmers. Decentralization was promoted as the State transferred the use and management of lands to local

collectives.[52] They were responsible for seeing to the lands' development and protection, and to the valorisation of natural resources (Diallo 2002). Following two slight modifications in 1991 and 1996, allowing for the purchase of land (for the sake of large agro-business interests), the RAF remains ambiguous in its implementation. In 2010, Burkinabè land remains subject to overlapping and competing claims (Haugerud 1989; Reenberg and Lund 1998), as the country's various formal land policies are superimposed upon customary land tenure, which continues to prevail.

3.7.2 Customary Rights to Natural Resources

In sub-Saharan Africa, customary rights to natural resources vary according to a person's social identity. Each identity is complex, and defined by a person's gender, age, marital status, ethnicity, status as local or 'migrant,' and more. This social identity confers an individual a specified bundle of rights to the land and to its flora and fauna.

To conceptualize these rights, natural resources can be perceived as different niches in a specific multidimensional landscape. Access to these niches varies temporally (seasonally or in response to extreme events), spatially, and according to the resource in question (the species and its end use) (Rocheleau and Edmunds 1997). Tenure can thus be understood as the rules which sanction or prohibit a person, based on his or her social features and individual agency, to access resource niches in specific ways, places and times. Rights are nested within one another such that different individuals can access the same space in different ways and/or at different times (Rocheleau and Edmunds 1997).[53]

Access rights are generally classified in four categories, within each of which the resource user has a different amount of tenure security. A person may have the right to *use* a resource, *transfer* use rights to another individual, *exclude* other individuals or groups from using the given resource, and/or *enforce* a given tenure regime through institutional provisions that guarantee access rights. Tenure is dynamic, and access rights

[52] Decentralization is a fundamental principle guiding Burkina Faso's development. It figures in land policies such as the *Gestion des terroirs villageois* (GTV) approach. Supported by multinational and bilateral donors such as the World Bank, France and Germany, the GTV approach takes the village territory as the basic unit for land management and for the rational use of natural resources (Reenberg and Lund 1998).

[53] For instance, in a gum Arabic (*Faidherbia albida*) grove, FulBe herders browse their cattle, while agriculturalists collect firewood, and Maure collectors gather gum resin for eventual sale (Fortmann and Riddell 1985; Freudenberger 1992).

can be broken up, re-divided and reallocated over time. For this reason, short-term initiatives to improve land quality, such as mulching, may be readily admissible to resource users with usufruct rights to the land. Yet, practices that imply long-term rights to land such as tree planting are discouraged among ethnicities, women or other groups who are denied decision-making rights concerning land use (Berry 1987; Schroeder 1999). Power relations determine the tenure outcomes that result from political-economic changes. When access rights are contested, conflict resolution rests upon the rival claimants' social power to influence decisions. Consequently, West African women generally have relatively weak tenure rights in cases of disputed claims with their male counterparts (Berry 1987). Bearing in mind that there exist a diversity of customary Burkinabè tenure regimes, which vary according to ethnicity, ecology, and other factors, I review below some generalities pertaining to labour, land, and tree tenure in rural Burkina Faso.

3.7.2.1 Rights to Labour

According to Jackson (1993: 1954): "[l]and tenure in Africa embodies labour rights—especially the rights of men to the labour of women." In African peasant agricultural systems, labour shortages are often a greater constraint on production than is access to land (Roberts 1988). In fact, Roberts (1988) suggests that in many African societies, property should be first considered in terms of labour, as the rights to land are futile without the rights to the labour to render the land productive.

Akin to their role in determining land rights, West African hierarchies of generation, gender, and class govern one's ability to mobilize labour, which in turn influences one's own involvement in production and the productivity of farmed fields. Intra-household negotiations over the allocation of labour to 'cooperative household' versus 'female' production are embedded in social conventions such as marriage. Rights to one's own labour and to that of others go hand in hand with rights to the land.

3.7.2.2 Land Tenure

Traditional land tenure in sub-Saharan Africa is founded on the idea that one cannot appropriate anything that does not stem from a person's productive work. Consequently, land (because it is not created by humans) cannot belong to people, but rather to 'nature',

spirits, or 'God(s)' (Ouédraodo 2003). Most Burkinabè ethnic groups entrust the protection of their land to their ancestors or spirits, who assign regulation of land-use and tenure issues to a *chef de terre* or 'earth priest' (Zahan 1954; Hammond 1966; Breusers 2001). Initial use rights to land are acquired through bush clearance by the first occupants, and the *chef de terre* is a direct descendant from the original village settler lineages. His ancestors, who are buried in the land, were the earliest people to approach the local spirits for land use. Hence, he has a vested, mystical authority to sanction matters of village land allocation, clearance, and use among settler and immigrant lineages and is entrusted to foster an auspicious relationship between local people and supernatural forces (Zahan 1954; Izard 1988; Kevane and Gray 1999b).

Customarily, Burkinabè land forms part of a common property regime. All village residents can access, use, and manage the land, but they cannot dispose of it, sell it or give it away (Berkes 1989; Bassett and Crummey 1993; Rocheleau and Edmunds 1997). A complex set of rules defines the joint rights of the specific group entitled to use the common property resource, while sanctions enforce compliance (Ostrom 1990). Among the Moose and Gurunsi, on whom I focus in this study, descendants from the founding lineage in an area—the 'first occupants'—whose ancestors settled the land and brought it into productive use have privileged land rights (Kevane and Gray 1999b; Ouédraogo 2003a). They allocate temporary or extended tenure rights to 'latecomers' or 'strangers' through a transfer transaction. As Reenberg and Lund (1998: 604) state, "this transfer is, on the one hand, essential to the flexibility of African land tenure systems and, on the other hand, a source of conflict due to its ambiguous nature." As land cannot be owned per se, these transactions only involve a transfer of the bundle of rights that relate to the land, and not of the land itself.

Access rights are granted by nested levels of authority. Customarily, the earth priest allocates land to the lineage head, who apportions it among household heads, who in turn allocate land among household members (Breusers 2001). Rights of usage are well defined and transmitted through patrilineal filiation. The strength of a person's claims hinges upon his or her status within the kinship group and the seniority of the lineage at a given place (Rocheleau and Edmunds 1997; Breusers 2001).

Traditionally, every village household has use rights (without title) to a portion of village lands. These fields are frequently located in diverse ecological zones, such as the uplands and lowlands, to encourage crop variety and minimize the risk of crop failure due to pests or climatic factors in a particular microenvironment (Carney and Watts 1991; Carney 1992; Prudencio 1993). Fields may be contiguous or some distance apart, but within walking distance of each another.

Should a family require additional land, it borrows it from another household, if available, without incurring any debts. Yet, this favour does not confer the borrower permanent land rights. Further, as land tenure is distinct from access to all forms of life upon the land, land loans do not confer the borrowing party access to economically valuable trees. In fact, the lending family frequently retains the right to the yield of productive trees such as shea or *néré* (African locust bean) (de Beij 1986; Kevane and Gray 1999).

As mentioned, within a given household, the male head allocates land between household members. There exist two types of landholdings, which bear corresponding access rights and labour duties. The greatest portion of family land is allotted to the household unit as cooperatively farmed fields, which serve the household's basic dietary needs. Staple crops, consisting mainly of millet, sorghum, maize, and yams, are primarily grown on these lands (see Table 3.2, Section 3.8.1). Yet, crops such as groundnuts, which are both consumed within the household and sold, are also cultivated on these fields. Every able-bodied household member is expected to contribute his or her labour to these fields. The male head controls the ensuing yields and manages storage and distribution of the harvest to appropriate household members. He is entitled to income derived from these fields, but only if family subsistence needs have been met and a surplus materializes (Thorsen 2002). In practice, the head of the household may also engage in cash cropping on these fields, frequently drawing upon women's labour in the process.

In exchange for their labour on cooperatively farmed household fields, women and young adult men have usufruct rights to individual fields from the general household landholdings (Marchal 1983). Individual fields are smaller than cooperatively-farmed lands, with the former typically representing one tenth of the area of the latter (Marchal

1983; Kevane and Gray 1999b).[54] Women's fields are frequently adjacent to cooperatively cultivated household plots to minimize the time required for travel between fields. On their personal plots, women grow okra, groundnuts, legumes, and cereals for local sale and retain the ensuing revenue (McMillan 1987a; Compaoré 2000). Women's personal production also serves to supplement the family diet. For instance, McMillan (1987a) reports that in one village of the Moose Plateau, women's personal fields accounted for 19 per cent of the total area sown to sorghum and millet. As women directly control the products of their autonomous 'female production' (McMillan 1987a; Carney and Watts 1991), the economic importance of these plots is greater than suggested by the fields' size (Kevane and Gray 1999b).

Among the Moose, there exists a long history of female entitlement to personal plots (Moore: *beolse* plots). In no event, however, does this entitlement—which is based upon women's marital status—guarantee women permanent rights to land (Pageard 1969). Female land rights "generally depend on a relationship to the [male] individual or group exercising 'ownership' rights of disposal and exclusion as well as practical control", whereas men have primary use rights (Rocheleau and Edmunds 1997: 1357). The Moose proverb "a woman's field is made at night" (*pág puug tòogdà yūngō*) refers to the negotiations between husband and wife (as well as among co-wives) which shape female access to resources, including land and labour (Kevane and Gray 1999b: 1; Kevane and Wydick 2001). A woman's claims to land and her ability to invest labour on her personal fields are influenced by factors such as age, health, childbearing responsibilities, number of offspring, and the relative status of co-wives, if applicable (McMillan 1987; Thorsen 2002).

Aside from the household landholdings, village residents have access to uncultivated lands, such as common woodlots, surrounding the village (the 'bush'). These lands are the source of NTFPs, including shea nuts. Activities occurring within the bush are subject to community-imposed sanctions, such as the prohibition of individuals cutting down shea trees and other valuable species.

[54] On the high end, McMillan (1987a) estimates that among the Moose, female-controlled fields can represent as much as 20 to 25 per cent of the total cultivated area.

Over the past century, Burkina's tenure regimes have responded to numerous socio-economic changes. Since the 1960s, rising population densities and increasing rural integration into the market economy have resulted in a contraction of Burkinabè farming units (Prudencio 1993; Gray 2005). In response, land is now increasingly allocated to households rather than to the lineage and households request land directly from the earth priest rather than passing through the head of the lineage (Reenberg and Lund 1998).[55]

Socio-economic changes have had particular consequences for women, who have lost substantial control over natural resources since the late colonial period (1920-1960). As the importance of cash crops has grown, some land previously under female control has been reallocated to cash cropping under male control while other land under female control has become designated as cooperatively farmed household land (Carney and Watts 1991; Rau 1991). Coupled with an increasing concentration and scarcity of land in Sudano-Sahelian Africa, the allocation of land under female control has thus been declining (Kevane and Gray 1999a). Although preferring land close to the home, as noted earlier, women are frequently allocated poor quality lands or distant fields, which require long travel times. Labour and capital shortages further limit productivity on female controlled fields, as women cultivate these plots alone or with the help of children and elderly mothers. Men provide their assistance only at the time of field clearance (Roberts 1988; Udry 1996). As detailed below, female access to the trees that grow on claimed lands is equally insecure compared to their male counterparts.

3.7.2.3 Tree Tenure

Customary tenure in sub-Saharan Africa is complicated by the fact that access rights to trees are frequently distinct from land tenure. Many individuals may have usufruct rights to a single tree, such that there exists a 'layering of rights' related to a given tree (Osborn 1989). Control of trees and their products is generally determined by the user's relationship to the formal resource 'owner' and is subject to negotiation (Fortmann and Nabane 1992; Rocheleau and Edmunds 1997). Tree tenure is complex, and distinctions exist over the right to plant, harvest, and cull trees (Kevane and Gray 1999b). In addition,

[55] This individualization of farming and tenure is manifest, as Moose fields were formerly organized in concentric rings around entire villages, rather than around individual compounds as they are today (Prudencio 1993).

different rules regulate access to planted versus wild trees, to different species and to tree products used for subsistence versus commercial purposes (Fortmann and Bruce 1988). Generally, men have stronger claims to trees that carry economic value (Osborn 1989; Rocheleau and Edmunds 1997). This has implications for female shea butter producers. As shea derivatives traditionally used for subsistence purposes are increasingly sold, women risk losing the longstanding rights they have had to these NTFPs.

Since trees are long-lived and generally belong to their planter in sub-Saharan Africa, they are associated with a sense of permanence to usufruct rights to land. A person who plants a tree will have rights to its products for life, regardless of who controls the land on which it is planted (Fortmann and Riddell 1985). Trees thus stand as emblematic flagpoles of territorial appropriation (Bruce et al. 1985; Joekes et al. 1994). For instance, in Gambia, men managed to reclaim land that was cultivated by female horticulturalists by tree planting. Although women had usufruct rights to this land, it remained under the control of the senior male members of the landholding lineages. The trees the landholders planted shaded over women's crops and became "a means for claiming both material and symbolic control over garden lands" (Schroeder and Suryanata 1996: 194; Schroeder 1999). Despite access to land, West African women generally do not plant trees due their restricted rights to plant permanent crops, their shortage of labour available for tree cultivation as well as their relatively weak tenure rights in cases of disputed claims over the resource with their male counterparts. Women have thus 'under-invested' in tree crops (Berry 1987). Nonetheless, women may labour on men's orchards, wherein gender-specific tasks are performed (Leach 1994). They may also have a close association with a particular species, as is the case for the shea tree. Their rights to the derivatives of this 'wild' species are detailed in Section 6.3.1.1 of Chapter 6. These rights affect women's ability to pursue shea butter production and sale as one facet of their diverse livelihood strategies.

3.8 GENDERED LIVELIHOODS

As elsewhere in sub-Saharan Africa, Burkinabè peoples pursue a diverse portfolio of livelihood activities to secure income, maximize the use of household labour and resources, and minimize risk and vulnerability to crop failures associated with climatic

variability (Dercon and Krishnan 1996; Ellis 1998, 2000; Barrett et al. 2001). Although some household members may specialize in a particular activity, the household's aggregate activities are generally diverse (Ellis 1998, 2000; Whitehead 2002). Bearing in mind that Burkinabè livelihoods vary according to factors such as gender and socio-economic status, as well as spatially and temporally, this section presents an historical perspective of the ways the Mosse and the Gurunsi make a living in the centre-west region of Burkina Faso. Their contemporary rural livelihoods revolve around agriculture (3.8.1), gathering (3.8.2), animal husbandry (3.8.3), and trade (3.8.4). Migration (3.8.5) is a cross-cutting theme, which has historically marked the ways the Mosse in particular carry out their primary livelihood activity: agriculture.

3.8.1 Agriculture

Although Burkina Faso's population is constantly seeking new economic opportunities, subsistence agriculture forms the backbone of Burkinabè livelihoods. In reference to the Mosse, for example, Hammond (1966: 29-30) explains that,

> the primacy of farming in the organization of lives is manifested in nearly every aspect of their culture—in the organization of work and the distribution of the products of work, in the organization of the family, society, and the political system, in their values, and in their religious ideas and practices.

Burkinabè agriculture is based on household production, combining subsistence with cash crop cultivation. Crops are grown beneath useful tree species, such as shea, which are preserved when fields are cleared and burned for agriculture. Average farming household sizes vary between six and 16 members in the country's central and western regions, six to ten members in eastern Burkina Faso, and five to 11 members in the Sahel (Ouédraogo 2003a). Mean cultivated areas per farming household are between 2.8 and 12 hectares in western Burkina Faso (where motorized 50-hectare farms exist), 1.5 to 4 hectares in the east, 2 to 5.5 hectares in the central region, and 2 to 3 hectares in the Sahel (ibid 2003). The first crops are sown with the rains, in May or June, and the last harvests customarily occur in November (Hammond 1966; de Beij 1986).

Agriculture is practiced according to traditional methods involving crop rotations, burning, and fallowing. After a few years of cultivation, compound fields are left in fallow for two to three years. Outer fields are fallowed for approximately a decade in

populated areas, or longer still in sparsely populated regions (de Beij 1986). Pearl millet, sorghum, maize, as well as some lowland—mainly rainfed and some irrigated—rice represent the major cereals grown and the bulk of the rural diet. These are combined with tubers, gathered products, vegetables and occasionally meat to complete farmers' dietary requirements (Prudencio 1993; Ouédraogo 2003a). A list of principal subsistence crops is provided in Table 3.2. As stated in Section 3.5, cotton (*Gossypium barbadense*) is the primary cash crop, followed by groundnuts, as well as sesame to a lesser extent (Ouédraogo 2003a).

Table 3.2: Principal Subsistence Crops in Burkina Faso.

Type of Crop	Common Name	Nomenclature
Cereals	Lowland rice Maize Millet Sorghum	*Oryza spp.* *Zea mays* *Pennisetum glaucum* *Sorghum bicolor*
Tubers	Manioc Potatoes Yams	*Manihot spp.* *Solanum tuberosum* *Dioscorea spp.*
Vegetables and Legumes	Cowpeas Eggplant Green beans Gumbo (okra) Onions Sorrel Tomatoes	*Vigna unguiculata* *Solanum melongena* *Phaseolus spp.* *Abelmoschus Esculentus* *Allium cepa* *Hibiscus sabdariffa* *Solanum spp.*
Nuts	Groundnuts Sesame	*Arachis hypogaea* *Sesamum indicum*

(Sources: Hammond 1982; Prudencio 1993; de Beij 1986)

Agriculture is gendered by crop and by task in cooperatively farmed household fields (de Beij 1986). Male and female as well as individual and group tasks are intertwined in the process of crop cultivation (Guyer 1984; Rau 1991). Among all of Burkina Faso's agricultural groups, men perform heavy agricultural labour, such as land clearance and hoeing. Women however, frequently also partake in these activities, as is the case among the Moose, the Gourmantché, and other ethnic groups. Women are also

responsible for sowing. In some Burkinabè cultures, such as among the Gurunsi, the Bobo, and the southern Senufo, female agricultural duties involve only sowing and harvesting (SIDA 2004). Yet, among the majority of Burkinabè cultivators, both men and women hoe, weed, and harvest major cereal crops on cooperatively farmed fields. When performing these activities, men and women may nonetheless assume different tasks. For instance, harvesting commonly involves men cutting cereal stalks and women carrying the cultivars to the compound (de Beij 1986). Children's primary responsibility is to guard fields against predators such as birds, which they drive away with a slingshot.

Agriculture is performed using few inputs. Most agriculturalists continue to cultivate by hand using traditional tools such as the hand-held hoe (Moore: *daba*) (Figure 3.4). Certain areas, however, are in a technological transition phase, wherein some farmers cultivate with oxen and ploughs while others rely solely on hand cultivation (Gray 2003, Ouédraogo 2003a). Since the 1960s, state agricultural policies have promoted the adoption of animal traction in an effort to modernize the subsistence economy (Speirs 2001: 95).[56] In addition to reducing labour, animal traction provides fields with manure as fertilizer. Women do not own mechanized tools, such as ploughs, but may borrow those owned by the household head or rent or borrow those of other households. In some instances, the household head may plough his wives' fields in exchange for her labour in his fields. Motorized machinery remains scarce (Gray and Kevane 2001). Likewise fertilizers and pesticides are seldom used, but improved seed varieties are sometimes purchased and some small-scale irrigation does occur (Thorsen 2002). Unfortunately, continued reliance on traditional technologies renders agricultural activities highly vulnerable to fluctuating rainfall cycles.[57]

Food vulnerability is also a reflection of the pressure of commercial agriculture. A large portion of the most fertile agricultural lands is devoted to commercial farming at the expense of subsistence agriculture. This practice partly owes to donor and public lending tendencies, which show similarities with Burkina's colonial past (Section 3.4.2). Institutions continue to offer more credit for the development of export (particularly

[56] Interventions in the agricultural sector are largely funded by foreign aid, and frequently take the form of extension schemes. Trained consultants provide farmers with production inputs, farming advice, and marketing assistance. Credit schemes are also prevalent to facilitate farmers' access to inputs (Speirs 1991).
[57] For instance, between 1994 and 1997, grain production decreased by eight per cent due to low and poorly distributed rainfall. Poor yields had direct repercussions on household food availability (Compaoré 2000).

cotton) rather than subsistence crops, and the area under commercial farming is expanding at the expense of subsistence agriculture (Speirs 1991; Compaoré 2000). Few initiatives seek to stimulate food crop production, and the government's desire to keep urban food prices in check has done little to favour the economic value of food staples (Speirs 1991).

Figure 3.4: Hand-held Tools Used in Traditional Burkinabè Agriculture
(Source: Author 2006)

As previously mentioned, cotton is Burkina Faso's primary export commodity. It is predominantly grown in the country's southwest, yet some production also occurs in other regions. Cotton cultivation is carried out by smallholders under rainfed conditions, and requires significant inputs in the form of fertilizers and pesticides. These are acquired from village cooperatives (the *Groupements des producteurs de cotton*) on credit prior to the growing season, and are reimbursed upon the crop's harvesting. Cotton farming is frequently performed with ox-ploughs, and may involve tree removal from cultivated fields and monocropping. This is noteworthy in the context of this study given that it can lead to the culling of shea trees in farmed fields. Cotton growers concurrently cultivate maize, for which they use some of the fertilizers acquired through the cotton cooperative (Bassett 1988; Dembélé et al. 2001; Gray 2005). Due to its status as a cash crop, revenues from cotton sales accrue to male agriculturalists (Bassett 1988). Nonetheless, women and children provide invaluable labour in the crop's cultivation, particularly at the harvesting stage. This limits women's availability to engage in other activities, such as shea butter

production and sale, during the cotton harvest. Growing cotton is a risky endeavour, which can be highly lucrative during years of good yields or lead farmers to indebtedness during years of drought or disease. Poorer farmers who are more risk-averse thus tend to refrain from this activity, particularly since the fall in international cotton prices has increased its precariousness (Gray 2005). They rely instead on income from other activities, including the collection and sale of non-timber forest products (NTFPs).

3.8.2 Gathering

Gathering of NTFPs from cultivated and unclaimed lands is of primary importance to Burkinabè livelihoods. NTFPs including fruit, nuts, leaves, medicinals, edible insects, oils, and resins, improve food security by providing vitamins and nutrients to the diet and safety nets in times of need (Arnold and Ruiz Pérez 1995; Crélerot 1995; Neumann and Hirsch 2000). For instance, shea butter provides invaluable nourishment to agricultural communities of the shea belt (Crélerot 1995), and *soumbala*, which derives from the *néré* tree (*Parkia biglobosa*), is the most highly prized spice in Burkinabè cooking (Gutierrez and Juhé-Beaulaton 2002).

In addition to their consumption value, shea nuts, *néré*, leaves, and other NTFPs carry a crucial economic significance for the rural household, and particularly for women. NTFP collection, processing, and sale are performed within gender groups, and are typically female activities (Guyer 1980; Crélerot 1995; Brown and Lapuyade 2001; Thorsen 2002). Many Burkinabè women are self-employed, supplying local markets and global commodity chains with NTFPs such as shea butter and nuts. They further process NTFPs into goods such as cooked fritters, straw brooms, or artisan products. Since NTFP-related activities carry no entry costs except for labour, income from these sales is particularly important for poorer women who have limited alternate income-generating activities (Marshall and Newton 2003; Hasalkar and Jadhav 2004; Schreckenberg 2004). Female traders sell NTFPs from their homesteads, at local village markets and/or in regional marketplaces. Some saleswomen specialize in one commodity while others sell a range of gathered products, alone or with the help of unmarried daughters.

In Burkina Faso, a decline in indigenous tree densities in farmed fields has been reported (FAO 1991; Adjibade 1994). This has repercussions on women's gathering activities. Likewise, as NTFPs are also collected from common property areas, the loss of

communal woodlots, interstices between men's fields, and roadside or marginal lands due to commercial farming and land scarcity limits gathering of NTFPs (Bruce et al. 1985; Rocheleau and Edmunds 1997). Shrinking commons particularly affect poorer households and women, who must walk farther and search longer to collect NTFPs and firewood. Households may also suffer from a dwindling standard of living as dietary needs become harder to fulfil, and as the economic situation of women who commercialize NTFPs is weakened (Fortmann and Nabane 1992). Rural households thus simultaneously pursue other activities to make ends meet.

3.8.3 Animal Husbandry

Livestock production is frequently another component of Burkinabè parklands and livelihoods (Boffa, 1999). Many of Burkina Faso's ethnic groups adopt an agro-silvipastoral system, wherein they integrate farming with animal husbandry. Since the 1960s, this has been the case for the Moose, and since the end of the 20th century, for the Gurunsi as well (Breusers et al. 1998). The Moose's interest in, and knowledge of, animal husbandry developed over centuries of interaction with FulBe herdsmen on the Central Plateau (Breusers et al. 1998; SIDA 2004). The more recent practice of animal husbandry among the Gurunsi is linked to the settlement of Moose and FulBe migrants in their villages (Howorth 1999). Moose and Gurunsi agriculturalists now raise some ruminants (cattle, sheep, and goats) and/or non-ruminants (pigs and poultry), depending upon ecological, socio-cultural, institutional, and economic conditions (Ouédraogo 2003a). The importance of animal husbandry to these local ethnic groups is reflected in the investments, discussed in Chapter 8, that shea butter producers are making with their shea revenues in the province of Sissili.

In Burkina Faso, livestock is valued for its milk, but also for traction, field fertilization, and as an asset that can be liquidated to satisfy income needs as they arise (Kessler 1992; Breusers et al. 1998; Ouédraogo 2003a). Further, manure application is a primary method of enhancing soil fertility and extending the period of continuous field use (Saul et al. 2003). Farmers who do not own livestock may therefore invite FulBe herdsmen to browse their herds on the cereal stalks remaining after the harvest

(Broekhuyse and Allen 1988; Gray 2005).[58] Moose and Gurunsi agriculturalists who do own cattle commonly entrust them to the FulBe, who retain the livestock's milk and offspring in exchange for their services (Breusers et al. 1998).[59]

As in the case of other livelihood activities, animal husbandry practices follow gender lines. Due to their limited means, women primarily own poultry and small ruminants rather than cattle. As discussed in Chapter 8, women able to accumulate poultry may eventually sell some of these animals to purchase sheep or goats. When lump sums of money are required, domestic animals—which serve as savings—may figure among the range of items women sell.

3.8.4 Wage Labour and Trade

As demonstrated throughout this section, Burkinabè peoples are primarily connected to the monetary economy through trade. They may also, however, pursue commercial opportunities as officials, waged farm labourers, mill owners, and small-scale entrepreneurs (SIDA 2004). Employment opportunities in Burkina Faso remain rare, even in urban areas such as Ouagadougou where youth unemployment rates frequently exceed the 40 per cent mark (Lachaud 1994). Since the 1990s, the economic crisis, structural adjustment programs and high migration rates to urban areas have further reduced urban labour market opportunities and driven even educated Burkinabè men and women towards informal economic activities (Calves and Schoumaker 2004).

Informal trade activities are longstanding in Burkina Faso, yet improved infrastructure in recent years has reduced the time and costs involved in getting products to market, and increased the variety of products that can be marketed, as goods spend less time in the sun and experience less jolting in transit (Toulmin and Scoones 2001). Larger markets are proliferating, sometimes at the expense of smaller, local marketplaces. While some male traders with greater access to cash can more easily transport their goods to these distant markets (ibid 2001), most rural women still undertake multiple kilometre

[58] Some agriculturalists even build wells to encourage herders to graze their animals in their fields, and supply lodging for the FulBe and their herds (Broekhuyse and Allen 1988; Gray 2005).
[59] Breusers et al. (1998) suggest that the Moose entrust their cattle to the FulBe due to labour constraints and to conceal their wealth. Cattle ownership is a sign of socio-economic differentiation among the rural Moose, and wealth engenders social responsibilities and can elicit jealousy.

journeys by foot while head-loading heavy goods to the market. Alternatively, they sell products from their compound, particularly on market days (Saul 1981).

Burkinabè trade is structured by season. It increases during the dry season when people have more time and money to spend, and wanes by as much as 50 per cent when farmers are busy tending their fields (Saul 1981). Local prices oscillate according to product availability and quality, which fluctuate seasonally, annually, and spatially (Saul 1981; Elias and Carney 2005).

Among certain ethnicities such as the Moose, trade is also characterized by some specialization. Whereas traders may concentrate on the sale of particular products, specialization is most pronounced among the blacksmiths, weavers, and potters who are born into their occupations. Their occupational knowledge is passed down through generations and maintained within their lineages (Zahan 1967).

Finally, and most importantly for this study, Burkinabè trade activities are structured by gender. Men sell meat, artisan products, manufactured goods, and cash crops, whereas women commercialize surplus from locally grown subsistence crops from their personal plots or goods gathered from common woodlots (Skinner 1962; Saul 1981; Roberts 1988).[60] They also market produce from cooperatively farmed fields, and return the ensuing revenues to their husband (Brown and Lapuyade 2001). As elsewhere in Africa, female traders commercialize NTFPs and processed goods, including prepared foods, soap, home-made beer, cooking oil, spices, and straw brooms (Saul 1981; McMillan 1987b; Clark 1994; Kevane and Gray 1999b; Sunderland et al. 2004). As some NTFPs make their way into global commodity chains, international policies and overseas market trends affect local sales prospects (Carr et al. 2000). These policies and trends also affect the opportunities and incentives Burkinabè people have to seek out a living in other regions of their country or abroad.

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[60] This passage from Skinner (1962: 264) illustrates this point:

> Only women sell cooked food, beer, millet, rice, peanuts, shea-butter, tobacco, and all of the other locally grown vegetables and vegetable products, except cotton which may also be sold by a man. In contrast, women do not sell such local products as cotton, cloth, hemp, jewelry, iron implements and leather goods, which are the province of men. Only men may butcher and sell animals and meat in the market. And they alone control the commerce in foreign food articles such as salt and dried fish. Both men and women sell the valuable imported kola nut, but only men sell food of European manufacture such as cigarettes, matches, sugar, mirrors and so on.

3.8.5 Migration

Migration plays a central role in Burkinabè livelihoods. Migrants travel nationally or to neighbouring countries, particularly to Ivory Coast and Ghana (UNEP et al. 1999).[61] Seventy-one per cent of Burkinabè migrants remain within the country, while 29 per cent migrate internationally (UNEP et al. 1999). Remittances from the approximately two million Burkinabè citizens working abroad represent a major contribution to the national economy (SIDA 2004). Whereas wealthier migrants may seek jobs overseas, the majority of international migrants remain on the continent (Wouterse and van den Berg 2004). As in the colonial past, international migrations primarily involve young men who send remittances to their families (Henry et al. 2004).[62]

Individual or collective migrations occur both seasonally (circular migration)—for an average of three months—and more permanently (Finnegan 1980). Chain migration, wherein people join earlier migrants who help them find lodging and work, is prevalent (ibid 1980). Although they are a constant phenomenon, out-migration and searches for off-farm employment increase during years of low agricultural prospects. In addition to potentially securing revenues for the household, this migration eases the burden of feeding a large family when rations are lacking (Thorsen 2002).

The Moose people are particularly known to migrate. In fact, McMillan (1995: 21) explains that migration is "deeply embedded in almost every aspect of [Moose] traditional social, economic, and political structure." In Section 3.4 I described how the Moose have migrated since at least the 11th century, when they moved north and settled in present-day Burkina Faso (Skinner 1958; Izard 1966, 1988). They were later sold into the trans-Atlantic slave trade, and sent to work in neighbouring colonies under the French regime (Totte 1994; Nunn 2005). Since independence, they have migrated from Burkina Faso's densely populated Central Plateau in search of arable land, milder climates, and

[61] Since the conflict in Ivory Coast (with its anti-foreigner sentiment) began, migration to this country has been curtailed (Wouterse and can den Berg 2004).

[62] Yet, Le Jeune et al. (2004) report an increase in female migration in Burkina Faso and provide an interesting discussion of the different motives Burkinabè men and women have for migrating.

job opportunities, as well as in official resettlement schemes (Henry et al. 2004; Wouterse and van den Berg 2004).[63]

Migrants tend to maintain membership in their natal villages: they continue to participate in village affairs and may assume leadership roles upon their return (Finnegan 1980). Some only return to their natal village for visits, but many migrants permanently reunite with their relatives and take up the farming responsibilities of their ageing fathers. With a lump sum of disposable income, returnees invest in productive resources such as oxen and ploughs or in creating their own work invitations that increase the labour pool to fulfil physically taxing agricultural tasks.[64] Young men who migrate to the city and receive a formal education are less likely to return to their village. Likewise, young migrants who have worked abroad generally opt to live in urban centres upon returning to their country (Thorsen 2002). Migration as a survival strategy or search for opportunity thus has repercussions on the social organization of Burkinabè society.

3.8.6 Section Conclusion

In the context of this study, three important points from the livelihoods information presented above are worth reiterating. First, rural Burkinabè women face serious labour constraints, particularly during the agricultural season. In addition to pursuing the activities mentioned above, they carry heavy domestic responsibilities. They collect and head-load wood and water, which may be provided by a pump or village well, often many kilometres to the compound. They are further responsible for childrearing and daily tasks such as fire production, cooking, laundry and dishes, and sweeping. In a review of 12 studies on women's time allocation in the Global South, Leslie (1989) reports that African women spend on average six to 15 hours, with a median of ten hours, tending to their daily duties. In turn, results from the Upper Volta/UNDP/UNESCO Project for Equal Access to Women and Girls to Education show that Burkinabè women routinely

[63] Between 1974 and 1981, government and donor schemes resettled residents from the densely populated Moose Plateau into the Volta river valleys, following the eradication of river blindness in the latter area (McMillan 1995).

[64] A work 'invitation' is a form of cooperation between villagers, whereby a group of farmers provides labour on a person's fields in exchange for food, drinks, or in some cases financial compensation. These invitations can involve a few people or as many as dozens of people. They are predominantly organized by men for field clearance purposes. Only farmers with sufficient resources can afford to host an invitation (de Beij 1986).

assume an 11-hour workday and perform 80 per cent of household labour, including 64 per cent of the work involving agriculture, food processing, and water and fuelwood collection (McSweeney 1979: 381-382). As McGuire and Popkin (1989) aptly put it, they are in "a zero-sum game," working long hours with limited remuneration. Compounding this reality, male involvement in cash cropping and out-migration in search of remunerated work, which has led to a rise in female-headed households, have shifted previously male-dominated activities to women. The depletion of multipurpose tree species has further increased the labour required to gather tree products, including fuelwood (Rocheleau and Edmunds 1997). The challenges these labour constraints pose for the success of shea projects are discussed in Chapter 8.

The second point worth noting is that the monetarization of the economy coupled with gendered economic spheres within the household requires women to find their own sources of cash for their and their children's survival (Bukh 1979; Davison 1988). Yet, and this is the third point, despite their diverse livelihood strategies, rural Burkinabè women's income-generating potential is severely limited. Men's greater ability to migrate, their involvement in cash crop production, and their rights to resources—including women's labour—affords them an economic opportunity unparalleled for women (Hannequin 1990). As discussed in subsequent chapters of this thesis, shea butter projects thus offer women a rare and important opportunity to earn an income. First, however, the rest of this chapter focuses on the province of Sissili, the site of this study, where all these processes are taking place.

3.9 Research Site: Province of Sissili

Having contextualised my study at the country-scale, in this section I focus on the province of Sissili where I carried out my fieldwork. I consider the province's physical geography and people before turning to the three specific locations—Léo (Section 3.9.1), Lan (3.9.2), and Prata (3.9.3)—where my study took place (Figure 3.5). Sissili is home to the Gurunsi, and characterized by its high percentage of migrants, including the Moose and the FulBe who partook in this study. Their role within the province is highlighted throughout this section.

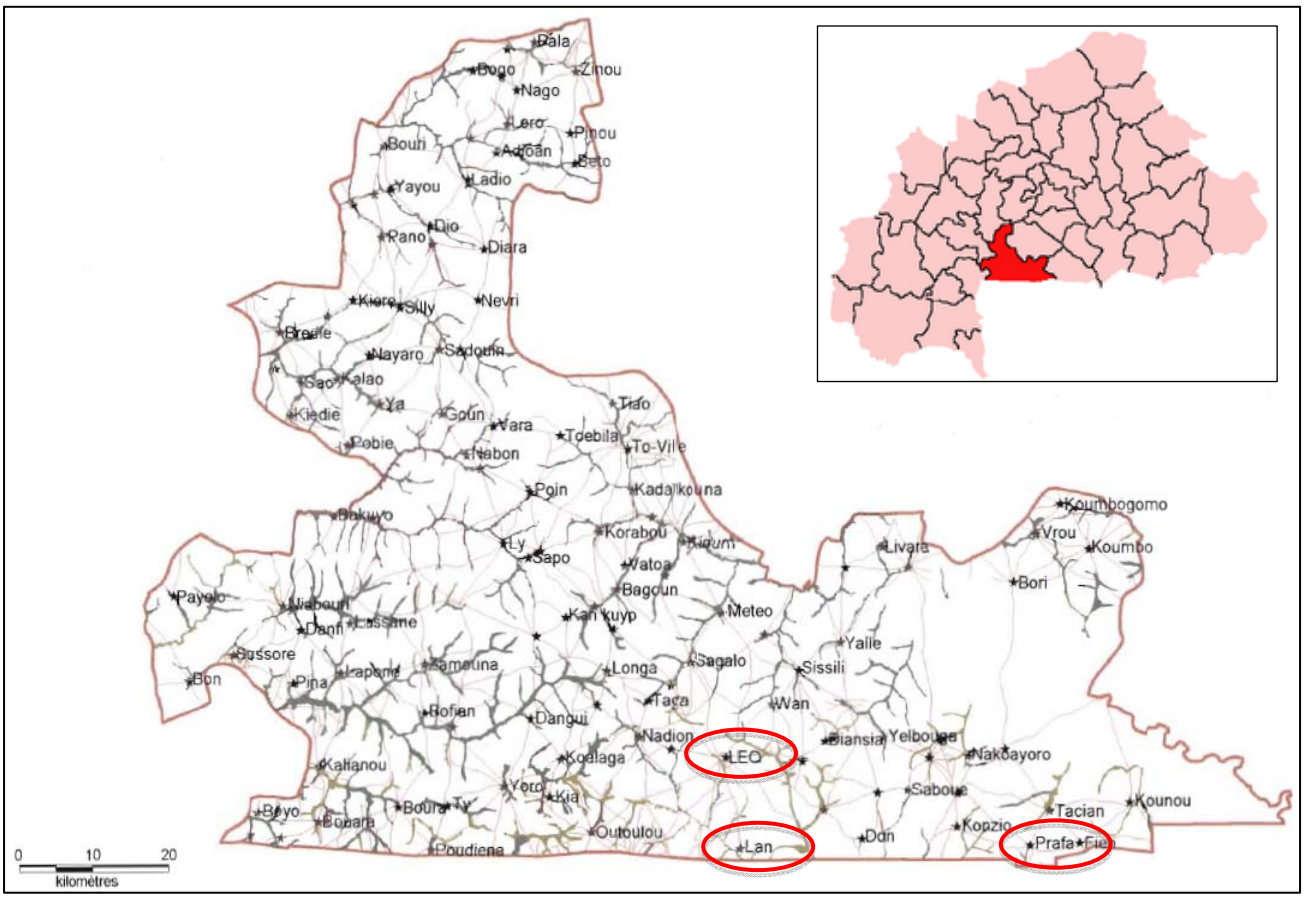


Figure 3.5: Province of Sissili and the Three Study Sites

(Adapted from Ouédraogo 2003b: 71; and Wikipedia 2010)

N.B.: Villages and seasonally flooded lowlands are displayed on the map; study sites are circled in red.

The province of Sissili sits within the southern Sudano-Guinean phytogeographic zone, which is characterized by shrubby and wooded savanna (a continuous layer of herbs with a discontinuous arboreal layer), sparse forests and gallery forests along watercourses (Figure 3.6). Sixty per cent of the province is covered by uncultivated savanna. Sissili is species-rich compared to the northern parts of the country (Kristensen and Balslev 2003). While *Vitellaria paradoxa*, *Terminalia spp.*, and *Combretum spp.* are the main arboreal species, *Andropogon ascinodis* and *Schizachyrium sanguineum* dominate among herbaceous perennials (Ouédraogo 2006). Due to its abundant biodiversity and uncultivated forest areas, Sissili is home to 32,700 hectares of protected multi-use forest (*forêt classée*): the Nazinga Game Ranch. The province also supplies Burkina's major cities with firewood, which is transported by truckload to its urban destinations. In contrast to the central Plateau area, the region's farmland remains

relatively plentiful, and its ferruginous tropical soils, dominated by Lixisols (FAO 1993), are favourable to the growth of various cultivars (DRED-Co 2003).

Figure 3.6: Typical Vegetation Profile in Uncultivated Areas of the Province of Sissili (Source: Author 2006)

As is the case more generally within Burkina Faso, extensive agriculture with limited access to plough-animal traction remains the norm in the area, and soil fertility is maintained by rotational fallow. Millet, red and white sorghum, and maize, as well as non-cereal crops such as cowpeas, black-eyed peas, sweet potatoes, groundnuts, and yams provide the food staples. Cotton represents the most important cash crop regionally, and areas under its cultivation continue to expand. Breeding of bovine, ovine, goats and donkeys complements these agricultural activities (Ouédraogo 2006).

Sissili's population has doubled to 208,409 people over the past 20 years. Yet, with 21.5 people per square kilometre, its population density remains low with respect to the rest of the country (Howorth and O'Keefe 1999a; Ouédraogo 2003a; INSD 2006). Over 90 per cent of this population is engaged in agriculture, and the percentage of schooled children (39.2 per cent) is significantly below the national average of 47.5 per cent (DRED-Co 2003). The province continues to have very poor infrastructure, which hinders its economic development and agricultural productivity.

The Gurunsi are considered Sissili's original inhabitants. They stem from two principal sub-groups: the Nuna, who participated in this study, and the Kassena. However, large-scale migrations to the area, in two recent waves, have transformed the province's demographic make-up. Although migrations began in the late colonial period, they were accentuated during the droughts of 1973-1974 and of the 1980s. This first phase of migration resulted in an in-flow of predominantly Moose migrants from the central region. Early migrations were instigated by government schemes that aimed to resettle populations from the Moose Plateau's crowded and degraded lands to the Volta valleys (McMillan 1995). These migrants have been in the area for 20 to 50 years, and are relatively well integrated within the indigenous communities. Their children may have married among the Gurunsi, they fluently speak Nuni (language of the Nuna people), and enjoy relatively secure rights to local resources (Ouédraogo 2003a).

The second wave of migrations occurred from around the mid-1990s onwards, without government intervention. It has involved migratory movements primarily from the Moose Plateau due to the area's degraded lands and unfavourable climate. Comprising nearly 50 per cent of Sissili's residents, Moose migrants now represent the province's largest population. They have outnumbered the Gurunsi, who counted for only 22 per cent of the provincial population at the turn of the 21st century (Howorth and O'Keefe 1999a). Migrants also include the FulBe, semi-nomadic herders who migrated from the Sahel in search of pasture and dry season watering-points. They now account for 15 per cent of the local population. In addition to rearing livestock, many FulBe migrants have taken up farming and become sedentarized in the area (Ouédraogo 2003a). Other ethnic groups such as the Gourmantché have also come to the area in search of grazing and arable lands. This second phase of migration caused the greatest inflow of new arrivals in the province. As the most accessible villages are filling up, recent migrants are settling in secluded areas, where there is little in the way of basic infrastructure.

In Sissili, Moose migrants reproduce their traditional social organization, all the while recognizing the authority of the indigenous host. In their new village, the status of migrant kin groups increases with their time of arrival (Breusers 2001: 57). The first Moose migrant to settle becomes the village chief and regulates local Moose activities. The Moose chief arbitrates disputes, yet he refers grave grievances to the village's

Gurunsi chief (*Pio*) and council, who have the final say in village matters (Howorth and O'Keefe 1999a, 1999b). New migrants seek representation and support from established members of the community (Sautter 1980). These intermediaries, who are generally (but not always) early Moose migrants, facilitate the migrants' integration into the village and provide them with information on local rules and norms (Sutton 1980; Ouédraogo 2003a). Within the structures of Gurunsi society, the Moose then operate autonomously in what Howorth and O'Keefe (1999a: 22) call a "small Mossi kingdom…regulated by Mossi rules."

These 'rules' also govern the tenure patterns the Moose adopt in rural Sissili. Upon arriving in Gurunsi territory, migrants request permission to settle from the Gurunsi village chief who oversees the village's social affairs (Howorth 1999). Following the *Pio*'s authorization, migrants consult the Gurunsi earth priest (*Tiatiu*) who assesses land availability and manages settlement patterns (Howorth and O'Keefe 1999a, 1999b). As land is a gift from the ancestors, refusal to lend unused land is considered ominous (Reenberg and Lund 1998; Gray 2003). Consequently, whereas the Gurunsi retain privileged rights, the *Tiatiu* generally grants migrants temporary or extended rights to village lands (Ouédraogo 2003a). Migrants accede to these lands by clearing the bush, and their claims to land they have brought into production strengthen over time (Stamm 1994). Yet, tenure rights among these recent arrivals remain insecure (Ouédrogo 2003). When possible, migrants therefore invest in soil quality by fertilizing, building anti-erosion bunds, and resorting to other measures that lengthen the practicable period of land cultivation and allow them to reduce fallow periods (Gray and Kevane 2001; Gray 2003; Saul et al. 2003; Gray 2005; Gray 2007).

As is also the case in south-western Burkina Faso (Gray 2003), Moose migrants in Sissili have been accused by the indigenous population of practicing land-'wasteful' fallow and bush clearance over larger surface areas than they are able to cultivate (Howorth 1999). Moose farmers clear on average six hectares of land per household while the Gurunsi cultivate four hectares per household (DRED-Co 2003). The Moose migrants' land clearance practices are poorly perceived by the indigenous communities, who in some instances now attempt to avoid lending land to recent arrivals. Although

outright refusal to lend land is inadmissible, local Gurunsi authorities may allocate poor quality lands to migrants to diminish their interest in settling in the area (Gray 2003).

In Sissili, the villages where migrants have settled are multi-ethnic, and Moore, the language of the Moose, has become the common language of communication between ethnic groups (Howorth and O'Keefe 1999b). Despite being outnumbered, the Gurunsi wield local political power. Their village chiefs manage social affairs, and are seconded by councils of elders from the various Gurunsi lineages as well as district officials (Ouédraogo 2003a). In spite of having lived in Sissili for some time, many migrant communities remain excluded from local institutions (UNEP et al. 1999; Gray 2005). In some instances, they have therefore formed their own 'administrative villages,' where they can have improved access to basic infrastructure, a clinic, and schooling. While they are politically marginalized, these newcomers are commonly stronger economically than the indigenous communities. In some villages, this has allowed them to unofficially partake in some of the local decision-making processes (Ouédraogo 2003a).

To the best of their ability, Moose migrants throughout West Africa reproduce the agricultural system developed by their people on the Central Plateau (Skinner 1960, Sautter 1980; McMillan 1995, Howorth 1999). This system is based on household production and silviculture, integrating animal husbandry with subsistence and some cash crop cultivation (Breusers et al. 1998). Faced with land constraints, the Moose have abandoned the practice of shifting cultivation. Agriculture is still practiced according to traditional methods, however, involving crop rotations, burning, and fallowing (Howorth 1999).

Migrants have also brought new skills, experiences, and customs to the province of Sissili. The Gurunsi are traditionally bush farmers, who cultivate sorghum, maize, pearl millet, groundnuts, yams, and cotton. Yet, since the arrival of FulBe and Moose migrants, they have also begun to partake in animal husbandry. In addition, the Gurunsi are now increasingly adopting Islam, which is locally considered a 'civilized' religion, all the while retaining their traditional animist religious beliefs (Kristensen and Balslev 2003). Finally, whereas trade has historically been peripheral to the Gurunsi's lifestyles

(Kibora 2003), Moose in-migrations have brought new market activities and the greater development of marketplaces in the region (Hosworth and O'Keefe 1999a).

Although in-migrations have triggered changes in Gurunsi lifestyles, these changes are also the result of larger political-economic processes. Integration into the cash economy, declining terms of trade for primary commodities, and insecure agricultural yields compel some of Sissili's young men to migrate to neighbouring countries during the dry season in search of employment. Due to cash cropping and enlarged monetary needs, Gurunsi women have become more heavily involved in agriculture than they previously were (Kristensen and Blasev 2003). The completion in 2006 of a tarmac road linking Sissili's capital (Léo) to Ouagadougou has facilitated access to urban, national and international markets. For Sissili's shea butter producers seeking to sell their product overseas, the road has reduced transport and transaction costs. In so doing, it has brought new opportunities to Léo, Lan, and Prata, my three study sites, whose characteristics are outlined below.

3.9.1 Léo

Situated 140 kilometres south of Ouagadougou and 13 kilometres north of the Ghanaian border, Léo is the provincial capital of Sissili (Figure 1.4). Between 1985 and 2006, the town's population more than doubled from 10,961 to 26,779 residents (INSD 2006). As described in the previous section, Léo's rapid population growth primarily results from an influx of migrants of Moose and FulBe origin, but also of rural migrants from elsewhere in the province of Sissili who came to the city seeking employment or trade opportunities (MATD 2006a).

Léo refers not only to a town, but also to the commune encompassing the town's five central sectors as well as five peripheral sectors. Together, these ten sectors are home to 51,037 people and 8,670 households (INSD 2008). The commune of Léo comprises a hospital, 25 elementary schools and two high schools, a public daycare, mills, lively food kiosks, a handful of inns, and permanent commercial stalls. In 2003, 8.7 per cent of its inhabitants had access to electricity providing from the Ghanaian grid (MATD 2006b). The town additionally has an Internet connection, telephone networks, and a post office connecting it to the outside world. Despite these amenities, however, Léo resembles an oversized village rather than an urban agglomeration (Figures 1.5 and 3.7). Most of Léo's

inhabitants are agriculturalists who cultivate lands located on the outskirts of town, and their compounds resemble those of their village counterparts.

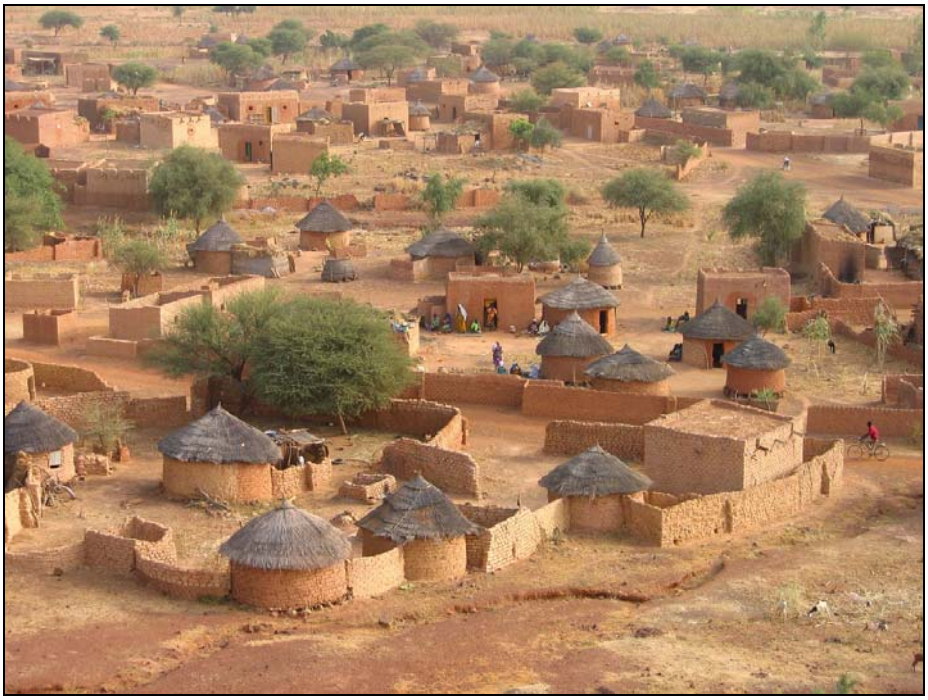


Figure 3.7: Arial view of a neighbourhood in Léo
(Source: Cybertea 2007)

Léo's main attraction is its bustling market, which draws merchants from Burkina Faso and Ghana alike. The covered market opens on a daily basis, but fills up on Saturdays and Sundays, when dozens of vehicles transporting vendors and merchandise pull into the border town (Figure 3.8a). At this time, merchants also line the covered market's periphery, grouped together according to the type of goods they sell (Figure 3.8b). Hours later, small and large-scale wholesalers leave again, transporting tonnes of grain, groundnuts, yams, potatoes, manioc, shea nuts or other produce depending on the season. Small-scale vendors from Léo's surrounding areas, including those from Lan—my second study site—also return to their villages.

Figure 3.8a: Léo's covered market on the weekend (Source: Author 2006)

Figure 3.8b: Outdoor vendors at Léo's weekend market (Source: Author 2006)

3.9.2 Lan

Situated merely nine kilometres south of Léo, Lan sits at the border with the Republic of Ghana (Figure 1.4). Its population is composed of indigenous Gurunsi inhabitants and migrants of Moose and FulBe origin. In 2004, the village counted 1624 inhabitants, among whom 47.78 per cent were of age to make up the active population (Plan de Gestion de Terroir de Lan 2006). As in the rest of the centre-west region of Burkina Faso, the population's main activities consist of agriculture (mainly subsistence) and animal domestication. Lan's residents have few income generating activities, among which shea

butter sales is of primary importance for women. Although a couple of kiosks carrying basic goods are found in the village (Figure 3.9), the absence of a market in Lan does little to stimulate local trade. Nonetheless, many of Lan's inhabitants walk or ride a bicycle or donkey cart to Léo or to Ghana for trade purposes. As Lan is also short of a mill, some women travel to Léo to have their cereals, groundnuts, and shea nuts ground.

Figure 3.9: Kiosk displaying basic goods for sale in Lan (Source: Author 2006)

Despite its large size for a village, Lan has no health clinic or electricity. With its two wells and two water pumps, the village's access to potable water remains inadequate, and local women complain of the difficulty of securing water for their household (Plan de Gestion de Terroir de Lan 2006; fieldwork data 2006). Moreover, conflicts arise over access to resources among the indigenous and migrant populations. Due to the lack of income generating activities in Lan and to the precariousness of village life, nearly three per cent of Lan's male inhabitants migrate seasonally (20 men) or more permanently (25 men), mainly to neighbouring Ghana (Plan de Gestion de Terroir de Lan 2006). The completion in 2006 of a paved road passing through the village and linking Léo to Ghana has helped the circulation of people and goods to the area. In this respect, the peri-urban village is in a stronger economic position than the village of Prata, my third study site.

3.9.3 Prata

Prata is a large village located 49 kilometres east of Léo, in the province of Sissili. Its southern limit borders the Republic of Ghana, while the village of Bieha—the administrative centre of the *Département* (see Section 3.4.3)—is situated 13 kilometres to the west. Prata's indigenous Gurunsi population shares its land with Moose and FulBe migrants. In 2006, the village's population totalled 1248 (INSD 2006). The indigenous populace largely outnumbered its migrant counterpart, consisting of 14 Moose households and six FulBe camps. While the Gurunsi and the Moose are primarily engaged in subsistence agriculture and to a smaller extent in animal domestication, FulBe herders pursue their livestock rearing activities in the village outskirts. As discussed in Section 3.8, local people also partake in some cash cropping and gathering to make ends meet. Further, they trade in goods grown or collected locally as well as those imported from neighbouring Ghana. Trade occurs within Prata, where merchants market their goods directly from their homesteads or door to door to neighbouring compounds. A single permanent kiosk carrying basic necessities as well as cigarettes and alcohol also occupies the heart of the village. Prata's residents further attend Bieha's weekly market on Tuesdays, and the construction of a dirt road linking the two villages in 2004 has facilitated local travel (Plan de Gestion du Terroir de Prata 2004; fieldwork data 2006). Short and long-term migrations, primarily to Ghana, for trade and employment purposes also prevail.

Life in Prata remains rudimentary. Similarly to Lan, Prata is without electricity, a mill or a dispensary. The village's only school was inaugurated in 1994, and houses merely three classes in each of which fewer than 20 children were enrolled in 2007. Access to potable water remains problematic as Prata's women collect water from only two water pumps. Conflicts arise among co-resident ethnic groups, particularly between the village's agriculturalists and herders. To improve their lives, village residents have consequently formed a number of village groups, organized along ethnic and gender lines. The Gurunsi women's group of shea producers is the most dynamic women's association in the village, and as discussed throughout this thesis, it plays a key role in helping village households secure their livelihoods.

3.10 CONCLUSION

As this chapter has shown, Burkina Faso is a country with diverse biogeographies, peoples, cultures, tenure regimes, and livelihood strategies. The above discussion has highlighted some of the generalities pertaining to the small country and to the life of its inhabitants. Yet, care must be taken to avoid overgeneralizations. All Burkinabè villages, households in a given village or members of a given household do not face the same opportunities and constraints. Political economic changes at the international, national and local scales thus affect these actors in diverse ways. However, bearing these points in mind, a few dominant features are common to most Burkinabè ethnic groups and localities, and are worth summarizing below as they pertain directly to the sustainability of shea butter projects in the centre-west region of Burkina Faso.

Burkina Faso is one of the poorest countries in the world and is marginalized in the global economy. It carries few natural resources desired by the international community. Burkina's 'white gold' (shea butter) is thus primordial to the national and household economies. Women of nearly all of Burkina's 63 ethnic groups collect shea nuts and transform them into butter for household consumption and/or for sale. Shea butter projects, which have converged around the international demand for shea, offer some of these women an opportunity to sell shea butter on the international market.

Shea-related activities are but one of many income-generating strategies pursued by rural Burkinabè women. Sedentary Burkinabè peoples are agriculturalists, who grow predominantly subsistence crops for a living. Farmers cultivate a diversity of crops in various agro-ecological zones to minimize the risks associated with pests or crop failures. Valuable tree species, including the shea tree, are preserved on farmed fields for their by-products as well as for the ecological and cultural benefits they provide. Rural dwellers are also tied to the cash economy through the sale of their crops, as hired farm help, and through non-farm activities. Migration plays a key role in Burkinabè livelihoods, as predominantly young men migrate from rural to rural areas, to urban centres or to neighbouring countries in search of seasonal or permanent work.

Among Burkinabè cultures, a person's status is intimately tied to her or his age and gender. Men wield a marked authority over women in matters of decision-making, labour, household economics, and access to resources. In light of the fact that few income-earning

opportunities accrue to women, the importance of shea-related opportunities, which fall within the traditional female realm, is foremost. Within the agricultural system, men and women operate in different spatialities, use and manage different resources or the same resources differently, and are responsible for the completion of distinct tasks. Tenure also varies according to a person's gender. In a changing political economic context, conjugal disputes over labour, revenues, and tenure, including the loss of women's customary hold over shea-associated benefits, can arise. Initiatives concerned with Fair Trade in shea must therefore carefully consider women's usufruct rights to shea tree by-products.

The province of Sissili, and the site of fieldwork for this thesis, is home to many migrants, predominantly originating from the Moose Plateau. The province's co-resident ethnic groups have different accesses to resources and tenure security based on their status as indigenous, early migrants or latecomers to the area. This creates distinct opportunities for women from these different backgrounds in the context of shea butter projects, as discussed in Chapters 6 to 9. A road created in 2006 linking Léo to the national capital has facilitated Sissili's access to national and international markets. In so doing, it has begun to encourage the export of shea products from the region, which may pave the way for a better future. These issues, as they influence the sustainability of shea butter projects in the centre-west region of Burkina Faso, are considered in the rest of this thesis. First, however, I turn in Chapter 4 to the methodology I have used to perform this research.

CHAPTER 4

METHODOLOGY

4.1 INTRODUCTION

Shea butter projects can only be considered sustainable if the participants upon whom they hinge experience and recognize project benefits (Cunningham 2001; Vermilye 2004). Based on the notion that poverty and quality of life are subjective experiences (Chambers and Conway 1992), I have sought in this study to examine the situated experiences of participants involved in shea projects as well as those of their spouses, fellow local shea nut and butter vendors, and community members (Rocheleau 1995). In this chapter, I discuss the methodology I have used to explore these experiences and to assess the sustainability of shea butter projects in the centre-west region of Burkina Faso. The range of methods I have drawn upon give a voice to study participants to explore the diverse ways in which projects are leaving a mark on participant communities and their landscapes.

As explained in Chapter 3, my research was carried out in the province of Sissili, in three main locations: the small town of Léo, the peri-urban village of Lan, and the rural village of Prata (Figures 1.4 and 3.5). I conducted my fieldwork in two phases, beginning with a reconnaissance trip during the rainy season months of June and July 2005. A second, longer phase of fieldwork occurred between September 2006 and March 2007. Hence, I spent a total of seven months conducting the fieldwork on which this thesis is based. Prior to this study, I had performed research in Burkina Faso in 2001 in the context of my Master's degree (Elias 2003). I therefore had pre-existing contacts in the field, and was able to promptly re-familiarize myself with the local customs and integrate into the communities under study. My earlier experience in the country also made it easier for me to develop rapport again with participants I had previously met who trusted me quickly. Finally, my familiarity with Burkinabè peoples helped me to develop a culturally appropriate approach for working with local women and men.

Expanding the data I gathered through my study participants using the various qualitative methods discussed below, I also acquired important information for my study through conferences and discussions with a network of fellow researchers and

professionals working on shea butter and agroforestry. Among others, I solidified research ties with local colleagues from the *Institut de l'Environnement et des Recherches Agricoles* (INERA), the Center for International Forestry Research (CIFOR), fellow graduate students, and members of the Shea Network—an informal group of institutions located throughout the shea belt that work together to improve the prospects of shea butter production and marketing for female butter makers.

To discuss the methodology for this thesis as a whole, this chapter is divided as follows: in Section 4.2 I detail the five research methods by which I have gathered my data. These consist of observation (4.2.1), informal conversational interviews (4.2.2), semi-structured interviews (4.2.3), wealth classifications (4.2.4), and shea tree mapping and measurements (4.2.5). Next, I address the ethics involved in conducting my study (4.3), and in subsequent sections I discuss my positionality in the field (4.4) and language and translation issues (4.5). In Section 4.6, I turn to the research successes and challenges I encountered in the field, and in conclusion (4.7) I reaffirm the importance of triangulating methods to acquire an holistic understanding of the multi-dimensional phenomena under study (Bassett and Zuéli 2003; Zimmerer and Bassett 2003).

4.2 METHODS

In the three sites in which I worked, I gathered data using a combination of methods including observation, informal conversational interviews, and semi-structured interviews. In addition, in Prata, I mapped the distribution of shea trees, assessed shea tree characteristics, and recorded oral histories of vegetation change to gather endogenous perceptions of the village's landscape evolution. A calendar of field activities indicating the sequence in which the different methods were used during the longer data-collection phase of my fieldwork is provided in Appendix I. These methods and the ways they relate to each other are described below.

4.2.1 Observation

Observation is a research method entailing "the systematic noting and recording of events, behaviours, and artefacts in a social setting" (Marshall and Rossman 1995: 79). The observer directly interprets people's lives based on their actions, rather than asking people to recount their experiences in an artificial social encounter such as an interview

(Dowler 2001). According to Kitchin and Tate (2000: 220), "this directness provides validity as it concentrates upon what people really *do* as opposed to what they *say* they will." The researcher may conduct direct observation, without partaking in the observees' activities, or participant observation, by participating in the relevant activities of the people being observed (Bryman 2004). In direct observation, data is generally noted as an holistic description of events as well as in the form of detailed checklists, which diachronically monitor events or behaviours. Participant observers commonly record their data in unstructured narrative form, coupled with *in situ* analysis and interpretation (Kitchin and Tate 2000). Observation may be overt, with researchers explaining their purpose to observees prior to the beginning of the research, or covert, if researchers hide the fact that they are observing research participants (Bryman 2004; Lugosi 2006; Schutt 2006).

4.2.1.1 Type of Data Gathered

Throughout my fieldwork, I requested the hospitality for lodging and meal sharing of households in which at least one woman was a member of the shea producers' Union. Specifically, a Gurunsi family hosted me for nearly three months in Léo, the provincial capital, which served as my home base for interviews carried out in the small town as well as in the neighbouring peri-urban village of Lan. Another Gurunsi family hosted me for two months of the dry season in the village of Prata. Upon household members' oral consent, I undertook overt participant observation by actively partaking in the shea-related activities of the women with whom I lived. I recorded the temporality of the activities associated with women's shea butter preparation and supplemented this information with descriptions of the processes I observed related to the shea nut and butter trade. In both localities, I also undertook overt direct observation of the workings of the shea producers' Union—the *Union des Groupements des Productrices de Produits Karité de la Sissili et du Ziro* (UGPPK)— by attending Union-related events. In Léo, I attended weekly markets during the dry season and carefully observed the trade in shea nuts and butter. During these visits, I purchased shea nuts and butter and weighed them to determine seasonal variations in their price per unit mass. These observations, activities and interactions helped me formulate and refine my interview questions, and complemented other forms of gathered data.

4.2.2 Informal Conversational Interviews

Face-to-face interviews are a useful way of generating richly detailed, multi-layered, contextual knowledge of the phenomenon under study via direct personal encounters (Burgess 1984, Valentine 2005). According to Eyles (1988), an interview is a "conversation with a purpose." The interview's 'purpose' is to elicit information that cannot be easily observed, such as people's perceptions, experiences, feelings, beliefs, and the meanings they attribute to their physical and social environments, in their own words (Dey 1993; Kitchin and Tate 2000; Valentine 2005). Interviewing carries many advantages, such as allowing for wide-ranging discussions and an in-depth exploration of the themes under study and creating space for interviewees to explain the complexities of their experiences (Bryman 1988; Silverman 1993).

The informal conversational interview lacks a formal structure. Questions are developed during the course of the conversation with the interviewee, with no predetermined order or wording, and posed within the context of a natural dialogue in an informal setting. Interviewees are encouraged to broach the themes they wish to discuss regarding the general research topic and to share their experiences and feelings about those issues as they see fit. This form of interview is particularly useful for allowing issues the researcher may not have personally thought about to surface, and discussing issues of significance to research participants in ways that reflect their own "frame of reference" (Kitchin and Tate 2000: 215). Because the content of informal conversational interviews varies considerably among respondents, this type of interview does not allow direct comparisons among participants. However, it can provide the richest source of data about a given theme (ibid 2000) which can set the background for information gathered according to other data collection methods, if need be.

4.2.2.1 Sampling Design

Informal conversational interviews were carried out with key informants to generate information regarding shea butter projects and shea agroforestry. Purposive sampling was used to select 'information-rich' respondents (Patton 2002) such as NGO personnel involved in shea projects and the executive officers (president, vice-president, secretary, treasurer, assistant treasurer, head of marketing, and quality controller) of the shea butter Union who are also themselves shea producers. Some of the Gurunsi and Moose UGPPK

members I met, as well as their husbands, were also interviewed. In some cases, these interviewees later participated in the semi-structured interviews described in Section 4.2.3. Informal conversational interviews, which occurred throughout my fieldwork in Léo and in Prata, helped me become acquainted with key issues and players in the shea sector. A list of key informants cited in this thesis is provided in Appendix II.

4.2.2.2 Questions

To initiate conversations with interview participants, I raised general topics related to the shea trade and shea agroforestry. These probes elicited spontaneous narratives about issues participants felt were important with respect to shea projects. Among non-member shea butter producers, the conversation revolved around the shea market and participants' reasons for not joining the Union. In light of the themes raised during these discussions, I fine-tuned my questions for semi-structured interviews.

4.2.3 Semi-structured Interviews

The semi-structured interview is situated along a continuum of structured interviews, wherein the questions posed are pre-meditated and pre-arranged in a standardized interview program, and unstructured interviews, in which interview questions are generated *in situ* (Dunn 2000; Kitchin and Tate 2000). The researcher may carry out semi-structured interviews using an interview guide with a list of topics to be covered or an interview program listing questions to be broached with no specific order, at an appropriate moment based upon the interviewee's responses. In this way, semi-structured interviews allow respondents to direct the discussion (Valentine 2005). The exact wording of these questions may vary between interviews depending on the flow and nature of each conversation (Kitchin and Tate 2000; Valentine 2005). The strength of this interview format is that, while it can accommodate the particularities of each response, it allows for comparability across interviews (Patton 2002).

4.2.3.1 Sampling Design

As semi-structured interviews mean to elicit insight into participants' perceptions and feelings, my sampling design was intended to produce an illustrative sample based on characteristics that influence respondents' perceptions rather than a representative sample

from which to extrapolate the collected data to the entire population (Sandelowski 1995; Flowerdew and Martin 2005; Valentine 2005). Semi-structured interviews were conducted with three different populations, consisting of:

1. UGPPK members and their husbands, of Gurunsi and Moose origin, in the town of Léo, the peri-urban village of Lan, and the village of Prata;
2. non-UGPPK members—men and women of Gurunsi and Moose origin—who are involved in the shea nut or butter trade business in Léo; and
3. non-UGPPK members—men and women of Moose and FulBe origin—who reside in Prata.

To select participants of the first study population, I acquired a list of all Union members living in Léo (N=592), Lan (N=123), and Prata (N=110) from the UGPPK manager. As mentioned in Chapter 1 and detailed in Section 7.3.1 of Chapter 7, these producers are organized in *Groupements Villageois Féminins* (GVFs), or women's work groups, which are the primary-level organizations that come together to form the UGPPK, a secondary-level organization. In 2007, there were between 20 and 130 female producers in each of the 33 GVFs constituting the UGPPK, for a total of 1200 producers in the Union. GVFs are drawn up according to their members' location of residence (village or borough if in Léo) and ethnicity. At the time of this study, there were 15 GVFs of shea producers located throughout Léo's neighbourhoods. Three of these were comprised of Moose women and 12 grouped women of Gurunsi origin. In the peri-urban village of Lan, UGPPK members were organized into two constituent GVFs; one composed of Moose women and the other of Gurunsi women. In turn, the rural village of Prata was home to only one of the UGPPK's GVFs, and all of its members were of Gurunsi origin.

In this study, ethnicity was used as an analytic variable as I was interested in qualitatively assessing inter-cultural differences in shea agroforestry techniques and in the effects of shea projects at the producer and household levels. Locality also served as part of a purposeful sampling strategy, since I aimed to explore experiential differences along the urban-rural continuum as well as in different localities within the town of Léo. In Léo, GVFs were therefore stratified according to the ethnicity of their participants as

well as their specific geographical location. Within these categories, I randomly selected a mix of 27 Gurunsi and Moose producers as participants for the study (Appendix III). In addition, all seven of the UGPPK's executive officers—six of whom are from Léo and one who is from Lan—as well as their spouses participated in the interviews.

In Prata and in Lan, I used stratified random sampling to select Union members and their husbands. Stratification was based on both gender and wealth categories, which were determined by way of the wealth ranking exercises described in Section 4.2.4. Specifically, 24 Union members of Gurunsi origin in Prata and 20 Moose members in Lan as well as the husbands of all these women were asked to partake in semi-structured interviews (Appendix 4.3). Finally, five women from Lan's Gurunsi GVF—selected randomly from the GVF roster—and their spouses participated in gender-segregated focus groups. A review of the sample size among the first population of semi-structured interview participants is provided in Table 4.1.

Table 4.1: Sample Size of the First Study Population, UGPPK Members and Their Husbands.

		Sample size	
		Women	**Men**
Locality	**Léo**	33	27
	Lan	21	16
	Prata	24	23
Sum		78	66
Total		**144**	

N.B. The discrepancy between the number of female and male participants owes primarily to the fact that some of the shea producers interviewed were widows, but also that some husbands were unable to participate in the interviews because they were away, ill or constantly inebriated.

The second study population of semi-structured interview participants consisted of non-UGPPK member shea nut and butter vendors at the weekly market in Léo. Since their numbers were limited (n=11), all *shea nut* vendors—male or female, of Moose or Gurunsi origin—encountered at the Saturday market were asked to participate in an

interview. Appendix IVa provides information on the gender and ethnic background of these interviewees.

Likewise, all of the 18 female *shea butter* vendors encountered at the market who were not part of the UGPPK took part in semi-structured interviews. Snowball sampling was also used to identify two shea butter vendors who sold shea butter exclusively out of their homes and who were not part of the UGPPK. Nineteen of the 20 female shea butter vendors interviewed were of Gurunsi origin, the other being Moose. Appendix IVb lists these vendors as well as their location of residence (within or around Léo) and the place(s) where they sell their butter (market and/or home compound). In turn, Table 4.2 summarizes the sample size and gender makeup of the second study population of semi-structured interviewees.

Table 4.2: Sample Size of the Second Study Population, non-UGPPK Member Shea Nut and Butter Vendors in Léo.

	Sample size	
	Women	**Men**
Shea nut vendors	5	6
Shea butter vendors	20	--
Sum	25	6
Total	**31**	

The third study population consisted of Moose and FulBe migrants to Prata who are not part of the UGPPK. The wife of the male head of the household of each of the 14 Moose settlements in Prata as well as her husband was interviewed, each separately (Appendix Va). In addition, a representative—either the male head of the household or his wife or both—of each of the seven FulBe settlements in Prata participated in the study (Appendix Vb). The sample size of this third study population of semi-structured interview participants is recapitulated in Table 4.3.

Tale 4.3: Sample Size of the Third Study Population, non-UGPPK Member Moose and FulBe Migrants to Prata.

	Sample size	
	Women	**Men**
Moose	14	14
FulBe	5	5
Sum	19	19
Total	**38**	

4.2.3.2 Questions

Among the first study population (UGPPK members and their husbands), semi-structured interviews focused upon to the local effects of shea projects. Certain questions relating to shea revenues and investments, among other topics, were asked exclusively to female participants. Although participants' numerical answers often only represented 'guesstimates' due to recall biases, they revealed a valuable dimension of the effects of shea projects: that is, women's perceptions of their shea-derived revenues. As women frequently did not know exactly how much they had earned through shea sales to the Union, I consulted the records the Union held of member remuneration to complement this interview data.

Another set of open-ended questions pertaining to shea agroforestry was asked to both male and female participants. Finally, background information on participants' personal and household characteristics, such as number of wives/order of marriage, number of children, and so on, was sought during each interview. Participants were also asked about ownership of a number of material goods, such as agricultural materials and consumer durables, which were identified by local people and local researchers as being appropriate wealth indicators. This data served in the wealth rankings exercises described in Section 4.2.4 and allowed me to draw links between socio-economic status and shea tree management or the effects of shea projects. The interview programs used among female and male participants are annexed in Appendices VI and VII, respectively.

Among the second study population, consisting of non-UGPPK member shea nut or butter vendors, questions centred on shea nut and butter commodity chains. At the market, participants were asked to describe their experience in the shea sector as well as the evolution of this market over the past years (see Appendix VIII for shea nut vendors and Appendix IX for shea butter vendors). Shea butter vendors were also asked to discuss why they were not members of the UGPPK.

Finally, the third study population, composed of Moose and FulBe migrants in Prata, was asked about usufruct rights to shea trees and products, involvement in the shea market, and shea agroforestry techniques (see Appendix X for men and Appendix XI for women).[65] The goal of these interviews was to acquire a culturally specific understanding of shea agroforestry practices and shea-related activities and dynamics among the different co-resident ethnic groups in the village. All interviews occurred in the participants' compounds, as did the interviews with UGPPK members and their husbands.

4.2.4 Wealth Classifications

Wealth classifications consist of categorizing households or individuals in a given village or community into relative wealth ranks, according to a set of pre-established criteria. In this study, wealth classifications are important for analyzing correlations between socioeconomic status and the effects of shea projects, as well as the agroforestry techniques practiced by study participants. Further, the classification of households into wealth classes provided base-line data which can one day serve to assess longitudinal changes in the composition of village wealth with the evolution of shea projects, if so desired (Adams et al. 1997).

Wealth classifications can be determined by administering household surveys or through participatory wealth ranking (PWR) methods. Generally, PWRs are carried out by a few knowledgeable community members, who ascribe a relative socioeconomic status to their fellow residents based on specific criteria (Afonja 1992; Zeller et al. 2006; Van Campenhout 2007). Although this method is widely used in development programs and applied research projects (Chambers 1994a), some argue that is it less valid and

[65] The same interview programs were used during interviews with the FulBe, but they were shortened since the FulBe are only minimally involved in agriculture.

reliable than the formal household questionnaire. This is largely due to the fact that, whereas participatory methods provide a qualitative assessment, household surveys offer a standardized and quantitative means of determining wealth ranks (Adams et al. 1997).

In household (or individual) surveys, participants are asked about their consumption levels or ownership of a number of goods which, in a specific context, act as indicators of relative wealth levels. The drawback of this method is that holistic definitions of wealth comprise measurement challenges. Assessments therefore tend to rely on quantifiable variables and omit more qualitative wealth indicators, such as a person's status within the village (Adams et al. 1997). Moreover, even quantifiable variables may be unreliable, as recall biases, seasonality, the sensitivity of the information provided, and researcher-participant dynamics can introduce errors (Lipton 1983; Glewwe and Van der Gaag 1990). Composite indices also face their limitations since they attribute a subjective relative weight to every variable of household wealth, and aggregate various dimensions of wealth (Adams et al. 1997).

In light of these considerations, in my study the wealth rank of each interviewed participant was determined *both* according to PWR methods and to individual surveys integrated in the in-depth interviews conducted. The assistance of local people was central to both exercises. First, an assessment based on individual surveys and wealth indicators was conducted. The indicators enquired about were determined informally at the beginning of the research process in each of my three study areas. In each site, at least five local people from different backgrounds (gender, age, wealth category as initially identified by local assistants) were consulted. In addition, Burkinabè researchers who work in the region among the same ethnic groups as those of my study participants provided input as to commonly used local wealth indicators. Based on this information, my semi-structured interviews schedule incorporated questions about ownership of a number of goods. These included, but were not limited to (for men): field size, ownership of draught animals (and number of animals owned), ownership of a plough, ownership (and number) of bicycles, ownership of a motorcycle, ownership of a television, ownership (and number) of donkeys, presence of a tin roof, ownership (and number) of goats and sheep, ownership (and number) of chickens or fowl, and ownership (and number) of cattle. With the help of the local informants mentioned above, I attributed

coefficients to these indicators based on their relative monetary worth and calculated a global score for each participant's wealth based on his or her ownership of material goods. This exercise was performed with male and female participants, for whom different indicators had been determined. The exercise was more successful among male participants, who owned a greater variety of material goods of superior value that could be readily compared.

In addition to these indicator-based assessments, I carried out participatory wealth rankings. In each of my three study sites, one male focus group and one female focus group, composed of four participants each, were organized at the end of the research period.[66] To enhance the richness of this exercise, participants identified during the semi-structured interviews as being comfortable in an interview setting and forthcoming with information were purposively selected to partake in these focus groups. One to two individuals from the different wealth classes determined according to the indicator-based assessment was selected.

In each study site, focus groups explored definitions and indicators of a person's wealth. I asked open-ended questions and used probes to elicit thorough responses or clarify the information provided (Lincoln and Guba 1985). The goal was not to compare the wealth of those present within the focus group, but to have a set of indicators upon which participants could agree upon to assess the wealth of their fellow residents. Moreover, I wanted to have systematic data that would allow me to compare men and women's perceptions of wealth in a given community.

Following the focus group exercises, each focus group participant was privately asked to rank all the men and women who participated in the semi-structured interviews *relative to one another* into one of five wealth categories. These categories were given relative weights: poor – 1 point; poor-to-medium wealth – 1.5 points; medium wealth – 2 points; medium wealth-to-rich – 2.5 points; rich -3 points.[67] An average score per

[66] As Garvin (1995) explains, focus groups generally consist of four to twelve people who come together to discuss a particular issue put forth by a moderator. The moderator guides the exchanges, which reveal the different viewpoints and motivations of participants on a given topic (Krueger 1988). This exercise permits the researcher to witness interactions and power relations within a group; according to a participant's rank within the group, he or she may feel more or less comfortable expressing their viewpoints.

[67] Participants were originally asked to rank semi-structured interview participants into three categories but they were more comfortable ranking them in one of five categories as they felt that some people stood between the original categories.

participant was then calculated. I subsequently established three, rather than five, wealth categories, wherein poor participants scored an average of between 1 and 1.5; medium wealth participants scored above 1.5 but less than 2.5; and rich participants scored at least 2.5. These values were compared (and closely matched) with the survey-based wealth appraisals to determine a final wealth rank for each participant.

In Léo, this wealth-ranking exercise was not possible for two reasons. First, because Léo is a town of over 26,000 people, the town's UGPPK members did not all sufficiently know each other to evaluate each other's wealth. Then, there are many more types of goods in Léo that can be associated with wealth than in the villages, and comparisons among different types of wealth holdings are difficult. Consequently, the exercise was only conducted in Lan and in the village of Prata; the latter being where I also mapped and measured shea trees.

4.2.5 Tree Mapping and Measuring

Mapping consists of creating a visual depiction of the location of, and spatial relations between, physical features of interest in a designated area. This can be achieved by using a global positioning system (GPS), which registers the coordinates of landscape features (Cunningham 2001). Information on specific attributes (such as tree characteristics) can be coupled with locational data, and thereafter visually depicted using Geographical Information Systems (GIS) analysis. Maps produced using GIS can thus reveal how specific attributes vary across space (Kitchin and Tate 2000).

4.2.5.1 Type of Data Gathered

Mapping of Prata's shea trees was performed to complement interview data related to my first objective of providing insight into the nature of shea tree management and conservation, and the extent to which these are gendered. Using a handheld Garmin Geko 201 Global Positioning System unit, my research assistant and I recorded the latitude and longitude coordinates of all shea trees encountered within one-hectare subplots located in five different types of land uses and fields: 1) fields cultivated by the households of Gurunsi UGPPK members from the first study population; 2) fields farmed by Moose households of the third study population; 3) lands cultivated by FulBe migrants of the third study population; 4) young (four to five year old) fallows formerly cultivated by the

Gurunsi households mentioned above; 5) uncultivated, brush areas. Table 4.4 summarizes the number of fields surveyed within each type of land use, whereas Appendix XII provides a comprehensive list of these fields.

Table 4.4: Characteristics of the Fields Surveyed in Prata

Type of land use		Ethnicity of land custodian	Number of fields surveyed
1	Cultivated fields	Gurunsi	18
2		Moose	14
3		FulBe	5
4	Fallows	Gurunsi	15
5	Brush lands	---	10
Total			**62**

N.B. Although 24 Gurunsi women from Prata partook in semi-structured interviews, the fields of only 18 of these participants could be surveyed as those of the other six interviewees were located in Ghana, where I lacked permission to carry out my research.

The cultivated fields examined were farmed cooperatively by the household (versus personal fields), and were under the control of the male household head. As recent migrants at the time of the study, the Moose and the FulBe did not have any fields lying in fallow, which explains why only fallows previously farmed by the Gurunsi were surveyed. Brush areas were identified by indigenous Gurunsi elders as zones that had no known history of cultivation or management, and that were believed to reflect the area's 'natural' vegetation.

In the five types of land uses and fields, I assessed the state and structure of the shea population. For each shea tree encountered, including saplings, I measured the diameter at breast height (1,3m), and gathered visual clues about the specimen's state with respect to parasitism.[68] With this data, I determined the species' size class distribution in the different types of fields. Although tropical tree size is not necessarily directly correlated with age (Cunningham 2001), because of the shea tree's slow growth rate and long life landscapes dominated by large specimens are indicative of longstanding protection by local populations (Boffa 1999). They also reflect the superior growing

[68] Parasitic plants are a leading cause of mortality among shea trees located in the northernmost range of the species' Malian and Burkinabè populations (Boussim and Guinko 1993).

conditions for shea trees in cultivated fields, where many more mature shea trees are found than in unmanaged woodlands (Kessler 1992; Boffa 1995). Information on the prevalence, size, and state of shea trees offered insights into shea tree population structure and regeneration, and into the general condition of the resource base (Lovett and Haq 2000; Cunningham 2001). Moreover, the maps produced with the GPS data (Appendices XIII-XVII) illustrate the spatiality of shea trees in managed and unmanaged landscapes, which sheds additional light on tree selection and management practices, and thus on the sustainability of shea projects based on the maintenance of a vigorous shea tree population.

4.2.5.2 Data Interpretation

The spatial distribution of tree specimens was mapped by a graduate student colleague using ArcGIS. Fifteen meter buffers were created around each tree and field boundary point, as this distance corresponded with the error of the GPS unit. Nearest neighbour analyses were performed in ArcGIS to determine the average distance between trees and examine clustering patterns. The area of each subplot was determined in ArcGIS and divided by the number of shea trees present in the plot to calculate shea densities. The shea population's size-class distributions were analysed for the five aforementioned different types of fields surveyed. Analysis of Variance (ANOVA) comparisons of the size-class distributions and shea densities across the different types of land uses and fields were thereafter computed in Excel.

4.2.6 Section Conclusion

My data collection activities substantiated the value of triangulating methods and consulting a wide range of stakeholders to construct a fuller picture of the phenomena under study. Intriguingly, the husbands of UGPPK members were more communicative about problems concerning the Union's internal dynamics, which their wives had discussed with them, than were the Union's members themselves. Perhaps the women did not want to complain about their fellow members because of a sense of allegiance. They may also have wanted to project a harmonious image of the UGPPK, and in this respect may not have wanted to discuss its internal conflicts with me. Speaking to male spouses was therefore enlightening. As another example, whereas Gurunsi women make up the

large majority of Union members, interviews with Moose women as well as with non-member shea butter producers and shea nut vendors enhanced my analysis of the dynamics surrounding the UGPPK. Complementing this information with interviews with Union leaders, experts, and NGO personnel, as well as with tree maps and measurements provided a richer analysis of the various dimensions that factor into the sustainability of shea projects. Not surprisingly, such an undertaking involved a number of ethical considerations, which are briefly considered in the following section.

4.3 Ethical Considerations

Permission to carry out my study was granted by McGill University's Research Ethics Board. In the field, I requested permission to conduct my research from key individuals, according to local socio-cultural norms. I arrived in the provincial capital, Léo, on the eve of the UGPPK's annual assembly and was thus able to publicly introduce myself and my project to the representatives of each GVF (Figure 4.1).

Figure 4.1: Introducing Myself and My Study at the Annual UGPPK Assembly (Source: Reid Cooper 2006)

I made it clear that, although I hoped my research would useful, it would not have any immediate practical outcomes and could, at best, only indirectly inform Union policies. Nonetheless, the Union's elected representatives and the NGO assisting the UGPPK welcomed my project. Before beginning my research in Prata and in Lan, I also presented my project to the village chiefs and elders, who granted me their blessing and

collaboration. In each of my three study sites, the project was then explained individually to research participants, who were asked to verbally consent to partake in the study. Women were invited to seek permission from their husband to participate in the interviews, if they deemed it necessary.

I maintained the confidentiality of my interviewees by keeping my research notes in a safe and private place and using pseudonyms when recording, treating, and disseminating the data. The assistants with whom I worked were also renown for their trustworthiness and assured me of their discreetness. Participants were informed that they could withdraw from the interview process at any time if they wished to do so. Results were recorded by hand since participants appeared uncomfortable around a voice recorder. Before leaving Prata, where I had lived for two months, I arranged a final meeting with the village elders to thank them for their collaboration.

Additional ethical considerations arose from the fact, in an effort to improve the welfare of, and give something back to, the women who partook in my research, I sought in 2005 to find Canadian market outlets for UGPPK shea butter. The idea was born during my first period of doctoral fieldwork in Burkina Faso as Union leaders repeatedly solicited my assistance to help them integrate their product into North American markets. I resolved to investigate the possibilities, and that if no opportunities materialized, I would consider personally importing a small quantity of shea butter to test the Québécois market. I was guided by the thought that "research, in addition to the collection of data, can be a collective experience that contributes in some tangible way to the goals, tactics and strategies of those with whom we collaborate" (Routledge 2004: 84). Hence, my research became coupled with an engagement to respond to these study participants' expressed needs, and in October 2005 I co-founded *Karibelle*, a very small-scale Fair Trade shea butter enterprise.

Karibelle's mission is:

> to establish solidarity between Burkinabè producers and Canadian consumers by offering fairly traded, top quality, natural shea butter at equitable prices. Our mission is also one of sensitization and promotion of environmentally and socially responsible consumption habits.

This goal is compatible with, and indeed reinforces, my academic practice in ways I discuss in a paper dedicated to the challenges and ethics I faced in combining academic

research with critical praxis (Elias 2006). Briefly put here, ethical considerations include my personal repositioning with respect to my research participants and to the research I conducted. It is important to note, however, that given *Karibelle*'s small size and the trifling volume of shea butter it has imported with respect to the Union's total sales, women who were aware of my involvement in the enterprise appeared to correctly understand it as a symbol of solidarity rather than a significant business venture.[69] Further, only the general manager and leaders of the Union knew of my initiative since they were the ones I had contacted when placing orders from Canada. Consequently, I do not believe the enterprise had any real bearing on the ways study participants perceived me, as a researcher studying shea.

Fuller (1999: 221) reminds us that involvement in the causes researchers study can undermine the voice of the "researcher as academic". However, many activist-academics have demonstrated that, when approached with critical reflexivity, the multiple roles they adopt can enhance rather than hinder geographic research (Maxey 1999; Routledge 2004). As I argue in the aforementioned paper (Elias 2006), I believe this to be true in the context of this research.

4.4 Positioning Myself in the Field

The recognition that the process of 'knowledge production' is socially constructed, situated, and value-laden (Haraway 1991; England 1994; Rose 1997) comes with a responsibility to recognize that power relations are imbued in the research process. My interactions with research participants, their perceptions of me and my understanding of them were mediated by my position as an individual with all the social markers and idiosyncrasies that characterize me. In the eyes of Burkinabè residents, the primary characteristic defining me was the fact that I am a white (*nassara*) stranger. Burkina Faso is a country seldom visited by Western tourists; most of the small number of Caucasians in the country are aid workers, predominantly from France. The local people I encountered thus immediately assumed that I was French, worked in development, and

[69] Over the five years of its existence, *Karibelle* has imported under one tonne of shea butter from the UGPPK. In contrast, the Union's other clients import between 15 and 60 or more tonnes of butter per year.

was there to carry out a project to 'help' them. When my Québécoise origin was revealed, people greeted me warmly.[70]

When I explained the purpose of my stay, people could not fathom that a person would travel half way around the world to conduct research with them. The distinction between my privileged self, who had the time and resources to travel and conduct interviews, and my research participants, who spent long days performing physically demanding work to fulfil their basic needs, was obvious. When I spoke of my 'work', one participant enquired: "…but you work only with a BIC, right?"[71] She was referring to the fact that I did not perform 'real' work – my pen was not a 'real' tool nor did I produce anything concrete. Her comment highlighted the skewed nature of the power relations arising between myself—an educated Westerner with access to material resources, who could leave the village at any time to pursue my 'work' in an urban, Northern environment—and the research participants.

Many academics have stressed the need to recognize and address these asymmetrical power relations when doing cross-cultural research in the Global South or with vulnerable groups (Sidaway 1992; Rose 1997, Schulz et al. 1997; Smythe and Murray 2000; Heller et al. 2010). My efforts to redress this power gradient and to forge a reciprocal relationship with the study participants pervaded my research endeavours. Despite my rudimentary understanding of the local languages, I attempted to speak these to the greatest extent possible. I adopted the local customs, such as curtseying when greeting people, despite the fact that this was not expected of a white woman. I was not expected to eat with the women and partake in household responsibilities, but I did so to the greatest extent possible. I cooked with the women, did my laundry with them, participated in the physically taxing process of shea butter production, and became involved in their activities. As this required that I 'get my hands dirty,' it elicited people's amazement, but also their respect. It put participants and I on a more level playing field, and made women realize how much *they* could teach *me*. In so doing, my behaviour dismantled some of the barriers that arise when conducting research with women in

[70] Burkinabè people generally carry a more favourable image of Canadians than of the French. This is due to Burkina Faso's colonial past, but also to the fact that Burkinabè people feel that the French continue to treat them as if they were an inferior people.
[71] BIC is the brand name of pen.

developing countries, who are frequently uncomfortable expressing themselves in front of outsiders, and who often do not perceive the value of their own knowledge (Scheyvens and Leslie 2000). I embraced the position of "researcher-as-supplicant" (England 1994: 82; see also Smith 1988), acknowledging that local people held greater knowledge about the specific issues I was researching than I, and that *they* were doing *me* a favour by sharing this knowledge with me.

The fact that I am a young woman further helped me develop more equitable relations with participants. Gender and age or childbearing status are highly defining features in Burkinabè society and they affect the roles, privileges. and responsibilities an individual plays within his or her household and community (refer back to Chapter 3). As also experienced by McDowell (1988), I believe that being a young woman made me seem less threatening to participants, and encouraged them to confide in me. Nonetheless, I was given respect rarely attributed to young women in Burkinabè society. In many ways, being white offset the importance attributed to gender and age. As previously mentioned, I was not expected to partake in food processing and other female responsibilities and was frequently invited to eat with the men. I was, however, perceived as being subordinate to my husband, Reid, who accompanied me to the field. Despite having received an in-depth introduction to my project by myself, many participants approached Reid with questions about my research, assuming that he was the authority. They were surprised when he recommended that they consult his wife since it was, after all, her study.

In my previous trips to Burkina Faso, I had been unaccompanied. Reid's three-month presence during my fieldwork in 2006 thus engendered a different dynamic between the research participants and I. As discussed by other researchers (Cupples and Kindon 2003: 65; McGrath 1998), this is partly because participants had an opportunity to observe me interacting with another member of my own culture, which may have made me appear less "anomalous". Specifically, my husband's presence in the field allowed research participants, and particularly women, to relate to me around the shared experience of marriage (Scheyvens and Leslie 2000). Yet, as Valentine (2002: 122) explains, "many layers of sameness and difference can be operating at the same time, with the participants and researcher simultaneously identifying and disidentifying with

each other, while not even perceiving or recognizing the (dis)connections being made by the other". Indeed, despite being married, I remained very different than the mothers I interviewed since at the time Reid and I did not have children. Believing that we were infertile since we had already been married many years and feeling sympathy for us, some women reassured me that, "God willing", the children would come. The absence of children, who confer status upon their parents, may have further contributed to redressing some of the power imbalances between the research participants and myself.

4.5 Language and Translation Issues

My fieldwork was further embedded in a web of power relations woven among participants, my research assistants, and myself (England 1994; Scott 2001). As mentioned above, in 2006, I received the assistance of my husband, who carried out approximately half of the interviews with male research participants and helped me with the tree mapping exercises. Due to our limited understanding of Nuni and Moore, we also worked with interpreters who translated for Reid and I into the French in which we worked. Working in a Vietnamese context, Scott et al. (2006: 36-37) describe how

> most accounts of researchers working in cross-cultural contexts brush aside the positionality of the field assistant or interpreter. This is a serious omission, since factors such as age, gender, regional and class background and prejudices such as attitudes towards women or ethnic minorities can play a tremendous part in shaping interactions between the researcher, interpreter and research subjects, and the nature of the data obtained.

Lloyd et al. (2004: 11) further observe that, "the appropriateness of an interpreter is thus determined not only by their language and communication skills but also the degree to which they can engage with people and groups of different status, and be conscious of their own positionality." The selection of competent and reflexive research assistants was therefore of utmost importance.

Although rarely mentioned in publications, the involvement of translators in social scientific and ethnobotanical research is a common practice (Twyman et al. 1999). This practice has repercussions, however, because language plays a central role in the construction of meaning (Derrida 1991). Relying on translators has thus certainly affected my interpretation of the gathered information. The overriding issue is the interpretation of

concepts from one language into another, where the concept itself may not exist. As Frenk (1995: 138) argues,

> every utterance in our interviews becomes 'untranslatable' since it is shaped, framed, configured by and for both its immediate, contingent contexts and its cultural contact for which there is no equivalent in another language.

Such concerns from intercultural communication exist so long as an 'outsider' (be it the researcher or those who subsequently read the research reports) attempts to understand a culture which is not his or her own. As Tambiah (1990: 3) explains, we "understand other cultures as far as possible in their own terms but in our language, a task which ultimately entails the mapping of the ideas and practices onto Western categories and understanding". The outcome of cross-cultural research is thus a hybrid understanding of the concepts at hand, which draws from the interlocutor's response, the translator's intervention, and the researcher's and reader's interpretations.

Nonetheless, I took the measures that I found possible to mitigate concerns associated with the translation process. To reduce the possibility of misrepresenting respondents' perceptions, I tried to remain sensitive to the issues arising in intercultural research by being reflexive, recognizing the contextual nature of the collected discourses, and the positionality of, and power gradients among, all those involved in the research process (Twyman et al. 1999). I sought interpreters who were highly proficient in the research participants' languages as well as in French. I described the project and its significance to my translators in detail in advance of the interviewing, and stressed the importance of translating participants' responses word for word as well as relaying the 'gist' of their responses. Finally, I discussed the possible meanings and interpretations of the participant's responses with my assistants immediately following each interview and discussed the results and my preliminary interpretations after every few interviews. These measures allowed me to better capture the nuances embedded in participants' answers.

The selection of my interpreters was based on three primary factors. I attempted to mitigate the intimidation participants would potentially feel when facing a Western researcher and an educated field assistant.[72] To achieve this, I hired a female translator

[72] Burkinabè residents of the province of Sissili who speak fluent French have received a formal education, and have generally lived in the capital or in one of the country's larger cities. My assistants were therefore more educated than the research participants.

when interviewing women, as female respondents are frequently more comfortable opening up to a woman than to a man (Herod 1993).

Second, I sought assistants who were personable, well connected, and respected within their community, as the translator's relationship with research participants influences the researcher's interactions with participants (Twyman et al. 1999). Working with assistants who were locally appreciated facilitated not only the interview encounter but also the initial contact with participants, and the process of setting up appointments.

Third, I attempted to work with interpreters from the same ethnic group as were the research participants in each site. This was done to allow participants to feel at ease discussing potential conflict situations between migrants and the indigenous population. As the Gurunsi and the Moose speak different languages (Nuni and Moore, respectively), it was also crucial to find interpreters who could perceive the linguistic nuances conveyed in the participants' responses. I worked with local interpreters of the appropriate ethnic group in all sites except in Lan, where I interviewed Moose participants, but where no local Moose resident mastered the French language. I thus hired Léo's interpreters for the Lan interviews: a Gurunsi man and a woman of Dioulla origin but of Gurunsi upbringing.[73] This choice was based on two factors: both assistants spoke impeccable Moore, and both were extremely amiable, open-minded, and had the gift of putting people at ease. The professionalism and good nature of my research assistants largely contributed to the success of my research activities in each community.

4.6 Research Successes and Challenges

On the whole, I believe that my data collection activities were a success. Participants appeared to appreciate the research experience, and some stated that they felt honoured to have their personal experiences and knowledge valued through my research. Pratt and Loizos (1992) explain that the research encounter can indeed be enabling for people who do not generally have the chance to reflect on and voice their needs and concerns, as was

[73] My interviews with female participants were conducted with the assistance of a female interpreter from Léo, Fatimata Traoré, and of a woman from Prata, Nassiratou Diasso. A male interpreter of Gurunsi origin, Azizou Yago, carried out interviews with male participants with Reid while in Léo and with me while in Lan. Abinabou Nébié, a native villager from Prata, assisted Reid during interviews with the village's male participants. Finally, a local male schoolteacher of Moose origin, Pamoussa Ouédraogo, translated during my interviews with Prata's Moose and FulBe communities.

the case in my three study sites. As also reported by other Western female researchers working in the Global South (Scheyvens and Leslie 2000), participants were surprised but glad that I had travelled so far to come learn from them. Some participants felt that the interviews validated their knowledge, and both women and men gained an awareness of their expertise through the process. For instance, when asked about whether or how they manage the shea tree, many respondents replied that they did not know of any techniques to manage it. Yet, when asked specifically about cultivation practices around the tree, weed removal at the tree base, spacing between the trees, parasite removal, and so on, participants provided elaborate explanations of the techniques they used to ensure the species' vigour. In thinking about their practices in this way, participants realized that they do indeed possess valuable ecological knowledge. Many male participants also explained that they were glad to be consulted about shea projects, which are the domain of women but which also affect their lives. Their feedback had never before been sought, but they generally had much to say about the projects. Finally, some participants noted that the research encounter provided them with a rare and welcome distraction from their daily routine.

I have been told that my data collection activities have already been useful to the UGPPK. The Union has recently re-written its by-laws and rules of participation and membership. Following discussions I have had with the Union's manager, the UGPPK was able to include some of the recommendations I provided based on the interviews I conducted. In addition, the data I gathered revealed some of the loopholes the UGPPK would have to fill prior to its annual inspection by the Fairtrade Labeling Organizations International (FLO), a Fair Trade certification agency discussed in Chapter 7. The UGPPK's executive office and the NGO accompanying the Union have since worked to remedy these shortcomings. I also explained environmental concerns associated with shea nut collection and processing activities to the UGPPK leaders, who subsequently secured external assistance to address these.

Nonetheless, I faced certain challenges while in the field. The most significant drawback was the timing of my first data collection trip in Prata. I arrived in the village in November, while the harvest was still taking place and residents were overburdened with agricultural work. Members of the UGPPK—married women—bore the heaviest

workloads, as they not only spent long days cultivating, but also collected water and firewood, pounded grain, cooked, cleaned, and cared for their children. Women's schedules left them little time to converse with me during this period. Hence, after completing my tree mapping exercises in Prata, I decided to leave the village and to return weeks later, after the harvest period.

Other drawbacks included the distances I had to travel—up to 10 or 12 kilometers a day—by foot, bicycle or moped using sandy footpaths to reach the fields I was mapping. Despite the fact that I was working during the coolest period of the year, daytime temperatures exceeding 30 degrees Celsius made this travel and the tree mapping exercise difficult. In addition, field burning began (both purposefully and inadvertently) during my mapping activities. This slowed down the mapping process, as identifying young, charred shoots was difficult and time-consuming.

I faced an additional challenge when working with young women, many of whom were insecure, self-effacing, and reserved. Asking them to share their experiences and knowledge with me was problematic, as:

> Reflexive autobiography is possible only when subjects believe that their own lives are important enough to deserve recounting […] If a people's dominant ideologies, expressions of male political hegemony, define what women know and do as secondary and unimportant, then creating a context where women can and will talk about themselves and their partly separate realms of life and expertise may indeed be difficult (Keesing 1985: 37).

These young women either responded with very concise, nondescript answers, or, it seemed to me, with the responses they imagined I wanted to hear. On the whole, men were more verbose than women, and older women spoke more freely than their juniors. As time passed and I forged relationships with villagers, participants began to feel at greater ease with me, and my interviews became increasingly rich.

4.6 CONCLUSION

My research experience confirmed the importance of triangulating methods such as observation, informal and semi-structured interviews, wealth rankings, and mapping and measuring shea trees to capitalize on the different methods' complementary strengths and non-overlapping weaknesses (Brewer and Hunter 1989). As previously discussed, my fieldwork experience also substantiated the importance of adhering to culturally specific

protocols such as those demonstrating my respect for the elders of the villages in which I worked. Finally, it reaffirmed the importance of acknowledging my positionality and that of my research assistants, of practicing reflexivity throughout the research process, and of being sensitive to language and translation issues affecting the interpretation of the data. It is to this analysis of the gathered data that I now turn.

CHAPTER 5

INDIGENOUS KNOWLEDGE AND AGROFORESTRY OF THE SHEA TREE

5.1 INTRODUCTION

In this chapter I explore the ways gender and ethnicity affect shea agroforestry practices in an environment undergoing rapid socio-economic change. Non-timber forest products (NTFPs) such as shea have garnered the attention of development practitioners seeking to reconcile environmental conservation with rural income generation (Cunningham 2001). In the West African savanna, shea nuts and butter are prime contenders for diversifying agricultural incomes while creating farmer incentives to counter desertification and deforestation. Indeed, due to their multiple economic, nutritional, medicinal, cultural, and ecological benefits, shea trees (*Vitellaria paradoxa*) have long warranted the protection of agricultural peoples, who conserve spontaneously growing specimens during field clearance. Under erratic environmental conditions, the varied products and ecological services these trees bestow provide invaluable livelihood security for farming communities. Dating back to 1000 A.D. in northern Burkina Faso (Lovett and Haq 2000b), the selective retention of shea trees has resulted in the development of shea parklands: a discontinuous cover of scattered trees under which crops are cultivated (Pullan 1974; Boffa 1999). The dominant tree species of parklands reflect local climatic, agricultural, and cultural factors (Pélissier 1980b, 1980a). In shea parklands, where farmed fields comprise fewer trees and lower species richness than uncultivated lands, shea trees grow in nearly pure stands, illustrating the role of humans in shaping shea tree densities (Harlan et al. 1976).[74]

Shea, which was rated top among important species to Sahelian peoples in a survey conducted by the International Centre for Research in Agroforestry (ICRAF), is one of the most prevalent parkland species in the Sudano-Sahelian region.[75] Due to its myriad uses, local farmers have developed a profound knowledge, based on long-term

[74] In one village of southwestern Burkina Faso with a large population of Moose farmers, 75 per cent of the trees preserved on agricultural fields were shea, six per cent were *néré* (*Parkia biglobosa*), three per cent were white barked acacia (*Faidherbia albida*) and 17 per cent were other species (Gray and Kevane 2001).
[75] In a study by Belem et al. (2007), *V. paradoxa* was considered the second most prized species after *P. biglobosa* by Moose, Bissa, Gurunsi and FulBe informants living in Nobéré, south-central Burkina Faso.

observations, of the species' characteristics and ecology. This endogenous botanical knowledge belongs to a standard repertoire of cultural knowledge and is key to ensuring local household welfare (Howard 2003).

In Section 2.3.3 of Chapter 2 I reviewed how indigenous ecological knowledge is differentiated among groups within a community. In particular, gender roles are highly differentiated in rural West Africa, and gender represents a key aspect mediating access to natural resources (Carney 1994; Fortmann 1996; Rocheleau et al. 1996b). Owing to their different access to, and use of, local vegetation, women and men develop distinct areas of knowledge about natural resources (Norem et al. 1989). As Leach (1994: 22) states, "examining gender helps us to understand how other forms of social difference influence rural environmental management, not just as 'proxy', but because other differences such as age, wealth or origins operate in gender-differentiated ways." Yet, despite the close association between the shea tree and women—who collect, process, and commercialize shea nuts—Carney and Elias (2007) argue that the respective roles that women and men play in shea agroforestry have not been recognized.

Ethnicity additionally influences agroforestry practices. Use and management of arboreal resources are regulated by socio-cultural conventions, which vary over time, regionally, and according to ethnicity (Pélissier 1980; Boffa 1999). In sub-Saharan African villages, the dominant trees in agroforestry parklands reflect culturally-specific patterns of tree management, in which trees with desired characteristics or with spiritual value are protected (Boffa 1999). However, in my extensive literature review of shea tree management practices, I did not encounter any research examining differences in shea-related knowledge and practices among ethnic groups.

In Burkina Faso's province of Sissili, the *Union des Groupements des Productrices des Produits Karité de la Sissili et du Ziro* (UGPPK) briefly introduced in Chapters 1 and 4 has been promoting the exportation of shea butter since the 1990s to improve women's income generating opportunities. The creation of the UGPPK as part of shea butter projects, coupled with the rising international demand for shea nuts and butter described in Chapters 6 and 7, has increased the local harvesting pressure on shea nuts. Concern has since arisen that a decline in the nut stocks left to germinate in the fields may undermine the species' regeneration. Yet, by strengthening the economic

value of shea nuts, shea projects can also enhance incentives to conserve the species and improve shea agroforestry practices (Wickens 1991; Kater et al. 1992; Kessler 1992; Cunningham 2001; Schreckenberg 2004). As the sustainability of the UGPPK's activities hinges on the local presence of vigorous shea parklands, the ways these opposing tendencies play out will bear upon the long-term outcomes of shea projects.

Thus, in this chapter I consider the ecological sustainability of shea butter projects, based on an assessment of the current state of shea parklands and of the local indigenous knowledge that guides shea nut exploitation and the management and conservation of these landscapes. In so doing, I focus on this study's first objective, namely: *to investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered.* I address three main questions. First, what use and knowledge of shea do male and female Burkinabè farmers have, and how do they manage the species in their fields? Second, what factors incite Burkinabè farmers to conserve particular shea trees in their fields? Finally, how, if at all, do use, knowledge, and management of shea as well as shea tree conservation incentives vary according to gender and ethnicity? The focus on shea tree management and conservation is relevant and timely, as evidence suggests that Burkinabè shea tree densities are decreasing due to a shift to orchard crops in the country's southwest, to the intensification of agriculture in Burkina Faso's central region, and to the expansion of cotton monocultures, of ox-ploughing (which is hindered by tree roots), and of fuelwood scarcity in other regions of the species' range (FAO 1991; Adjibade 1994).

In this chapter, divided into six sections, I begin by presenting botanical information on the tree species studied (5.2), with emphasis on its taxonomy (5.2.1) and morphology (5.2.2). I subsequently present and interpret the results of the tree mapping exercises and interviews pertaining to shea agroforestry described in Chapter 4. Specifically, in Section 5.3 I examine the state of shea parklands in Léo, Lan and Prata, my three study sites, focusing on local perceptions of the recent evolution of these parklands (5.3.1), and on the results of my tree mapping and measuring exercises in Prata (5.3.2). In Section 5.4, I turn to the gendered knowledge of shea, including endogenous perceptions of the factors influencing shea tree productivity (5.4.1), shea nut

characteristics (5.4.2) and the uses of shea tree derivatives (5.4.3). These discussions lead me to examine shea tree management practices in different types of land uses (5.5), as well as shea tree conservation (5.6). Throughout the chapter, I consider the ways gender and ethnicity mediate the knowledge and practices that form the basis of indigenous shea agroforestry systems. In conclusion (5.7), I suggest directions for future studies focusing on shea agroforestry.

5.2 TREE SPECIES STUDIED

5.2.1 Taxonomy

The shea butter tree is a member of the Sapotaceae family of tropical trees and shrubs, within the order Ebenales and class Magnoliopsida.[76] The species' Latin name, *Vitellaria paradoxa* (C. F. Gaertn.), has been vigorously debated. According to the International Code of Botanical Nomenclature, *V. paradoxa* is currently accepted as having two subspecies: subspecies *paradoxa* for the variety found in the western Sahel and subspecies *nilotica* (Kotschy) A. N. Henry *et al.*, for its eastern counterpart (Hall and Hindle 1995; Hall et al. 1996). However, its long-competing nomenclature *Butyrospermum paradoxum* (C.F. Gaertn.) Hepper subsp. *parkii* Kotschy is still frequently encountered in print. *Butyrospermum paradoxum* derives from the Latin word butyro, or butter, spermum, meaning seed, and parkii, in honor of Mungo Park. Park was the Scottish explorer (1771-1806) who collected for The Royal Gardens in Kew, England, and who first recorded a botanical description of the tree in 1797 (Lawson 1966).

The Sapotaceae family is known for its valuable berry fruit and gums (Smith 1977), among which shea fruit are of foremost importance. The family comprises five tribes, 35-75 genera, and 800 species. *Vitellaria* is classified within the Mimisopeae tribe and Mimusopinae subtribe, which comprises five other genera found in Africa (Pennington 1991).

[76] For those not familiar with taxonomy, life forms can be classified into seven major categories that can be visualized as a tree. At the top of the tree, forms of life are distinguished according to their Kingdom. As you move down the tree, the number of entities within each level increase. Sequentially, Kingdom is followed by Phylum, Class, Order, Family, Genus and Species. Some of these categories can be further divided into sub-categories. For instance, family can be subdivided into sub-family and tribe.

5.2.2 Morphology

5.2.2.1 Tree Morphology

The shea tree resembles an American oak (Figure 1.1). It is a small to medium-sized deciduous tree, which reaches ten to 15 meters in height. Its size is largely controlled by environmental factors, such as fires. In protected areas, shea trees attain a height of 25 meters, while in severe environments subject to frequent burning mature specimens reach no more than seven meters (Hall et al. 1996). The shea tree's short trunk (2 to 3 meters high, 1.5 to 2 meters girth) bears wide-reaching branches. In turn, these support a dense crown wherein oblong leaves, on long leaf stalks, are clustered at the branchlets' extremities (Burkill 2000). Young leaves are glossy, reddish and undulated. They grow to be green, ten to 25 centimetres in length and five to eight centimetres wide (Purseglove 1968). At maturity, the tree's bark is dark gray, deeply striated into squares, rectangles or diamond shapes, even on small branches. This bark can reach four centimetres in width and is fire-resistant. Cut bark, branches and leaves all exude white latex, useful as a sealant, glue or filler (Hall et al. 1996). Shea sapwood is pink, whereas its heartwood is heavy and termite-resistant. For this reason, it is used for construction purposes, despite being difficult to work. As the wood burns well, it is a terrific source of fuel and is sometimes transformed into charcoal (Dalziel 1937; Burkill 2000). The shea tree is polymorphic, with its various forms revealing distinct characteristics. Early twentieth century French traveller and botanist Auguste Chevalier (1943) classified the tree according to three varieties based on fruit and leaf characteristics (Lovett and Haq 2000a).[77] These varieties, consisting of *mangifolium*, *poissoni* and *niloticum*, were later corroborated by other botanists, agronomists and farmers (Okullo et al. 2004a; Diarrassouba et al. 2007; 2009), but the genetic factors with which they are associated remain poorly understood (Burkill 2000).

[77] Chevalier (1943) originally identified eight varieties, which he later reduced to three. The original categories were: *mangifolium*, *parvifolia*, *cuneata*, *serotina*, *poissoni*, *ferruginea*, *floccosa* and *nilotica*. Trees from the three categories presently accepted are located in the following areas: *mangifolium* var. is found in the North Sudanian zone, in Mali, Ivory Coast and Burkina Faso; *poissoni* var. is located in Benin and Ghana; and *niloticum* var. is situated in East Africa, where Nilotic peoples rely on its fruit (Purseglove 1967; Diarrassouba et al. 2009).

5.2.2.2 Flower Morphology

The shea tree is long living. Trees can reach 200 to 300 years of age and are characterized by a slow growth cycle. They begin producing flowers in their fifteenth year, and attain full fruit production after approximately 45 to 50 years. Peak production occurs between 50 and 100 years of age. The shea cycle is seasonal, with trees shedding their leaves mostly at the beginning of the dry season. In Burkina Faso, leaves drop in October or November (Ruyssen 1957; Terpend 1982; Schreckenberg 1996). The seasonality of this cycle is governed by the end of the rainy season, whose delay retards the onset of all subsequent vegetative phases (Terpend 1982; Hall et al. 1996). Moreover, fires affect the timing of leaf flush and flowering by accelerating their inception (Ruyssen 1957).

Shea trees flower during their period of leaflessness, around the early to mid dry season months of December to March. One study reports a longitudinal gradient of flowering, with shea flowers appearing in mid-November in Togo as opposed to the later, January-blooming populations in Mali (Ruyssen 1957). Flowering lasts for 30 to 75 days (Chevalier 1948) during which the fragrant white or yellow eight-petal hermaphroditic flowers shown in Figure 5.1 appear in terminal clusters (Burkill 2000; Hall et al. 1996). The shea tree's first flowers are sterile and only after three to four additional years do these begin yielding fruit. Flowers grow in bunches of 30 to 40, and produce strongly scented nectar, which entices the tree's pollinators: nectarivorous insects including the bee (Kamuanga 1998). Wind may additionally play a role in cross-pollination, although the species can also be self-pollinated (Chevalier 1948).[78] Yet, fruit set is greater in cross-pollinated flowers, which suggests that the species is largely outcrossing (Yidana 1991; Okullo et al. 2003). The dry season and the flowering period end around April, shortly after which fruiting begins.

[78] Yidiana (1991) suggests that shea flowers are protogynous, meaning that the female function precedes the male function. The author demonstrates that the style is exserted from the unopened flower prior to pollen maturation and dispersal, which favours cross-pollination.

Figure 5.1: Shea tree in bloom (Source: Author 2006)

5.2.2.3 Fruit and Nut Morphology

Fruiting spans the rainy season months of May to mid-September, depending on the latitude of the region. Fruit develop in four to six months and mature around July/August. The ellipsoid fruit, which grow in groups of six to eight (Kamuanga 1998), resemble a plum in size and shape. Each fruit is approximately five centimetres long (Burkill 2000) and generally carries a lone nut, although occasionally two nuts can be found within a single fruit (Figure 5.2). The yellowish green pulp reaches maturity by its fourth to sixth month, when it takes on a dark green tint. High winds, which blow as fruit mature, tear shea fruit from the trees. The pulp, which is normally sweet and appreciated by adults and children, can thereafter be eaten as an important source of nutrients.

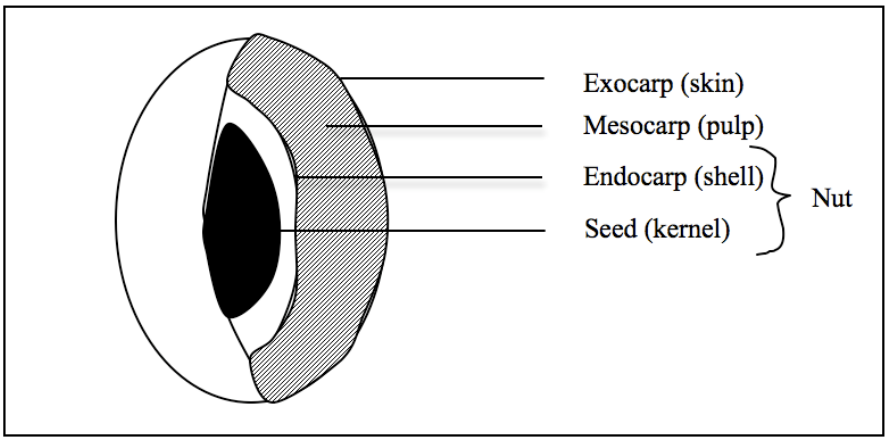


Figure 5.2: Cross-section of a shea fruit

Nutritive qualities of shea pulp include large quantities of ascorbic acid (196.1mg per 100g), iron (1.93mg per 100g) and calcium (36.4 mg per 100g), as well as vitamins A and B (Hall et al. 1996; Compaoré 2000). Beyond being appreciated by humans, shea fruit are consumed by domestic animals including pigs and sheep, wild elephants, birds, ungulates, primates and bats. Shea seeds pass intact through their intestinal tract and are excreted in droppings. The tree's distribution thus relies on these animals for long-distance seed dispersal (Burkill 2000; Hall et al. 1996).

The shea nut's ellipsoid shape parallels that of the fruit (Figures 1.3 and 5.2). Approximately five centimetres long and two and a half wide, the brownish, shiny nut shell is easily recognized by its scar along one side (Abbiw 1990). It bears a lone shea kernel, which resembles an almond and makes up approximately 60 to 70 percent of the dried nut volume. According to Terpend (1982), 100 kilograms of fruit yield half of that weight in nuts, which weigh 30 kilograms when dry. Kernels make up 60 to 70 per cent of the dry nut weight (Vuillet 1911), and represent 15 to 20 per cent of the entire fresh fruit weight (Hall et al. 1996). The oil-rich kernels are comprised of 25 to 30 per cent carbohydrate, eight to nine per cent protein, and between 45 and 60 per cent fat (Burkill 2000). This fatty acid fraction contains stearic acid (46 per cent), which is of use for producing cocoa butter equivalents and other confectionery fats, and oleic acid (41 per cent), which is valued for cosmetics and personal care applications (Alander 2004). Roughly 8.65 per cent of the fruit's wet weight can be transformed into refined butter (Terpend 1982; Leakey 1999).

Seeds are quick germinating, and initial root growth is vigorous (Hall et al. 1996). Taproots are grounded before aerial growth is initiated. In experimental plantations instigated by the scientific community, these taproots interfered with transplantation of nursery-grown saplings. Seeds are thus best planted *in situ* (Purseglove 1968), although as discussed below, planting of shea trees is generally attempted exclusively for research purposes and remains rare in indigenous traditions. These traditions, and local shea agroforestry systems more broadly, are discussed below, following an analysis of the present state of Sissili's shea parklands.

5.3 STATE OF SISSILI'S SHEA PARKLANDS

5.3.1 Local Perceptions of the Recent Evolution of Shea Parklands

Although it was not possible to observe the evolution of shea parklands due to the restricted time-scale of this study, participants related their perceptions of developments in the shea landscape since the mid-1980s; approximately one decade prior to the inception of shea butter projects. The narratives of female UGPPK members from Léo, Lan, and Prata suggest the evolution of multiple trajectories for the three study sites' shea parklands.

In the provincial capital town of Léo, 70 per cent of shea butter producers (n=31) reported a drop in shea tree populations around the town. These female interviewees, primarily of Gurunsi origin, believed that field burning practices and an increase in the human population have contributed to dwindling shea populations. They argued that tree removal during new field clearances, for charcoal-production and firewood purposes, and for the use of shea wood in carving mortars and pestles, are also to blame. Indeed, although loggers who fell shea trees without a permit risk being fined, Burkina's forestry laws are seldom enforced and thus fail to protect the species.[79]

In contrast, 60 per cent of Moose producers from the peri-urban village of Lan (n=15) believed that local shea tree populations have been stable, while the remaining 40 per cent perceived a decrease in the species' abundance over time. The latter believed that field fires, population pressure, and consequent tree felling for the establishment of new fields have caused this decline. They added that poor rainfall over the past years coupled with parasitic plant infestations have increased shea tree mortality.

A different pattern was reported in the village of Prata, where 86 per cent of the Gurunsi women interviewed (n=22) felt that shea tree occurrence has remained stable (27 per cent) or increased (59 per cent) over the past two decades. Participants did not suggest any reasons for the growth of the shea population. An older female resident (Salamata, 19/01/07) noted, however, that shea trees have been conserved and multiplied

[79] This is not unique to Burkina Faso. While in theory West African forestry departments prohibit the felling of certain species, they are seldom able to enforce their laws (Schreckenberg 1999; Wezel and Haigis 2000).

despite the rise in the village population and the clearance of formerly bush areas for agriculture.

Prata's male Gurunsi participants (n=23) expanded upon their spouses' observations. Similar to their wives, over 90 per cent of these male interviewees believed that the village's shea population has recently increased (78 per cent) or remained stable (13 per cent). They suggested that there are currently more shea trees than in the past, but that these trees are younger, smaller, and weaker. They believed that the larger trees that used to populate their village produced a greater number of better quality shea nuts.[80]

The perceived increase in Prata's shea population may be partly explained by the transformation of the area's shrubby savanna vegetation to farmed fields due to rapid demographic growth. Indeed, between 1986 and 2002, cultivated fields expanded from two per cent of the district of Bieha, which comprises the village of Prata, to 19 per cent of the district. In tandem, the area occupied by shrubby savanna decreased by nearly 50 per cent (Ouédraogo 2006). During this transition, the conservation practices of local Gurunsi residents, who strongly value the species, likely encouraged the proliferation of shea. Indeed, as shown later in the chapter, the Gurunsi protect a large number of shea specimens in their fields. In these fields, shea trees can thrive and propagate due to reduced competition from other species and to relative protection from livestock and field fires. On cultivated lands, shea trees are also more visible to participants, and can thus appear to have proliferated. Prata's female producers specified, however, that the ostensible rise in their village's shea population did not offset the decline in the species' productivity experienced over the last decades.

In contrast, in Lan, fewer than half (40 per cent) of Moose male participants (n=10) claimed that there are more shea trees today than in the past, whereas one third considered that the shea tree population has remained constant. These respondents explained that even small specimens are presently protected, as the indigenous Gurunsi inhabitants and some migrants oppose their felling now that they recognize their economic benefits. The remaining one third of male participants believed that shea

[80] Interestingly, an older man from Prata noted more general changes in the village landscape since the mid-1980s due to the arrival of FulBe herders and their livestock (B. Nébié, October 7, 2006). In particular, he reported the prevalence of a tree shrub (identified as *Piliostigma reticulaty* or *Piliostigma thonningui* by local foresters) since the FulBe's cattle arrived in the area and began dispersing its seeds from the bush. As a result, he and other elders felt that general tree cover has been expanding in and around Prata.

populations—and tree populations in general—have decreased since the mid-1980s due to population pressure.

The lack of consensus among Lan's Moose participants about the evolution of their village's parklands may be explained by the fact that, as recent migrants to the area, they may have inadvertently compared local shea tree densities with those of their home villages.[81] Notwithstanding, as demonstrated above, Lan's participants of both genders recognized the same factors causing a potential drop in the shea population, including population pressure leading to new field clearance. Indeed, as discussed in Chapter 3, the time period during which these changes were tracked (the mid-1980s onwards) corresponds with a large influx of migrants from the country's northern and central regions, which led to exponential growth in the province's population (Howorth and O'Keefe 1999a). The other observed factors, such as the role of brush fires and successive dry spells in the Sahelian belt in reducing tree populations, also correspond with those cited by researchers working in the region (Gijsbers et al. 1994; Maranz 2009). According to Kessler (1992), declines in the occurrence of shea trees on croplands can additionally be attributed to the introduction of draught animal traction and mechanized ploughing. Although the use of draught animals is increasing in the province of Sissili (Ouédraogo 2006), mechanized ploughing remains rare, and neither form of agriculture was mentioned by the study participants as causing a drop in the shea population. Whether the local shea tree population is indeed dropping in Lan and Léo carries implications for the sustainability of shea butter projects operating in the region. Specifically, resident shea butter producers may find it difficult to collect sufficient quantities of shea nuts to fulfil their production quotas; a problem already being reported, and described in Chapter 6.

5.3.2 Current State of Shea Parklands

Diameter at breast height (dbh) measurements and GPS data shed additional light on the contemporary state and structure of Prata's shea parklands. Table 5.1 presents descriptive statistics of the population of shea trees surveyed in areas with different types of land uses and in fields farmed by the different ethnic groups encountered in Prata. A complete

[81] In Chapter 3, Section 3.9, I detail the history of Moose migrations to the area as well as their claim to land and other resources in the province of Sissili.

list of the fields surveyed is provided in Appendix XII, while Figures 5.3a-5.3e depict the size class distributions of shea trees growing on these lands. As shown in these figures, Prata's residents conserve some very large individuals (105.5 cm to 164 cm girth) in their fields. Based on a parkland study conducted by Bagnoud et al. (1995) correlating shea tree girth with age, the largest specimens retained in Prata are likely well over two centuries old.[82] Large trees growing in brush areas are even older, as favourable growing conditions allow specimens found on farmed fields to attain a diameter double those of the same age growing in uncultivated areas (Boffa 1995). The fact that the largest individual (186.5 cm dbh) encountered was located in the bush rather than in cultivated fields or fallows suggests that the oldest specimens, which tend to become unproductive, are removed on agricultural lands. The low incidence of very large individuals in all the fields surveyed (100 cm dbh or above) (Figures 5.3a-5.3e) also reflects the high natural mortality rate among older trees, which are more susceptible to parasitic attacks and other diseases.

Table 5.1: Descriptive Statistics of Prata's Shea Population Structure

	Gurunsi Fields	**Gurunsi Fallows**	**Moose Fields**	**FulBe Fields**	**Brush Areas**
n	648	908	303	38	631
Dbh of smallest specimen (cm)	3	2	16.5	32	2
Dbh of largest specimen (cm)	129	105.5	135	164	186.5
Mean dbh (cm)	51	34.5	61	75	36
Median dbh (cm)	49.5	31	57	73.5	33
Mode dbh (cm)	58	3	41	61	32
Standard error (cm)	0.75	0.73	1.28	3.58	0.92
Standard deviation (cm)	19	22	22	22	23

[82] Working in southern Mali, Bagnoud et al. (1995) established the following dbh ranges for shea trees growing in cultivated fields at different stages of their life cycle: 20 to 29 cm at 35 to 55 years; 30 to 39 cm at 55 to 80 years; 40 to 49 cm at 80 to 105 years; 50 to 59 cm at 105 to 130 years; 60 to 69 cm at 130 to 150 years; and 70 to 79 cm at 150 to 180 years.

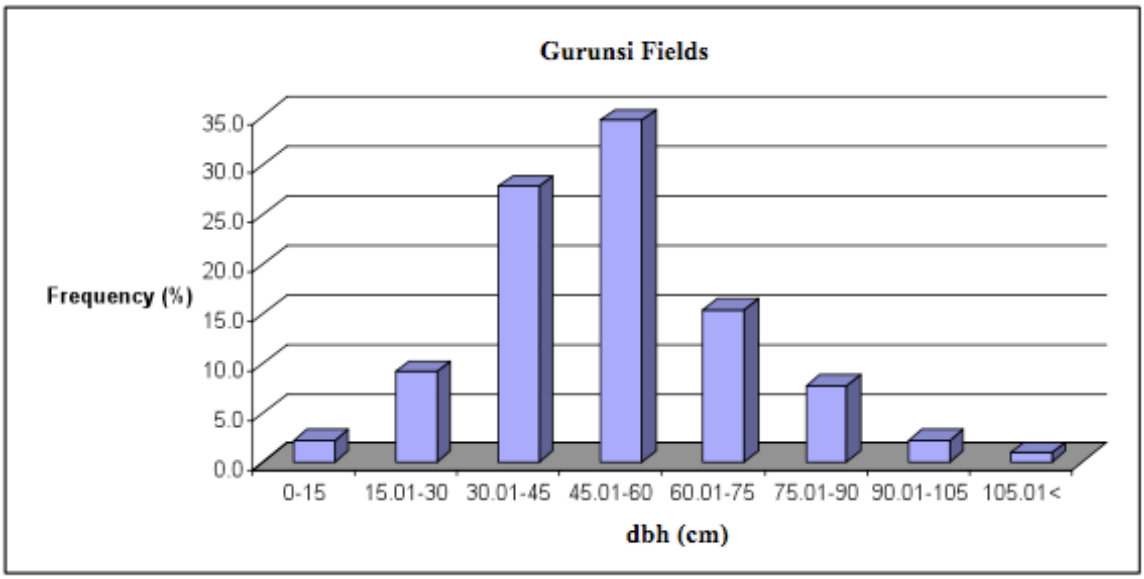


Figure 5.3a: Size Class Distribution of Shea Trees in the Gurunsi's Cultivated Fields

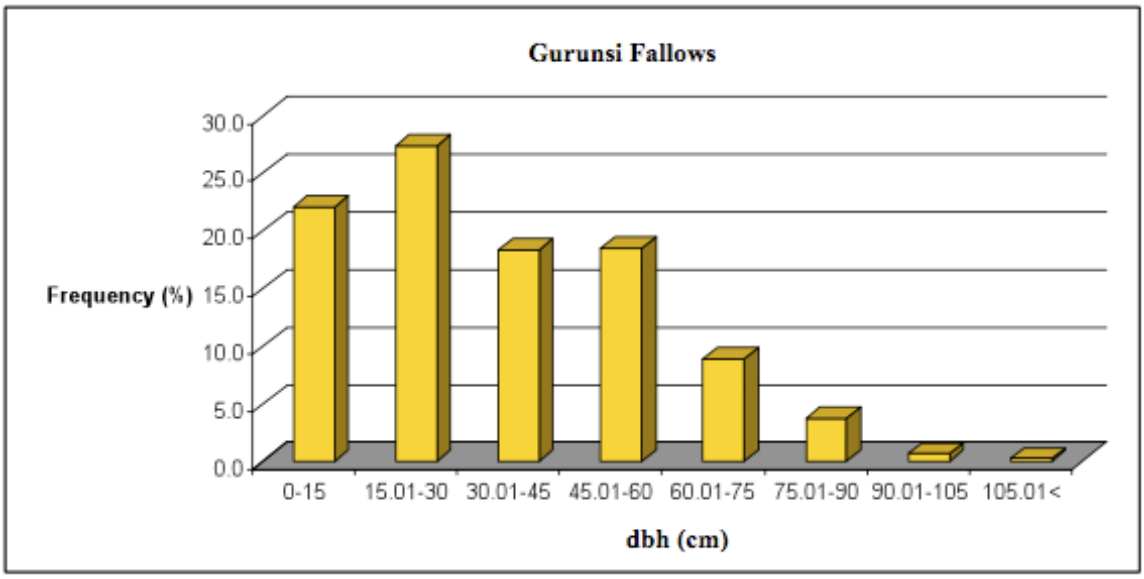


Figure 5.3b: Size Class Distribution of Shea Trees in the Gurunsi's Fallow Fields

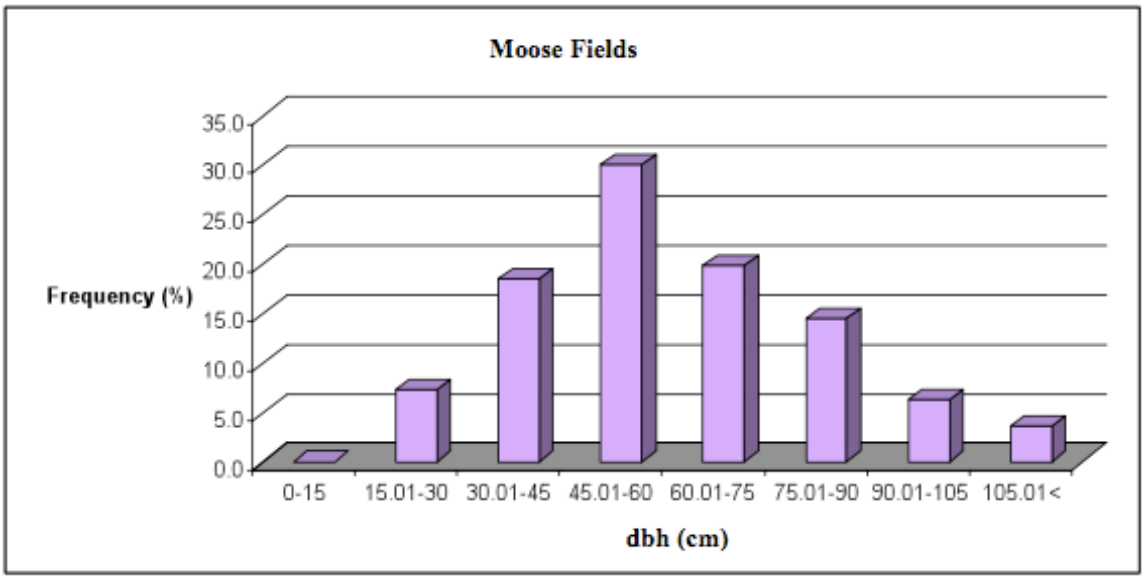


Figure 5.3c: Size Class Distribution of Shea Trees in the Moose's Cultivated Fields

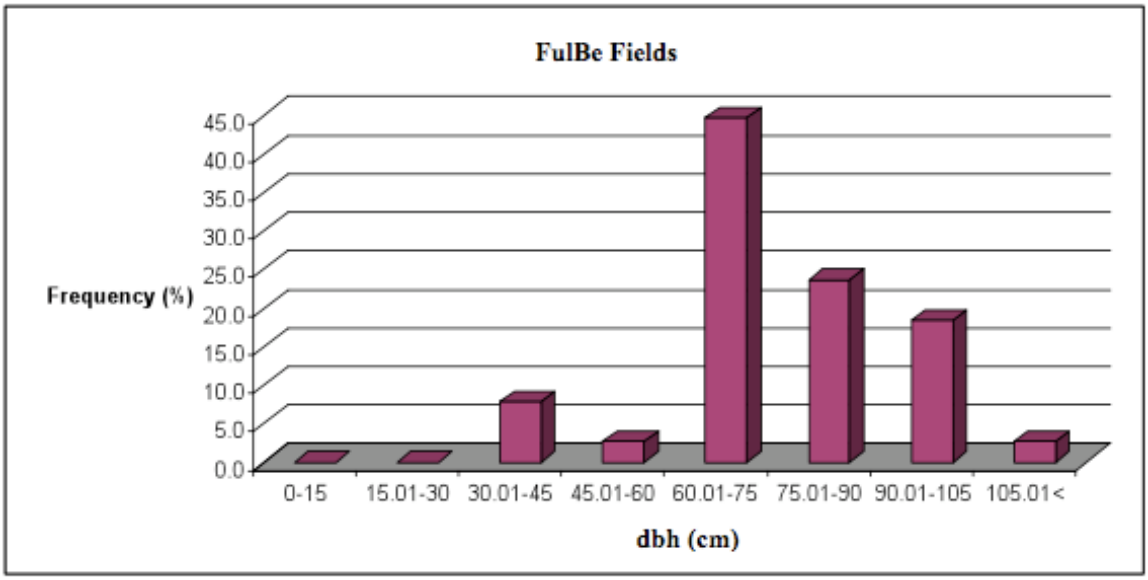


Figure 5.3d: Size Class Distribution of Shea Trees in the FulBe's Cultivated Fields

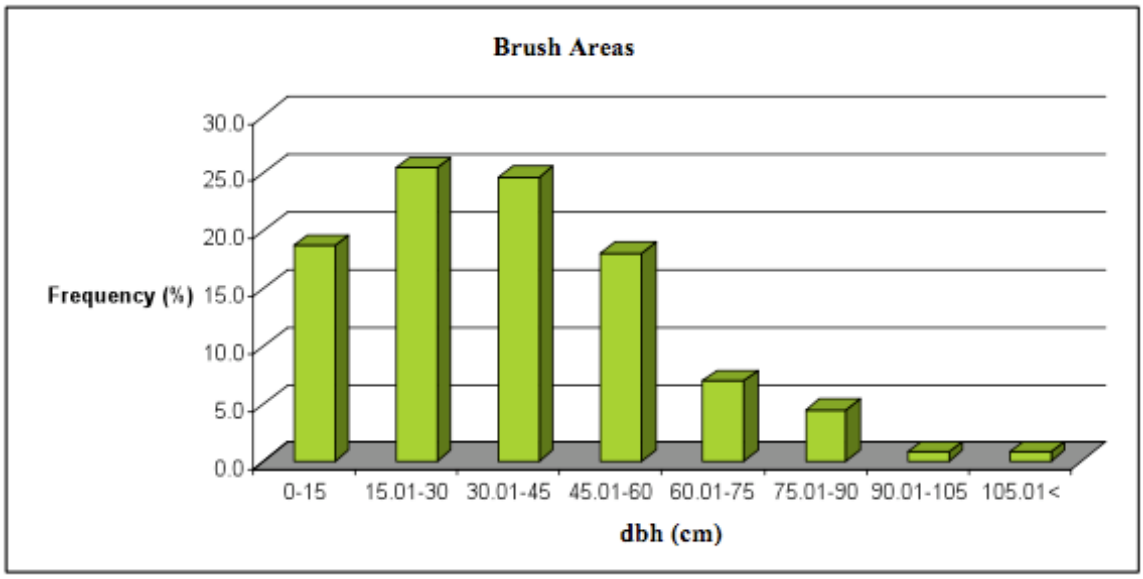


Figure 5.3e: Size Class Distribution of Shea Trees in Brush Areas

Figure 5.3a indicates that 95 per cent of the trees growing in the Gurunsi's cultivated fields are of medium to large diameter (dbh of 15.01 cm to 90 cm). Smaller specimens (dbh of 0.01 to 15 cm) represent only 2.2 per cent of the surveyed trees, whereas very large individuals (dbh exceeding 90 cm) represent 3.1 per cent of this population. These figures contrast with the size class distribution of shea trees growing in young Gurunsi fallows (four to five years old, while total fallow duration can reach ten to 30 years). This distribution—shown in Figure 5.3b—is skewed towards the lower classes, with 22 per cent of the individuals exhibiting a dbh inferior to 15 cm and nearly half of them measuring less than 30 cm of width at breast height. The mode of the distribution is merely three centimetres, which reflects the very high incidence of immature individuals. The remaining half of the trees have a dbh ranging between 30.01 cm and 90 cm, leaving less than one per cent of specimens with a girth exceeding 90.01cm.

As is the case with the fallow fields, brush lands carry a high proportion of young specimens (Figure 5.3e). Nearly 70 per cent of the trees exhibit a dbh inferior to 45 cm, with close to 90 per cent of individuals having a dbh inferior to 60.01 cm. Few very large trees (less than 2 per cent), with dbh exceeding 90.01 cm, were found in the brush. This is consistent with studies showing that shea trees tend to grow larger in cultivated fields than uncultivated areas due to improved growing conditions in the former type of land use (Kessler 1992; Boffa 1995; Lovett and Haq 2000b).

In comparison, the girth of the smallest individuals surveyed in Moose fields was 16.5 cm dbh and over 80 per cent of the population was in the 30.01 cm to 90 cm dbh range (Figure 5.3c). Ten per cent of the individuals surveyed were very large (girth exceeding 90.01 cm), which according to the Bagnoud et al. (1995) study, presupposes that they are over 200 years old. Similarly, the absence of young individuals in FulBe fields is glaring (Figure 5.3d), with the smallest individual encountered measuring 32 cm dbh and nearly 80 per cent of the trees measuring between 30.01 and 90 cm dbh. The remaining 20 per cent of very large shea trees exceed 90.01 cm in diameter. As shown in Figures 5.3c and 5.3d, respectively, the atypical age pyramid of shea tree populations in Moose and FulBe fields, with a low abundance of trees in the small diameter classes and greater numbers among large diameter classes, suggest that the Moose and FulBe are selecting against young (less that 15 cm dbh) individuals.[83] The selective retention of older trees is also reflected in the larger mean dbh of trees growing in their fields (61 cm and 75 cm, respectively) as compared to other fields and land uses (51 cm in Gurunsi fields, 34.5 cm in Gurunsi fallows, and 36 cm in brush areas).

Single factor Analysis of Variance (ANOVA) tests confirmed that there are significant differences among the structures of the shea populations growing in the different types of land uses surveyed. Table 5.2 indicates that mean shea tree girths in Gurunsi fields and brush areas differed significantly, as did those of Gurunsi fields and Gurunsi fallows. Yet, the difference between tree girths in Gurunsi fallows and in brush areas were not significant. This is reflected in Figures 5.3b and 5.3e, which show that the size class distribution of trees growing in fallows mirrors that of brush lands. These results demonstrate that management practices do indeed affect the structure of shea populations. In uncultivated areas, shea trees are left to grow and assume a typical 'natural' size class distribution comprising specimens of all size classes, with the majority of trees being of small to intermediary size. In contrast, in cultivated areas, farmers select for larger sized trees while culling smaller specimens, and when unhindered by competing tree species, the shea trees retained can attain larger diameters.

[83] Hennenberg et al. (2005) report that a typical tree age pyramid comprises a high density of low diameter trees and a low density of large specimens.

Table 5.2: F-values of Paired ANOVAs Comparing Diameters at Breast Height (dbh) across Land Uses

	Brush	Gurunsi Fallows	Gurunsi Fields	Moose Fields	FulBe Fields
Brush (n=10)					
Gurunsi Fallows (n=15)	1.320				
Gurunsi Fields (n=18)	157.362***	217.972***			
Moose Fields (n=13)	240.610***	304.409***	50.620***		
FulBe Fields (n=5)	102.133***	118.111***	57.001***	13.883***	

* $p \leq 0.05$; ** $p \leq 0.01$; ***$p \leq 0.001$

Moreover, the type of management technique appears to be associated with ethnicity. This is shown by the significant differences recorded between the girths of trees found in Moose and Gurunsi fields, between Gurunsi and FulBe fields, and between Moose and FulBe fields (Table 5.2). The field survey data reveals that FulBe farmers conserve the largest trees in their fields, while the Moose conserve large and medium specimens, and the Gurunsi conserve trees of all size classes.

In terms of species densities, significant differences were observed among the shea populations growing in different types of land uses and fields. Table 5.3 provides descriptive statistics of the densities of shea trees located in the five types of fields surveyed: those cultivated by the Gurunsi, those of the Moose, and those of the FulBe, as well as the Gurunsi's fallows, and brush fields. As indicated in the table, mean shea densities varied more than twelve-fold among these field types. The highest maximum density was found in the Gurunsi fallows, where 172 stems per hectare were counted. This figure was 12 stems per hectare greater than the maximum shea density encountered in the brush, suggesting that the species is more easily established where there are fewer competing species and where overall tree densities are lower. The lowest mean density (six stems per hectare) was calculated in the FulBe fields, which carried significantly fewer trees per hectare than the Moose and Gurunsi fields (ANOVAs, $F=6.11094$, $p=0.025$ and $F=52.78951$, $p < 0.001$) (Table 5.4). As shown in Table 5.4, the difference

in average shea densities between the Moose (26 stems/ha) and Gurunsi fields (35 stems/ha) was not significant at the α=0.05 level (ANOVA, F=3.277882, p=0.097).[84]

Table 5.3: Descriptive Statistics of Prata's Shea Parkland Densities

		Gurunsi Fields	**Gurunsi Fallows**	**Moose Fields**	**FulBe Fields**	**Brush Areas**
n		18	15	13	5	10
(Stems/hectare)	Minimum density	18	23	7	2	26
	Maximum density	45	172	62	10	161
	Mean density	35	77	26	6	74
	Median density	36	69	24	6	63
	Standard error	2	13	5	1	13
	Standard deviation	9	50	18	3	41

Table 5.4: F-values of Paired ANOVAs Comparing Shea Densities across Land Uses

	Brush	Gurunsi Fallows	Gurunsi Fields	Moose Fields	FulBe Fields
Brush (n=10)					
Gurunsi Fallows (n=15)	0.026				
Gurunsi Fields (n=18)	9.592***	12.525**			
Moose Fields (n=13)	14.442***	12.177**	3.278		
FulBe Fields (n=5)	13.396**	9.844**	52.790***	6.111*	

* $p \leq 0.05$; ** $p \leq 0.01$; ***$p \leq 0.001$

Table 5.4 also indicates that fallow areas and brush fields carry significantly greater shea tree densities than fields cultivated by any of the three ethnic groups. Average densities in fallows and brush fields (77 and 74 stems per hectare, respectively) did not significantly differ. Likewise, minimum shea densities in Gurunsi fallows (23 stems per hectare) and in the brush (26 stems per hectare), and maximum densities in these two types of fields (172 stems per hectare and 161 stems per hectare, respectively), closely matched.

Results from these mapping exercises suggest that shea tree regeneration is indeed occurring in Prata's fallows and brush areas. In fact, the species' regeneration potential must be considered in light of its life history characteristics. As noted earlier, shea trees

[84] Similarly, Raebild et al. (2007) compared tree densities in fields cultivated by different ethnic groups in Péni, south-western Burkina Faso. The authors found no significant differences in shea tree densities between fields farmed by indigenous Tiéfo farmers and those of other ethnic groups, including the Moose.

can attain 200 years of age, yet they only begin fruiting at 15 to 20 years of age (Dalziel 1937). This late reproductive maturity renders the species particularly vulnerable to depletion and local extinction if over-harvested (Cunningham 2001). Reproduction is permitted when the tree's annual nut production exceeds the nut harvesting rate, provided that the species' mortality rate is less than its regeneration rate (Ferris et al. 2001). Under sustainable nut harvesting conditions, Terpend (1982) believes that a density of 25 shea trees per hectare is sufficient to ensure the species' natural regeneration.

In and around the village of Prata, regeneration is favoured by the very high density of shea trees in uncultivated areas (77 and 74 stems per hectare in fallow and brush fields), and by the large incidence of potentially reproductive individuals (dbh ≥ 10cm, according to Okullo et al. 2004a). Regeneration is demonstrated in Figures 5.3b and 5.3e by the high percentage of small self-seeding specimens (as mentioned earlier, shea trees are not planted) in these two types of land uses. In brush fields, competition for light and nutrients between shea trees and other arboreal species may also contribute to the large proportion of small (as opposed to larger) shea trees observed (Kelly et al. 2004).[85] The shea densities observed in Prata's fallow and brush fields were much greater than those reported for Northern Ghana, where 44 trees per hectare were counted in woodlands (Lovett and Haq 2000b). Given this information, it does not appear that the reported increased quantities of shea nuts collected in Prata since the 1990s and discussed in Chapter 6 have infringed upon shea tree regeneration in uncultivated areas. Further, as the fallows surveyed were young (four to five years old, as previously mentioned), the density of shea trees will likely only continue to rise in these areas in the coming years.

In cultivated fields, the selective protection and culling of shea specimens determines shea tree occurrence to a greater extent than the quantity of shea nuts left on the ground to germinate (Brondex 1999). Knowing from the data presented above that environmental conditions in the Prata area are adequate for the species' regeneration, the size class distributions of trees found in cultivated fields primarily reflect the shea tree conservation practices of Prata's residents. Moreover, they point to the superior growing

[85] Shea is a light-demanding species, which is sensitive to inter-specific competition (Aubréville 1950; Picasso 1984).

conditions that allow shea trees to appear more vigorous, taller and wider in diameter in cultivated than in uncultivated areas (Kessler 1992; Boffa 1995; Lovett and Haq 2000b).[86]

In the Gurunsi's fields, over 11 per cent of shea trees had a girth smaller than 30 centimetres. The presence of small specimens and the high density (35 stems per hectare) of shea trees in these fields suggest that these agriculturalists are promoting the species' regeneration, even as more lands are cleared for agriculture. The population structure and density of shea trees growing in the Gurunsi's young fallows lend further support to this suggestion.

Although lower than the mean shea density in Gurunsi fields, according to Terpend's study the density of shea trees in Moose fields (26 stems per hectare) is also sufficiently large to ensure regeneration. The observed density is higher than to the one reported among the Moose in Thiougou, southern Burkina Faso, where only 19 trees per hectare were maintained in cultivated fields (Boffa 1995), and to the 15 mature shea trees per hectare reported in Mali (Ruyssen 1957). Average densities recorded in Moose fields additionally fall well within those recommended by Boffa et al. (2000). In a study conducted in southern Burkina Faso, these authors demonstrated that maintaining 12 to 31 shea trees per hectare was economically beneficial for agriculturalists involved in the shea nut trade, despite any drops in cereal yields caused by the trees' presence. Moreover, parklands were more productive at the 12 to 31 trees per hectare density than were fields without trees. Economic benefits were still perceived at a density of 43 small shea trees per hectare or 12 large shea trees per hectare during high season shea nut prices (Boffa et al. 2000). Farmers are sensitive to these considerations: shea tree conservation is linked to the market and to variations in shea prices (Schreckenberg 2004). Whereas regeneration and conservation are favoured when shea prices rise, the contrary holds true when the price of fuelwood outstrips returns on shea products.

Despite these observations, Prata's Gurunsi residents harbour the perception that the Moose fail to conserve shea trees in their fields. According to the Gurunsi, Moose agriculturalists cull the species, illegally and against local norms, to enhance agricultural productivity. Yet, interestingly, average shea densities in Moose and Gurunsi fields do

[86] As mentioned earlier, this is partly due to the fact that on cultivated lands livestock and bush fires represent less of a threat to shea trees than in the bush (Kater et al. 1992).

not significantly differ at the α=0.05 level. Rather, the Gurunsi belief reflects the differences observed between the population structures of shea trees growing in Moose and Gurunsi fields.[87] Only seven per cent of the shea trees in Moose fields have a dbh inferior to 30 centimetres, among which none have a girth inferior to 15 centimetres. This indicates that the Moose are uprooting the young offshoots in their fields. The species' ability to regenerate under these circumstances is questionable. Similarly, in southwestern Benin, Djossa et al. (2008: 217) note that, "[t]he low number of sampings (dbh 5-10cm) in farmed lands compared to protected [bush] lands is likely to have long-term consequences on the viability of the shea tree populations and may in the long run even lead to a collapse of the *V. paradoxa* population." Beyond tree densities, the species' regeneration potential on these lands therefore hinges on whether or not, and how long, they are eventually left in fallow. If fallow periods are sufficiently long to allow specimens to attain medium sizes (a dbh of over 15 centimetres) prior to field clearance, these specimens will more likely be retained and the shea tree population will have improved chances of regenerating (Ouédraogo and Devineau 1996). However, based on the Bagnoud et al. (1995) study, this would entail leaving lands in fallow for at least 20 or so years; an unlikely occurrence, especially among migrants with insecure land tenure, as fallow periods are shortening due to pressure for land (Boffa 1999). As a result of reduced fallow periods, ageing and thinning shea populations have been reported in many regions of the species' range (Terpend 1982; Gijsbers et al. 1994; Hall et al. 1996).[88]

The situation is less promising still in FulBe fields, where no shea specimens smaller than 30 cm in girth are found and where only eight per cent of individuals have a dbh smaller than 45 centimetres. According to the previously mentioned study by Bagnoud et al., it is probable that more than 90 per cent of the shea individuals in these fields are over 80 years old. The size-class distribution of shea trees in FulBe fields, which is strongly skewed towards higher classes, further suggests that the shea population is ageing. In fact, the absence of small diameter trees is generally understood to represent the degradation of parklands. The very low density (six stems per hectare) of

[87] The Gurunsi presumption is accentuated by the ethnic tensions straining the village's indigenous-migrant relations. These are discussed in Chapter 6.
[88] Ageing refers to the fact that old shea trees remain, while young trees are not replacing them.

shea trees conserved in the FulBe's fields—well below the densities found on Moose and Gurunsi fields—further limits the regeneration potential of the species.

As these results indicate, shea tree management styles vary across the three ethnic groups living in Prata. Over the centuries, the farming methods of the area's indigenous Gurunsi people have become well adapted to Prata's environment. The Gurunsi now practise a form of agroforestry that entails retaining a high density of shea trees, which grow abundantly in the area, among their cultivars, and drawing heavily upon their derivatives.

Shea is also a prized species among the Moose. Yet, it appears that Prata's Moose population, which recently migrated to the area, maintains a slightly lesser (though not significantly different) density of shea trees in their fields, and selectively eliminates immature specimens from its lands. Having migrated from Burkina Faso's central and northern areas, the Moose practise farming techniques previously appropriate for landscapes carrying lower shea tree densities than those of the province of Sissili. Further, the insecure tenure rights the Moose face in their new area of residence create a disincentive for them to protect and manage small shea individuals, which only begin fruiting after 15 to 20 years. Financial incentives to conserve shea trees would be irrelevant if migrants do not control the actual derivatives stemming from these trees. This sentiment was articulated by Lan's male Moose participants, who believe that by the time unproductive shea trees begin to improve their yields, migrants may be chased from their lands or loose access to the species' derivatives. Unlike tree species that are deliberately planted, the conservation and maintenance of spontaneously growing species such as shea do not strengthen claims to land, despite the fact that migrants may have cared for and protected these trees over the years. As one participant (Alasan, 12/02/07) explained, "what evidence would anyone have of planting or managing a naturally occurring species?"

Considering these circumstances, the density of shea trees conserved in Moose fields remains relatively high, and is favoured by two factors. First, as the interview data discussed in subsequent sections indicates, the Moose strongly value the shea tree and its conservation, and have an extensive knowledge of the species. In fact, as shown later, there were no perceptible differences between the Gurunsi and the Moose's responses

concerning their knowledge, management, and conservation practices surrounding the shea tree. Second, the indigenous Gurunsi population forbids migrants from eliminating shea trees from their fields.[89] When shea individuals are very small, the Gurunsi turn a blind eye to their removal. It is difficult to discreetly eliminate larger specimens, however, and doing so can create problems with the village's indigenous population.

Finally, the FulBe, who come from the country's northernmost areas, which are inhospitable to shea trees, do not traditionally rely on the species. Their management practices reflect the fact that they are primarily herders, and do not depend on shea to the same extent as the Moose or the Gurunsi. As herders, they rely instead on animal fat in their diet. They have only lately begun to supplement their diet with agricultural products by cultivating very small plots, often with the contractual help of local farmers. FulBe women's participation in the local shea trade is limited and dates back only to the late 1990s or so, involving exclusively the sale of nuts rather than butter.[90] Prata's FulBe population lives slightly outside the village to graze its animals, and therefore has access to the bush for shea nut collection. Moreover, being tucked away from the watchful eyes of the Gurunsi, the FulBe enjoy the privacy to remove trees from their fields without being reprimanded by the village's founding lineages. All these reasons diminish their incentives to retain shea trees in their fields. As these fields are very small, however, the impacts of their management practices on the shea population as a whole are minimal.[91]

In sum, the information presented above suggests that shea trees remain densely populated in and around the village of Prata, and that regeneration is occurring in the area's fallows and brush fields, and to a smaller extent in Gurunsi fields. These results bring a nuance to studies indicating that drought, population pressure, mechanization, and unsustainable land uses (extensive cattle grazing, burning, and deforestation to establish monocrop farming) are impeding the species' regeneration (Hall et al. 1996; Odebiyi et al. 2004; Teklehaimanot 2004). Further, these analyses signal favourable prospects for

[89] As detailed in Sections 3.7 and 3.9 of Chapter 3, migrants in Burkina Faso have insecure rights to land and the resources it carries, and often do not acquire rights to cull trees or harvest the products of economically valuable species on lands 'borrowed' from the indigenous hosts.
[90] FulBe women lack the traditional knowledge required to transform shea nuts into vegetal butter.
[91] The low number of FulBe fields surveyed is due to the small size of the FulBe settlement in Prata (seven households). For more conclusive results, this exercise would be worth repeating in a village where a greater number of FulBe fields can be surveyed.

the continued exploitation of shea nuts in the context of shea butter projects, and more generally for the projects' ecological sustainability.[92]

5.4 GENDERED KNOWLEDGE OF SHEA

As demonstrated above, shea tree densities reflect not only the tree's natural regeneration patterns, but also local management practises. These, in turn, are contingent upon the species' usefulness to local people and on the knowledge agriculturalists have acquired about the tree that allows them to make informed conservation decisions. Through their historically rooted, practical interactions with the species, local people have acquired a detailed understanding of the shea tree and its derivatives. This understanding is mediated by the resource users' social identity features, including their gender and ethnicity, which prescribe certain uses for, and ways of drawing upon, the tree's derivatives. The following section examines and compares the indigenous knowledge female and male agriculturalists of the Gurunsi and Moose ethnic groups have of three of the most important features of the shea tree: its productivity, nut characteristics, and uses. Since the FulBe do not traditionally have a close association with shea, they were not asked to participate in the parts of the study discussed in Sections 5.4 to 5.6

5.4.1 Shea tree productivity

Shea fruit production oscillates among individual trees, spatially, as well as inter-annually. UNCTAD (2006) data indicates that a mature shea tree produces on average between 12 and 15 kilograms of dried shea nuts per year, while other authors cite annual fruit yields of 15 to 20 kilograms (Ruyssen 1957; Chalfin 2000) to 25 to 55 kilograms per mature tree (Fleury 1981). In Burkina Faso, Crélerot (1995) reports variations in annual yields ranging from eight to as many as 80 kilograms of dried kernels per year, and Boffa (1995) notes a five-fold difference in yields between the best and worse producing trees. Across the shea belt, 15 to 30 kilograms of fruit per tree per year is an accepted approximation (Hall et al. 1996). Although there is no apt manner of predicting fruit

[92] It is worth reiterating that these assessments were carried out exclusively in and around the village of Prata. Hence, these conclusions may not be extrapolated to the shea tree population located around the town of Léo, which is likely less dense due to demographic and other pressures. In addition, there are fewer shea butter producers competing for shea nuts in the villages than there are in Léo, given the larger size of the population living in the latter area. The greater harvesting pressure in Léo coupled with the presumably smaller shea population in the area casts doubt on the ability of this tree population to regenerate.

yields from year to year or among specimens, the male and female agriculturalists I interviewed were attuned to inter-annual fluctuations in shea productivity, and to the factors influencing yields. These factors, explored below, can be grouped into two categories: those external to the shea tree and stemming from the environment, and those associated with individual shea tree characteristics.

5.4.1.1 Inter-annual variations and factors affecting yields

When asked about fluctuations in shea yields over time, the women and men I interviewed in Léo, Lan, and Prata nearly unanimously asserted that shea tree productivity has decreased since the early 1990s. As one participant from Lan noted, however, it is difficult to evaluate changes in shea productivity due to the rise in competition over shea nuts during the same period. Until 1995 or so, a significant amount of shea nuts remained in the fields without being collected. Yet, with the rising demand for these nuts stemming from new markets and demographic expansion, women now feel that they can no longer gather shea nuts in sufficient amounts. This accentuates their perception that shea yields have dropped.

Whether or not this is the case, research participants were able to cite many factors influencing productivity, which also correspond with some of the variables identified by researchers studying the species. Participants of both genders (n=83) spontaneously stated the same environmental factors, including climatic, biophysical and anthropogenic variables, when asked an open-ended question about the variables affecting shea tree productivity. Their answers are listed in Table 5.5a, which is not disaggregated by gender since male and female responses were remarkably similar.

As shown in the upper left column of the table, the most highly cited climatic factor was the timing and intensity of the winds. When the dry season Harmattan winds blow vigorously during the shea flowering period (December to March), these arid, cool winds and dust desiccate and pluck the tree's flowers before a fruit can be generated, thereby reducing yields. A similar observation has been made in Uganda, where strong winds, especially when sand-laden, were shown to disturb the shea tree's insect pollinators and to abscise the tree's buds, flowers and young fruit (Okullo et al 2004b). Male and female participants also believed that the lack of rainfall over the past years has

caused yields to drop, explaining that high rains lead to increased production in the subsequent year.

Table 5.5a: Endogenous Perceptions of Environmental Factors Influencing Shea Yields

	Environmental factor	**Number of times cited**	**Effect on yields**
Climatic factors	Strong winds	13	↓
	High rainfall	7	↑
Biological factors	Parasitic plants	33	↓
	Predatory insects	4	↓
	Leaf-infesting fungus	1	↓
Anthropogenic factors	Burning	4	↓
	Felling neighbouring trees	3	↑

Beyond climatic factors, female and male respondents cited biological factors, such as predators and parasites, as a damper on tree productivity. As shown in Table 5.5a, male participants reported that the shea tree is prey to insects and worms, which live in shea tree hollows and cause yields to drop. Indeed, researchers have corroborated the deleterious effects of such insects on shea yields and called for pest control initiatives (Lamien et al. 2008). Participants did not, however, specifically mention the role of caterpillars that feast on shea leaves as influencing tree yields. Yet, scientists (Gledhill 1972; Dwomoh 2003) report that in some years, shea trees are infested with the larvae of *Cirinsa butyrospermi* and *Bostra glaucalis* caterpillars. These insects lay eggs on shea trees that devastate the tree's foliage upon maturation. Heavy caterpillar infestations hinder typical flower and fruit formation, and reduce the weight of individual fruit produced as well as fruit yields per tree (Hall et al. 1996). It is probable that participants did not discuss these pests because they are not as abundant in the three study sites as in many northern and southwestern areas of the shea belt, where protein-rich *Cirinsa* caterpillars are sold as a valued dietary supplement.

Although in general, shea is not very susceptible to diseases, infections by fungi *Fusicladium butyrospermi* GRIFF. & MAUBL. and *Pestalotia heterospora* GRIFF. & MAUBL. do arise, causing dark patches on shea limbs and gray ones on the tree's leaves, respectively. In the three study areas for this thesis, this disease (black patches on leaves),

referred to as leaf-mosaic disease by the scientific community, was reported merely once, by one of Léo's female interviewees (Abibata, 22/10/06). Yet, in Bole, Ghana, only slightly south of the study sites, over 90 per cent of individual shea trees are reportedly affected by two subspecies of *Pestalotia* (Sallé et al. 1991). It is therefore interesting that the fungus is not more prevalent in the study sites, and may be only a question of time before it migrates north of the Ghanaian border.

Participants with whom I spoke recognized that a much greater problem where they lived and worked is the attack of semi-parasitic plants, shown in Figure 5.4, on the shea population. Male and female interviewees referred to the role of these parasites in reducing yields and stunting the growth of their host, which deteriorates and in severe cases will perish. In Léo and Prata, men and women nearly unanimously reported a recent increase in these semi-parasitic plant attacks. Although these mistletoes tend to colonize old shea trees, they are now also allegedly afflicting younger individuals. Prata's participants noted that nearly all of the village's shea trees suffer from semi-parasitic plants, which increase the species' mortality rate. This observation also corresponds with my personal assessment of the state of the local shea population with respect to parasitism.

Figure 5.4: Semi-parasitic Plant *Tapinanthus spp.* in Shea Tree (Source: Author 2006)

Indeed, high mortality rates in the northernmost range of Malian and Burkinabè populations of shea have been ascribed to the semi-parasitism of several vascular plant species belonging to the Loranthaceae family, including *Agelanthus dodoneifolius*, *Tapinanthus globiferus, Tapinanthus ophiodes* and *Tapinanthus pentagonia* (Ruyssen 1957; Bonkoungou 1987; Boussim and Guinko 1993; Boussim et al. 1993; Boussim et al. 2004). Dispersed by fruit-eating birds, these mistletoes stunt the growth of their host, decrease the quality of its wood, render it more susceptible to other pathogens such as fungi, and can lead it to its death (Boussim et al. 2004).

In Lan, three quarters of female participants reported a decrease in the abundance of shea tree parasites since 2000. This apparently owes to the human removal of plant parasites to reinvigorate the shea population. Moreover, Lan's Moose migrants remove mistletoes to provide them as fodder to their domestic animals. Contrary to their wives, however, Lan's male participants believed that the incidence of shea parasites has recently increased, and that nearly all of the region's shea trees are now afflicted. They believe that with a larger number of fields being cleared for cultivation, fewer trees are left standing, and plant parasites benefit from the greater aeration (spacing) and nutrient capture of shea trees. Interestingly, male participants also noted that with the expansion of cotton cultivation in Lan, parasites are now benefiting from additional nutrients provided by the use of synthetic fertilizers. This association between the parasite's proliferation and the use of synthetic fertilizers—which has not been previously examined in the literature—can directly affect the state of the shea population.

As shown in Table 5.5a, the men and women with whom I spoke also cited anthropogenic factors, such as human-induced fires and tree felling, as influences on productivity. Researchers working in the region have confirmed that shea trees scorched during the flowering period will not produce that year (Abbiw 1990; Hall et al. 1996). According to Lan's male participants and Prata's female participants, tree felling additionally affects shea productivity by creating favourable spacing patterns among shea specimens that enhance tree vigour. Interestingly, interviewees believed that in this respect, while the practice decreases the number of shea trees, felling shea specimens can actually improve the yields of those trees left standing.

Finally, one female producer suggested that shea tree production is linked to socio-economic changes occurring in the community. She mockingly explained that "before, when shea was useful only for our own consumption, the tree gave good yields, but now that there is money to be made with shea, the tree has decided not to give anymore" (Nassiratou, 16/01/07). Her statement points to a belief expressed among local residents, and commonly-held among indigenous populations, that the behaviour of natural resources is responsive to local socio-political phenomena or atavistic desire, such as greed (Bollig and Schulte 1999; Luning 2007).

5.4.1.2 Shea tree characteristics affecting productivity

Beyond environmental influences, Table 5.5b outlines the endogenous perceptions of the tree characteristics influencing shea productivity. The categories listed in this table reflect those spontaneously cited by the men and women I interviewed in response to an open-ended question about tree traits affecting yields. Gurunsi and Moose interviewees (n=83) provided similar responses, which are therefore shown together in the left-hand column of the table. Likewise, the table generally does not disaggregate results according to gender as male and female participants cited almost exactly the same variables. Yet, the subtle distinctions in their explanations of these factors are explored below.

Table 5.5b: Endogenous Perceptions of Tree Characteristics Influencing Yields

Tree characteristic	**Number of times cited**	**Effect on yields**
Abundant flowering (female response)/ Flowering after Harmattan (male response)	23	↑
High susceptibility to parasites	27	↓
Extensive canopy (female response)/ Well formed, new leaves (male response) Full leaf shedding	17	↑
Growth in cultivated fields (female response)/ Growth in cultivated fields or shallows (male response)	13	↑
Tree 'gender': 'male' tree	5	↓
Size	11	Ambiguous

According to the women and men I spoke with, individual shea trees may not produce fruit every year. Moreover, some trees do not fruit at all on extremely poor soils. In the present study, all female participants from Prata and Lan (n=45) could recognize the best fruiting shea trees in their fields, as did over three-quarters of Léo's UGPPK members (n=33). Likewise, all of Lan's male participants (n=16) claimed to know the best shea producers in their fields, as did 90 per cent of Prata's male respondents (n=23) and two-thirds of Léo's (n=27).[93]

As shown in the left-hand column of Table 5.5b, female participants listed a number of tree characteristics influencing productivity. First, they stated that shea trees that produce large quantities of flowers produce more fruit, provided that the winds do not desiccate the flowers. Next, they reported that yields are linked to the tree's resistance to parasitism. Trees that do not carry plant parasites appear more vigorous and are superior producers, whereas those with parasites produce fewer, lesser quality nuts. Specimens with full canopies and those that shed all their leaves were additionally believed to be better producers. Female respondents also recognized that the best producers are found in cultivated fields, where they are protected and grow in optimal spacing and soil. Further, Prata's female Moose participants distinguished between 'female' and 'male' trees, with the former producing better than the latter, which yield very small, "useless" fruit.

Although the women interviewed recognized that tree size affects yield, there was no agreement on the relationship between these variables. Some female respondents believed that young trees produce best, while others claimed that medium sized trees outperform the others. One shea butter producer made the parallel with humans, suggesting that we are most productive when we are middle aged (Nouria, 13/01/07). Likewise, previous studies on the subject provide ambiguous results about the correlation between tree size and yields. For instance, Ruyssen (1957) showed a positive correlation between these variables until tree girth reached 70 to 80 centimetres, at which point productivity decreased.[94] In contrast, Boffa (1995) and Lamien et al. (2007) did not

[93] The lesser knowledge of shea fruiting behaviour among Léo's participants may be due to the fact that the town's residents generally spend less time in the fields than their rural counterparts.
[94] According to the Bagnoud et al. (1995) study referred to in Section 5.3.2, trees reaching 70 to 80 centimeter girths would be approximately 150 to 180 years of age.

perceive any correlation between dbh and productivity. This wealth of data suggests that the relationship between these variables is likely neither direct nor linear.

As mentioned above, male participants cited many of the same factors influencing tree productivity. One participant specified that he did not notice the links between tree phenotype and yields until his wife joined the shea butter Union (Mathias, 17/10/06), whereas another male interviewee stated that this knowledge is crucial to guide the selection of shea trees in his fields (Ablaye, 12/02/07). When asked about the factors influencing tree yields, male participants explained that trees growing in cultivated fields provide superior yields to those in the bush for the following reasons: field trees are larger, may benefit from nutrient inputs from fertilizers, are protected from squirrels that destroy shea fruit in the bush, are less susceptible to bush fires, and are optimally spaced such that they can expand both in width and in height. Further, understorey cultivation practices can improve soil fertility, and thus nutrient inputs for the tree. As a result, shea specimens in cultivated fields apparently not only produce more, but also begin fruiting at an earlier age. According to male interviewee Rasmané (15/02/07), while it is possible to find sterile shea trees in the bush, all shea trees are productive in cultivated fields, even if some yield fewer fruit. These observations are substantiated by Lamien et al. (2004), who found that 94 per cent of shea trees growing in Burkinabè parklands produced fruit compared to only 56 per cent of specimens located in natural formations. The parkland shea trees they studied also produced significantly more fruit (4 kg/tree versus under 1.5 kg/tree in the bush), longer and wider fruit, and had superior average dry kernel weights than shea trees growing in uncultivated, brush areas.

As summarized in Table 5.5b, male respondents reported that the flowering behaviour of individual shea trees also affects their productivity. When flowering precedes the Harmattan, winds will pluck the flowers from the tree. Dust accumulation on the flowers, which gives white flowers a reddish tint, will further decrease yields. It is therefore preferable for tree individuals to flower after the winds. This makes sense in light of the information presented above regarding the influence of strong winds on tree productivity. Male participants added that it is not the quantity of flowers, but rather their vitality that determines productivity. Trees that produce more flowers do not necessarily provide the best yields, particularly when flowers materialize before or during the windy

period. The positive association between flowering and fruiting intensities (and thus shea nut production) has also been substantiated by authors studying shea in Mali (Kelly et el. 2007) and Uganda (Okullo et al. 2004a). In Ugandan shea populations (*V. paradoxa*, spp. *nilotica*), Okullo et al. (2004a) have correlated tree flowering and yields negatively with monthly rainfall and positively with maximum daily temperatures. In contrast, in the present study, interviewees did not cite temperature as a factor influencing shea productivity.

Male participants did, however, cite the tree's leafing behaviour, location, and resistance to parasitism as factors affecting productivity (Table 5.5b). Trees with new leaves that are well formed reportedly produce better than those with old and dry branches and leaves. Abundant dark green leaves, which become yellow and fall in October or November, are also indicative of high productivity. In terms of growing conditions, participants explained that shea trees thrive in cultivated fields and in the cool, fresh earth found in shallows. This reinforces the idea of an association between shea yields and soil moisture and fertility, noted by Hall et al. (1996). Male interviewees added that older, weak individuals tend to be more susceptible to predators such as worms that burrow in shea trunks and semi-parasitic plants, and thus produce less. This corresponds with my own observation that all older trees in the area are afflicted by plant parasites, whereas some of the younger specimens are spared. Male interviewees did not agree on the correlation between tree size and productivity: whereas some men felt that young trees produce best, others believed that medium sized or old trees provide larger yields. Again, this reflects the ambiguity of the correlation between these factors.

Beyond these characteristics, male participants recognized that some trees are simply more productive than others. As mentioned by their wives, male respondents referred to tree 'genders'. "Among all tree species," one man explained (Igounia, 12/02/07), "some individuals are non-productive by nature: they do not flower or yield fruit. They are called male trees because they cannot bear children; they only change beauties by shedding their leaves with the seasons." Other participants substantiate this idea explaining that some male shea trees, referred to as *tam daaga* in Moore, will not produce any flowers, whereas others will actually flower but produce no fruit. Others still will produce fruit, but these will be very small and will bear no nuts.

Finally, some male participants believed that it is impossible to predict productivity based on tree characteristics. With a fatalistic view of the world, they associated tree yields with the Divine. Male interviewee Lougman (12/02/07) explains, "nature is mysterious and the shea tree is mysterious; we cannot understand it based on its characteristics. Only God and the seasons will determine its yield." A fellow Lan resident (Fessin, 12/02/07) agreed, stating, "God alone serves and decides on production. There are no visible characteristics to explain productivity. Production is a natural phenomenon and Nature is unpredictable".

When asked whether good fruit producers remain the same from year to year, 70 per cent of male participants claimed that the same shea trees produce well, generally around the same time from year to year, and the same number of times (sometimes twice) a year. In contrast, 70 per cent of female participants believed that good producers vary inter-annually. Many of the women and men with whom I spoke reported the existence of productivity cycles, whereby trees that produce well for one or two years have lower yields the following one or two years and so on. As male focus group participants in Lan explained, "if a tree produces well this year, it will rest the following year; much like we do. Otherwise, it will become overtired". Likewise, some authors have reported the possibility of a three year cycle (Chalfin 2000), whereby production is good one year, poor the next, and mediocre the third (Terpend 1982); or of a five year cycle exhibiting poor yields for three years and good ones for two (Hall et al. 1996; Bayala et al. 2008). The Moose men I interviewed also believed that good producers may stop producing at some point. Branches too have their cycles, with some branches producing significant quantities of fruit some years and not the next. Such inter-branch differences in the fruiting behaviour of shea trees have already been noted, and attributed to the direction of the prevalent winds in the previous rainy season (Okullo et al. 2004b). Adding to this complexity, male participants from Lan reported that the timing of production varies among trees: some begin fruiting earlier in the season than others. Finally, Lan's male interviewees observed that production varies among zones, such that in a given year the shea population surrounding the provincial capital town of Léo can have a more favourable production than the peri-urban village of Lan, whereas the reverse may be true in subsequent years. This regional variability adds to the difficulty of predicting

producers' ability to gather sufficient quantities of shea nuts to fulfil international client demands.

It may seem unsurprising that both men and women were knowledgeable about the best producers and the factors influencing shea yields, as both men and women consume fallen shea fruit while working in the fields and are exposed first-hand to tree fruiting behaviour. Indeed, in some areas of Burkina Faso, agriculturalists have even ascribed names to their best producing shea trees. Yet, local knowledge of the variables affecting the species' productivity is remarkable due to the highly unpredictable nature of shea yields, which is reflected in the wide range of productivity figures recorded by the scientific community and provided earlier. Moreover, many of the factors affecting shea yields reported in this free-listing exercise had not been previously recorded in the literature. These include characteristics such as the size and vigour of the tree canopy, the tree's leaf shedding behaviour, and the 'gender' of the trees observed ('male' versus 'female' specimens). Having recognized the role these factors play in determining shea productivity is a first step towards enhancing our ability to estimate shea yields. The results presented above clearly demonstrate the detailed observational knowledge local male and female agriculturalists have acquired through daily interactions with the species. This knowledge forms part of the observation-practice-belief complex characteristic of traditional ecological knowledge systems described in Section 2.3 of Chapter 2.

5.4.2 Shea nut characteristics

The women and men interviewed were not only knowledgeable about tree productivity, but also about the characteristics of nuts yielding superior quantities of quality butter. These nut traits include the size, colour, hardness, location of collection and processing techniques of the given nuts. Overall, female participants of Gurunsi and Moose descent believed that closed-shelled, hard, red nuts were best for making butter. Specifically, over 80 per cent of the women I asked in Prata (n=18) claimed that the best nuts for butter-making were small, and 22 per cent of these women suggested that these small nuts were collected in the bush. The perceived link between small shea nuts and good butter among my participants corroborates earlier research in Ghana, where female butter makers believed that small shea kernels yield more oil (Lovett and Haq 2000b). In contrast, 13 per cent of Lan's female interviewees (n=15) believed that larger nuts give the best butter,

and one third believed that medium nuts yield butter of superior quality. The others, as well as 17 per cent of Prata's female participants, had no specific comments on the correlation between nut size and butter yields. Likewise, tests performed on Nigerian shea nuts indicate that the relationship between fat yield and kernel weight is not significant (Ugese et al. 2010). Lastly, 40 per cent of Lan's female respondents specified that the best quality nuts were those collected from the ground (windfalls), as shea fruit and nuts plucked from the tree may not yet be ripe, and will yield a lesser quantity of butter. This ability to recognize shea nuts yielding good quality butter is essential to the success of shea butter projects.

When asked whether quality nuts consistently came from the same trees, 70 per cent of female participants responded that they did. One woman from Prata (Minata, 17/01/07) added that, "trees are like women: some give birth to small babies, others to large babies. It's in their nature." A few of the women I interviewed also stressed that the key to successful butter production lies in the processing techniques rather than in nut characteristics.

Despite the fact that they do not produce shea butter, male participants were also knowledgeable about desirable shea nut characteristics, and their responses were nearly identical to women's. Merely 36 per cent of male respondents (n=33) explained that they did not know the characteristics of good shea nuts since that was the specialty (or rather the "problem") of women (and children, whom they did not mention) who gather and transform these nuts. Others, however, concurred with women that hard, red (as opposed to whitish) shea nuts are best, provided that they are properly transformed. They stressed the need to collect these nuts from the ground rather than from the branch to ensure their ripeness, and accordingly correlated nut quality with the winds, which can prematurely pluck shea fruit from the trees. Male participants also underscored the importance of butter-making methods in ensuring quality butter, and stated that nut characteristics were only secondary for achieving a quality product. Again, there was no consensus on the relationship between nut size and quality.

Men's knowledge of the characteristics of shea nuts yielding good butter is rather surprising, given that shea nut collection and processing are exclusively female activities. This knowledge may stem from the fact that men observe their wives processing shea

nuts and may converse with them about the activity. Men have also become increasingly interested in shea processing since the shea trade has become more remunerative. In contrast, in Northern Ghana, Lovett and Haq (2000b) found that men did not know the characteristics of the best shea nuts for making shea butter, while women stated that small seeds yielded the most butter.

Nonetheless, when asked about the characteristics of trees providing quality nuts, over one fifth of male participants in the three study sites admitted that this was not a man's concern. Yet, Oumarou (16/11/06) remarked that women sometimes walk past a tree without collecting its nuts, which indicates that these are of poor quality for making butter. Interestingly, male interviewees specified that the trees yielding the most fruit do not necessarily produce high quality nuts. Others believed that all shea trees provided some good nuts. One Moose man (Issaka, 16/01/07) explained that some shea trees consistently produced large fruit but small shea nuts. The Moose call these specimens "shea trees of the dogs" (Moore: *bâa tâam*; French: *karité des chiens*). Male participants stressed that their interest lay in fruit taste, rather than shea nut quality. Those asked to do so could not cite the characteristics of trees producing sweet fruit, explaining that there was no simple way to determine these and that it was instead a question of knowing individual trees. However, all male participants claimed to know the trees producing sweet tasting fruit, and agreed that, as is the case for shea nuts, fruit that prematurely fall from the tree have an inferior taste.

5.4.3 Uses of shea derivatives

Shea nuts are only one of the shea tree's non-timber forest products of local importance. Gurunsi and Moose agriculturalists also rely upon the species' fruit, bark, roots, latex, and leaf derivatives to meet their daily needs. The multiple uses they have for these products require an intimate knowledge of their properties and processing. Local uses for the shea tree, which inform and are informed by the indigenous knowledge associated with the species, influence farmer incentives to conserve the tree in my three study sites. In this way, local use-preferences for shea strongly relate to the ecological sustainability of shea butter projects.

Aside from shea butter, study participants listed a number of medicinal and other use-preferences for the species. Their responses are provided in Table 5.6, which is

disaggregated by gender but not by ethnicity since Gurunsi and Moose answers were remarkably similar. Below, I review the explanations provided by the women and men I interviewed, separating the discussion according to the locality of residence of the research participants.

Among Léo's urban Gurunsi and Moose residents, 44 per cent of female participants (n=32) referred to the importance of the tree's fruit for nutrition and wood for fuel, and 34 per cent mentioned its valued shading effects. Women were also knowledgeable about common cures produced with shea derivatives. They reported that shea bark is used to treat children's boils, particularly around the anus. The bark may be prepared and used in one of three ways: either ground, mixed with shea butter and anointed to the skin; boiled and used to wash the child's sores; or boiled and drank to soothe. Women stated that shea bark can also cure children's diarrhoea, stomach aches, and fatigue. Washing a child with water infused with shea bark, that may or may not be mixed with leaves, can allegedly cure children's malaria. Léo's female producers claimed that young shea leaves could also be used to treat malaria, general fatigue and children's diarrhoea. To produce the decoction, shea leaves are pounded and mixed with water. The infusion is then left in the sun and used to wash the feverish child. Leaves may alternatively be burned, their ashes collected and mixed with salt, and the mixture can be given to newborns to cure coughs. To treat unidentified illnesses, one woman explained that shea leaves are gathered in the early morning and boiled. The decoction is then used to wash the child over an ant farm. Leaves can also be added to bean meal, and in their pounded form, can be inserted into the shea paste during the kneading phase to help the shea foam to rise. Whereas the majority of Léo's UGPPK members were familiar with these cures, nearly one-third of Léo's female interviewees were apparently ignorant of the fact that shea leaves had any such uses.

Table 5.6: Uses for the Shea Tree and its Derivatives (Excluding Shea Butter) According to Female and Male Participants, All Sites

Part of tree	**Uses**			
	Female responses (n=90)	**# Responses**	**Male responses (n=78)**	**# Responses**
Fruit	Nutrition	16	Nutrition	30
Wood	Fire ignition Dye for houses (with ash)	22	Fire ignition Building material	9
Canopy	Shade	25	Shade	11
Bark Leaves Latex Bark, leaves Bark, roots Bark, leaves, roots	*Medicinal uses:* Stimulates lactation Coughs Unidentified illness Improves coagulation Eye infections Stomach aches & dysentery Boils Diarrhoea Fatigue Malaria (and fever)	47	*Medicinal uses:* Fatigue Snake venom in eyes Stomach aches Children's diseases	40
Leaves	Fertilizer Fodder	2	Fertilizer Fungal repellent (when burned)	16
Semi-parasitic plants	Fodder	1	Fodder	2
Shea nut residues	Fire ignition Soap production	25	Fire ignition Soap production	7
Bark (burned)	--	--	Insect repellent Fungal repellent	2
Whole tree	Wind barrier	1	Micro-climate improvements around and beneath tree	4
Beehives in tree	--	--	Honey production	2

The women I spoke with in Léo additionally reported that shea roots could be used for similar purposes as shea bark and leaves. They can serve as medicine for children, curing them against fatigue, boils, stomach aches, and malaria. These too must be boiled and the decoction used to wash the sick child. Participants explained that shea latex, in turn, is used to halt bleeding by promoting blood coagulation. Finally, 10 per cent of Léo's female participants reported that the residues collected during shea butter production can be used in soap production.

Lan's peri-urban female respondents (n=21) reported similar uses for the species. One third of the women interviewed cited firewood and another third cited shade as primary, non shea butter, uses for the tree. Fourteen per cent referred to the importance of shea fruit for household nutrition. As in the case of their Gurunsi counterparts in Léo, Lan's Moose participants use shea derivatives for medicinal purposes. They employ young shea leaves to treat children's diarrhoea, fever, and eye infections. Moreover, they reported the use of shea leaves as fertilizer and as fodder for their sheep. Participants explained that the semi-parasitic plants growing on the tree can also be used as animal fodder. Finally, Lan's female participants use shea roots and bark to treat children's stomach aches, diarrhoea, and boils, and the tree's bark to treat eye infections. In a study conducted by Gustad et al. (2004) in the region of Ségou, Mali, participants also recognized the value of shea twigs for treating backaches and of the tree's bark as a cure for pneumonia. None of the participants involved in the present study cited these uses for the species. Only one of Lan's female participants (Djénébou, 05/02/07) did not cite any uses for shea other than the butter derived from its nuts.

Finally, in rural Prata, nearly one third of Gurunsi and Moose women (n=37) claimed that they did not see any utility for shea beyond its use in making butter. The remaining two-thirds of those interviewed cited the same medicinal and other properties as their fellow UGPPK members in Léo and Lan. Producers in rural Prata added that shea bark could be used to enhance milk production among lactating mothers. According to an older woman, shea bark, sorrel, and groundnuts should be boiled together and drank to stimulate lactation (Salamata, 19/01/07). Novel ideas that emerged from Prata included those of a Gurunsi woman who explained that shea ash could be used to dye houses red, while another cited the use of shea residues generated during butter production to ignite

fires. Finally, Prata's Moose women referred to the importance of the tree's ecological function as a wind barrier.

As shown in the right-hand column of Table 5.6, male participants in the three study sites (n=78) emphasized different use-preferences for the shea tree. These participants discussed the importance of shea fruit, which even landless people could consume when in the bush. Men valued these fruit because they ripen during the agricultural period and appease their hunger while working in the fields, thereby allowing them to extend their workdays. Participants stressed that shea fruit are indispensable at this time, when household granaries are nearly depleted. Indeed, shea fruit represent an essential source of fibre, calcium, vitamin C, potassium and protein, particularly for rural dwellers who have little access to more expensive food sources (Maranz et al. 2004; Diarassouba et al. 2008; Ugese et al. 2008). Hence, as many as one third of male respondents cited shea fruit consumption as the primary reason they maintain shea trees in their fields. Two of Lan's male participants (n=14) explained that, for this reason, the shea tree is even more important to them than the remunerative mango tree (Igounia, 12/02/07; Issoufou, 13/02/07). They also referred to the economic importance of shea fruit, as these too can be sold for money.

As also shown in Table 5.6, male respondents noted the ecological functions of shea trees. They mentioned the fertilizing effect of shea leaves, and the favourable growing conditions, with respect to humidity and nutrient provision, conferred by shea trees to understorey crops. Participants explained that shea leaves and bark could also be burned in the fields to repel a fungal infection that attacks millet stocks during the rains. They highly valued the shade of the shea tree, under which they rest. As Lan's male focus group participants noted, immediately upon arriving in their fields, farmers place their water jugs underneath the shea tree to keep them cool. Finally, one male Moose participant (Moustafa, 15/01/07) remarked that the greater the number of shea trees left standing, the more favourable the rains will be since shea trees improve the micro-climate.

On the whole, the men I interviewed reported some similar medicinal uses for shea to those discussed by their wives: for lack of money to send children to the hospital, boiled shea bark, roots, and leaves rubbed upon sick children can heal them. Shea leaves

can be used to make *chapolo*, a drink that enhances children's energy levels (Ismael, 19/01/07), and shea latex can cure against snake venom in the eyes when immediately applied. Some 20 per cent of male participants recognized that shea derivatives could be used as medicinal treatments, but did not know how. They stressed that this was left to traditional (male) healers. Similarly, in neighbouring Ivory Coast, respondents from 12 different ethnic groups reported that traditional healers use the shea tree and its derivatives to cure 43 types of ailments (Diarassouba et al. 2008).

Male interviewees further referred to the importance of shea wood for burning and building purposes, as well as of shea cake—a residue produced during butter preparation—for igniting fires. Lan's Moose participants appreciated the use of the semi-parasitic plants growing in the trees as fodder for their sheep, goats and cattle, and enjoyed the taste of the honey produced in beehives perched in shea trees. One male participant (Issoufou, 13/02/07) explained that, in the past, shea bark used to be thrown on hot coals to chase away mosquitoes. Last but not least, Alasan (12/02/07) mentioned the cultural importance of the tree. When a mother visits her daughter in her husband's village, she offers her gifts of shea butter and *soumbala*.[95] Some male respondents were adamant that shea is the *most* important local species, and nearly all felt that conservation of the shea tree is of critical importance. As stated by Issa (17/10/06), "no one planted the tree, yet it gives a lot." As discussed in Section 5.6, the value the tree carries for local men and women is reflected in their conservation practices and bears favourably for the sustainability of shea butter projects.

In sum, male and female participants from the three study sites reported many of the same uses for the shea tree and its derivatives, although women's knowledge of the tree's medicinal properties was more detailed. This is likely due to the fact that women are the ones who process the tree's derivatives into cures. Male and female interviewees also recognized the species' ecological functions, which have already been well documented: leaf litter inputs are a significant source of carbon, improving soil fertility (Bambara 1993; Bayala et al. 2003; 2005); tree roots preserve soil integrity (Bonkoungou 1987; Boussim and Guinko 1993); at appropriate densities, trees serve as wind barriers (Kessler 1992; Kessler and Breman 1991; Kainkwa and Stigter 1994); and they improve

[95] Soumbala is a valued spice made from fermented pods from the *néré* tree (*Parkia biglobosa*).

soil water retention and infiltration (Boffa et al. 2000), among other benefits. Nonetheless, these were not the primary factors inciting shea tree conservation in cultivated fields.

The fact that as many as one third of Prata's female participants claimed to be ignorant of any uses for the shea tree beyond the shea butter it yields may be due to the stigmas associated with consuming shea products, which are associated with poverty. Local people resort to shea remedies primarily for lack of money to send their children to the clinic and to purchase western medicine, just as they eat shea butter for lack of money to buy imported oils. Based on personal observations, Prata's residents, who are on the whole very poor, do rely heavily on various shea derivatives to meet their daily needs.

In brief, I have shown above that participants from Léo, Lan, and Prata hold extensive knowledge of the recent evolution of shea parklands, as well as of shea tree productivity, and of the species' characteristics and uses. Although gender differences in ethnobotanical knowledge have been widely reported in Africa (Gakou et al. 1994; Cotton 1996; Wezel and Haigis 2000), I was rarely made aware of such differences during interviews. Interestingly enough, I found that time and again, female and male participants in the three study areas cited similar factors influencing shea yields and desirable shea nut characteristics, and mentioned comparable uses for the shea tree. This may be because the species plays such a central role in the lives of both men and women who exploit it on a daily basis in the three study sites. A comparable observation has been made in the neighbouring south-central region of Burkina Faso, where researchers found no consistent differences between the uses Gurunsi men and women cited for locally important plant species (Kristensen and Lykke 2003).

The above analyses also point to the need to consider not only stand densities and overall tree abundance in the assessment of the sustainability of shea butter projects, but also the productivity of the shea population and the quality of the shea nuts produced. While shea trees may abound, their productivity can be limited by the attack of semi-parasitic plants or by inadequate rainfall, among other factors. In addition, despite their quantity, the shea nuts produced must be of high enough quality to allow producers to satisfy international product standards. Shea butter makers will otherwise be forced to purchase a large portion of the nuts they use in their butter production, which can render

their enterprise altogether unprofitable. The difficulty in assessing these factors and the high variability these variables exhibit limit the ability to predict available nut stocks in any given year, and to determine the capacity of shea producers to meet export-quantity demands (Greig 2006). I return to these issues later in this thesis, but first turn attention to the ways agriculturalists influence these shea nut stocks through shea tree management.

5.5 SHEA TREE MANAGEMENT

The selection and management of valued trees, such as shea, which are not deliberately propagated is frequently referred to as a 'protoculture' (Terpend 1982; Boffa 1995). This practice confers advantages to the species in certain environments, and shapes population structures. As previously mentioned, for example, a greater percentage of 'superior', mature shea trees are found in managed farmlands than in unmanaged woodlands (Lovett and Haq 2000b). Moreover, in southern Burkina Faso, the relative occurrence of shea trees in cultivated fields is five times greater than in uncultivated savanna. In northern Ghana and Burkina Faso, shea accounts for more than 80 per cent of the woody specimens on farmed land (Boffa 1999; Lovett and Haq 2000a), but only 16 percent of those in uncultivated bush (Boffa 1995).

Due to shea's myriad uses, agriculturalists have adopted agroforestry practices that deliberately or inadvertently improve the species' health and productivity. However, as shea is not a planted species, it continues to be considered 'wild' by local people. In fact, Burkinabè residents often fail to recognize the management techniques involved in the tree's maintenance. Some do, however, recognize that the agricultural practices they employ in their fields—either explicitly for the purpose of shea tree management or to improve crop yields—enhance the tree's vigour. As Suley (08/01/07), a male participant from the town of Léo, asserts, the shea tree "is women's wealth; therefore he who does not tend to his shea trees does not want a wife. A good cultivator cares for his shea trees". The arboreal management techniques described by female and male Gurunsi and Moose participants are summarized in order of importance in Table 5.7 and explained below as they are practiced in each of the three study sites.

Female participants from Léo, Lan and Prata (n=73) described similar methods of shea tree management. Overall, as indicated in Table 5.7, women most frequently cited

cultivation under shea trees (35 per cent of respondents), removal of closely clustered trees (31 per cent), and weeding under shea trees (22 per cent) as practices that improve shea yields. Next, the women I spoke with listed parasite removal (20 per cent), pruning (14 per cent) and the creation of earth mounds around shea trees (7 per cent) as ways to enhance the species' productivity. Finally, a few participants referred to the creation of water retention ditches around shea trees, fertilizer application, and the preservation of shea bark as ways to improve fruit yields.

Specifically in terms of each site, 17 per cent of Léo's female interviewees (n=29) explained that the mere fact that they cultivate cereal crops under the tree contributes to its upkeep, while 14 per cent claimed to raise the earth around shea roots to protect them and to improve water infiltration during the rains, and another 14 per cent reportedly hoe underneath the tree. Others still stated that they tend to the species by felling other (competing) trees around shea specimens; removing or practicing controlled burning of twigs and grasses under the tree during the rains to protect shea trees from burning; culling shea parasites; pruning the tree; and/or refraining from bark removal to preserve the integrity of the tree. Seven per cent of Léo's female interviewees claimed to practise no form of shea tree management.

In Lan, 61 per cent of the Moose women interviewed (n=19) believed that cultivating beneath the tree is beneficial for its maintenance, and the same proportion claimed that their husbands or children remove the species' semi-parasitic plants to improve its vigour. Female focus group participants explained that parasite removal is a recent practice in Lan, begun by residents upon instructions by one of the village's elders. Another respondent (Abassiri, 09/01/07) stated that the UGPPK recommended culling these parasites to its members to improve tree yields. Although I did not perform an official tree survey in Lan, the vast majority of the shea specimens I encountered in the village did carry semi-parasitic plants. It is therefore surprising that women reported a decrease in the abundance of parasites over the years. Their answers may reflect the fact that they remove a greater number of parasites than they previously did or that they want to display their knowledge and diligence about the 'good practice' of parasite removal for enhancing shea productivity. It is also possible that, despite the high incidence of plant

parasites in the region, their abundance has actually decreased since residents have become increasingly vested in the shea trade and in improving shea yields.

Table 5.7: Shea Tree Management Techniques among Male and Female Participants, Listed in Order of Importance, All Sites

Female Responses (n=73)		**Male Responses (n=74)**	
Management technique	**Per cent of responses**	**Management technique**	**Per cent of responses**
Cultivate beneath tree	35	Weed and collect organic matter under tree	52
Improve spacing between trees (remove closely clustered trees)	31	Parasite removal	43
Weed and collect organic matter under tree	22	Pruning	32
No management techniques	22	Improve spacing between trees (remove closely clustered trees)	25
Parasite removal	20	Cultivate beneath tree	23
Pruning	14	Create earth mounds around tree	13
Create earth mounds around tree	7	*No management techniques*	12
Create water retention ditch around tree	1	Create water retention ditch around tree	3
Fertilizer application in maize and cotton fields	1	Fertilizer application in maize and cotton fields	3
Refrain from bark removal	1	Adjust timing of field burning	3
		Refrain from field burning	3

N.B. Total responses exceed 100 per cent as participants were asked to cite all the management techniques they practiced. The same respondent could therefore list more than one technique.

One third of Lan's female participants stated that they manage the shea tree by removing leaves, dead wood, and grasses around tree specimens. Beyond creating a firebreak, this practice procures farmers with a safe area, devoid of snakes or scorpions, to sit in the shade. Similarly, one third of participants reported that their husbands fell old branches or cut the shea bole to encourage a non-productive tree to produce. Others believed that, unlike the mango tree, for instance, shea trees should never be pruned. This belief is widely shared among other Burkinabè farmers (Kessler 1992), but has recently been disputed by scientists who argue that pruning shea trees can rejuvenate old specimens (Soro et al. 2004; Bayala et al. 2008). Finally, 17 per cent of Lan's shea butter

producers explained that by merely cultivating under the tree they contribute to its management.

Lastly, Prata's female participants (n=25) reported many of the same techniques to enhance the vigour of shea trees. Fifty-five per cent of the Gurunsi women interviewed claimed that they did not practice any form of shea tree management. The rest of the women interviewed in Prata, however, reported improving shea yields through: parasitic plant removal; fertilizer additions in cotton and maize fields; pruning (a man's job) during field clearance to reduce shading effects, and removal of low lying branches in fields sown to cereals (versus beans or groundnuts); hoeing around the trees; mound creation around the trees (caused by an accumulation of earth by draught-animals); and weed removal underneath the tree, primarily for cultivation purposes. Half of Prata's Moose women reported maintaining a weed-free circle around shea trees for cultivation purposes and to create a firebreak; removing the tree's plant parasites; cutting its low-lying branches; and digging a small trench around the tree to collect rain water. The other half claimed to practice no form of shea tree management. The high proportion of female interviewees who reportedly do not manage their shea trees may merely reflect the fact that these women fail to recognize their practices as a form of arboreal management.

As depicted in the right-hand columns of Table 5.7, male participants (n=74) cited similar shea management techniques as their female counterparts, albeit in different proportions. The most highly cited management practice among men was weeding and collection of organic matter under the tree (52 per cent of respondents), followed by parasite removal (43 per cent) and pruning (32 per cent). Optimal tree spacing, cultivation beneath shea trees, and the creation of earth mounds around shea trees were also frequently cited, by 25 per cent, 23 per cent, and 13 per cent of respondents respectively. Lastly, a few men claimed to enhance shea yields by creating water retention ditches or applying fertilizer around the trees, as well as properly timing or altogether avoiding field burning.

In terms of the specific study sites, 28 per cent of Léo's male participants (n=23) claimed to do nothing to manage the tree or improve its productivity, and over half of participants believed that by merely weeding and cultivating under the tree they contribute to its vigour. They explained that these practices not only eliminate unwanted

weeds that compete with the tree for nutrients, but also improve water infiltration under the tree and prevent burns to the tree during field fires. Sixteen per cent of Léo's participants reportedly remove the tree's semi-parasitic plants, and eight per cent prune the tree. Participants explained that improving the spacing between trees and aerating them also favours their development. Finally, they stressed that the timing of field fires is important; they therefore avoid field burning while the tree is fruiting, and attempt to burn early on in the season. One participant (Suley, 08/01/07) claimed to altogether avoid field burning to protect his shea trees.

Lan's male Moose participants (n=15) provided additional details on shea tree management techniques. They most frequently cited the importance of removing parasites, which particularly attack older tree specimens, to improve shea yields. Over half of participants claimed to remove semi-parasitic plants growing on the shea tree; 37.5 per cent of whom do so only when the plant is located on accessible, low-lying branches. They explained that to remove these parasites, one must either fell the entire infested branch—when too many parasites abound on a single branch—or sever only the parasite. When cutting the mistletoe, the site at which it attaches to the branch must be completely excised to prevent the plant from resurfacing. This is done with a machete. Due to the dangers it entails, only grown men generally perform this task. Nonetheless, some women claimed that they too remove low-lying parasites, while other female and male participants explained that their children climb the trees to remove parasites located on higher branches. Parasites must be excised as soon as they emerge. Lan's Moose respondents specified that they do not necessarily cull mistletoes for the purpose of improving the tree's productivity and health. As they also breed animals, they feed these plants to their goats, sheep, and cattle as fodder. In fact, one participant (Gueswendé, 15/02/07) stated that when severing mistletoes, he intentionally maintains a portion of the parasite on the tree to ensure its renewal for this purpose. Moreover, one third of participants do not cull any of the shea tree's parasites.

Beyond parasite removal, one third of Lan's male participants reported that they prune their shea trees. Felling non-productive branches or low-lying branches that interfere with underlying cultivars is said to rejuvenate the tree. New branches will then produce larger quantities of superior quality fruit. Participants explained that pruning

reduces shading effects, as it helps the tree grow tall rather than wide. Crooked, awkward branches are removed, as are non-productive limbs, which are most prevalent among older shea trees. Some Moose migrants explained that they learned these techniques while tending mango trees or coffee plantations in the Ivory Coast. They warned that pruning should only occur after the fruiting season, in June or July, when the tree can still draw a sufficient amount of water from the soil. If the tree is pruned in inadequate conditions or if it experiences burning shortly thereafter, its survival will be at risk. This risk may explain why shea tree pruning is proscribed among many Burkinabè farmers, as mentioned earlier.

Similar to other male and female interviewees, and also shown in Table 5.7, the men I interviewed in Lan reported that weed removal beneath tree specimens to prevent burning, and cultivation beneath the trees to improve the permeability of the soil, additionally enhance shea yields. Moreover, as Alasan (12/02/07) explained, fertilizer inputs in cotton and maize fields enhance tree productivity. Due to shifting cultivation, the addition of synthetic fertilizers eventually also affects fields sown to other crops. Male interviewees also mentioned the role of ancestral rituals and fetishes, performed by the village's indigenous Gurunsi population, to "arrange the bush" and summon good shea yields. However, as the bush does not belong to them, Moose migrants are not in a position to perform these ceremonies. Finally, a few of Lan's participants claimed that they do not manage shea trees at all. Male migrant Hamadou (13/02/07) explained that, "the shea tree is not my problem; if it does not produce, we will go somewhere else to collect shea nuts. Production is a natural phenomenon and there is nothing we can do to improve it. I take care of my crop yields and not of the shea tree." In turn, Gueswendé (15/02/07) believes that he does not benefit sufficiently from the species' economic importance to invest his labour in its management. Another migrant (Ablaye, 12/02/07) echoes his sentiment. He explains that he does not bother to manage the tree because as a migrant, he has been granted rights only to cultivate the land. He believes that if shea yields increase, he will be at risk of loosing his land or at least some of its derivatives.

Prata's male participants reported similar shea agroforestry practices. Eighty-seven per cent of Prata's male interviewees of Gurunsi descent (n=23) claimed to weed under their shea trees to protect them from burning, whereas three quarters removed some

of the competing arboreal species situated in close proximity to shea trees in their fields, and retained only certain shea individuals to achieve an optimal spacing between trees. Sixty-one per cent stated that cultivating under their shea trees improves their vigour and 57 per cent of respondents claimed to remove shea parasites. An equal number of male participants cull old or low-lying shea branches. Finally, 43 per cent of the men I spoke with told me that they create an earth mound around shea individuals to protect their roots and provide them with nutrients.

Among Prata's Moose participants (n=13), 57 per cent of the men interviewed reported removing semi-parasitic plants from shea trees after the harvest, primarily to feed these to their domestic animals. Like their female counterparts, male participants were knowledgeable about the plant's dispersal mechanism and about pruning methods that can be used to control its proliferation. Some men specified that they are only capable of removing low-lying parasites, which must be cut at the knot, where the mistletoe meets the tree's branch. When this is properly achieved, the parasite will not return and upon healing, the branch will increase its productivity. This corresponds somewhat with the scientifically recommended method of cutting the host branch a few centimetres below the site of its attachment to the parasite to prevent the latter from resprouting (Sallé et al. 1993; Boussim 2002; Boussim et al. 2004). Thirty-six per cent of respondents additionally pruned low-lying branches to increase the growing space for understorey cultivars or to create harmonious shading effects. Participants also reportedly clear weeds under the shea tree (29 per cent); improve the spacing between trees by eliminating young specimens (14 per cent); create a ditch around the shea tree during the wet season to capture rainwater; prevent burning under shea trees; and cultivate under shea individuals to improve the species' vigour. Only one Moose man interviewed claimed to ignore all methods of shea tree management.

In sum, although many participants initially failed to recognize that they manage the shea tree, the men and women with whom I spoke did cite similar ways of preserving and/or enhancing shea yields, albeit in a different order of importance. The distinct frequencies of male and female responses shown in Table 5.7 do not necessarily imply that men or women rely on these practices to a different extent, however. They are likely, at least partly, due to the free-listing techniques used to collect the data, wherein

participants were asked to cite the agroforestry techniques that came to mind without initial prompts (Alexiades 1996). In this sort of exercise, it is possible that participants omitted to recognize and mention certain techniques they do actually use to manage the shea tree.

Some of the practices reported, such as the effect of fertilizer applications in cotton and maize fields, the creation of earth mounds around tree roots or the creation of water retention ditches around the trees, have not received much attention from the scientific community. Synthetic fertilizer additions are a particularly timely issue as cotton cultivation—and with it, fertilizer inputs—is expanding in the province of Sissili. Interestingly and as mentioned earlier, whereas some participants believed that fertilizers favour shea yields, others recognized that they also enhance the growth of mistletoes, which can stunt and eventually kill shea specimens. Likewise, Lamien et al. (2007) suggest that pesticide application in cotton fields can reduce the species' pollinator population, thereby also affecting tree yields. The net effect of fertilizer and pesticide additions on shea populations must be carefully assessed in light of these considerations.

An interesting aspect of shea tree management is that it is often performed for reasons other than to merely improve the species' productivity. For instance, cultivating under the tree favours shea yields, yet the practice is evidently carried out primarily for agricultural purposes. Likewise, parasites are removed to provide fodder for domestic animals, and synthetic fertilizer is applied to improve cotton and maize yields. Although shea trees produce virtually unassisted, the species inadvertently benefits from these practices. Coupled with the fact that it is not a planted species, does not depend on costly fertilizers for growth and is well-adapted to local ecological conditions, shea trees thus offer agriculturalists interesting returns on a minimal (deliberate) investment of labour. This may help explain why the species has thrived over the centuries. As shown in the following section, these returns also justify the conservation of shea trees in cultivated fields.

5.6 Conservation Practices

Previous studies have detailed how factors such as the use and economic values of tree derivatives generate incentives for tree conservation in cultivated fields (Wickens 1991;

Kater et al. 1992; Kessler 1992; Cunningham 2001; Schreckenberg 2004). Likewise, the distribution of returns stemming from NTFP sales as well as tree tenure arrangements influence conservation decisions (Peluso 1996). For instance, if those controlling the trees' derived benefits do not also control the trees, financial incentives for conservation may be lost. Agriculturalists additionally conserve their trees for the ecological benefits they provide (Bonkoungou 1987; Boussim and Guinko 1993). Finally, trees represent "a means for claiming both material and symbolic control" over resources (Schroeder and Suryanata 1996: 194). Hence, tree felling or conversely, conservation may owe as much to the meanings imbued in the landscape as to its physical features (Schroeder 1999).

In this study, all farmers—including migrants who have insecure tenure rights to shea trees and derivatives—claimed to conserve shea trees in their fields. According to the State forestry laws, it is illegal to fell shea trees without acquiring permission from forestry officers. Nonetheless, participants from Léo, Lan and Prata admitted that during field clearance, they select specific shea trees with favourable characteristics and eliminate unwanted specimens. As a result, 'superior' individuals are frequently found on farmland. The factors influencing this selection process are listed in order of importance in Table 5.8 and explored in Section 5.6.1 below, before turning to the intra-conjugal discussions that underpin this selection (5.6.2).

5.6.1 Tree selection and conservation

Gurunsi and Moose women in the three study sites (n=35) cited similar variables influencing the selection of shea trees in their fields. As shown in the middle column of Table 5.8, the most decisive factors, which one third of respondents mentioned and said went hand in hand, were tree productivity as well as spacing and shading effects. When tree specimens are situated in close proximity, the weakest producers are eliminated. However, female interviewees explained that good producers are retained even if their shade interferes with cultivation; in such a case, crops are planted beyond the shaded area. In some instances, the shape of the tree canopy, which determines its shading effects, can be manipulated by pruning obtrusive branches rather than eliminating the tree

altogether.[96] Some female producers also reported that in new fields tree yields are assessed for at least one year before any specimen is eliminated. Others stated that shea productivity may be observed for three to four years before completing the selection process.

Table 5.8: Factors Guiding Shea Tree Selection among Male and Female Participants, All Sites

Selection Factor	**Per Cent of Female Responses (n=35)**	**Per Cent of Male Responses (n=70)**
Productivity	33	41
Spacing	33	33
Shading effects	33	33
Tree size/age	24	21
Parasitic state	24	16
Fruit taste (female response)/ Fruit and nut characteristics (male response)	3	7
All trees conserved	50	6

N.B. Total responses exceed 100 per cent as participants were asked to cite all the factors influencing their selection of shea trees in cultivated fields. The same participant could therefore list more than one variable.

Due to the link they recognize between tree age and productivity (discussed in section 5.4.1.2), some female participants reportedly select against older trees (17 per cent), which they believe are less productive, while others select against smaller, younger individuals (seven per cent). As participants also perceive a negative correlation between tree age and resistance to parasitism, they reported culling older individuals that are

[96] Studies performed in Burkina Faso have confirmed that larger shea canopies reduce the yields of understorey cereal crops (Kessler 1992; Boffa et al. 2000; Bayala et al. 2002). Crown pruning has therefore been shown to improve cereal yields by reducing the negative effects of tree shade on adjacent crops (Bayala et al. 2002) without adversely affecting the long-term health or productivity of shea trees (Bayala et al. 2008).

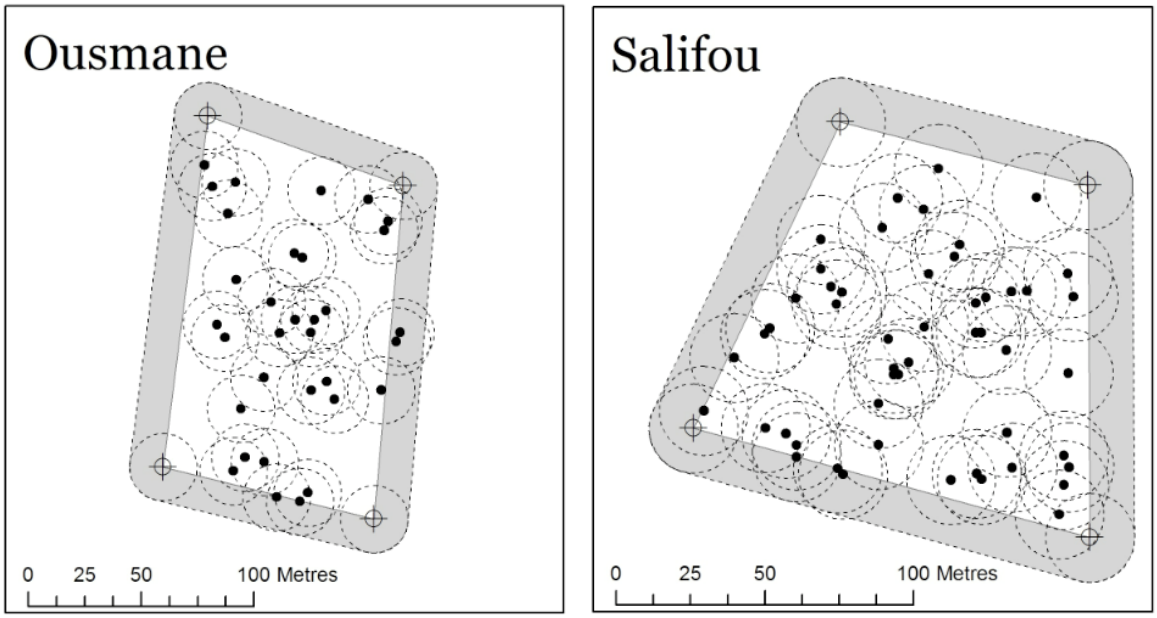
swarmed by mistletoes. The taste of shea fruit was further cited as a factor influencing tree selection in farmed fields.

Half of the women I interviewed claimed to maintain all shea trees in their fields. One respondent attributed this practice to Union membership, which has made the tree's derivatives increasingly valuable, whereas another ascribed it to the importance of shea fruit for her children's nutrition. As one woman, Adjara (08/01/07) summed up, "even men know that shea trees are remunerative; even more so than maize". Consequently, they claimed to protect even the smallest shea specimens.

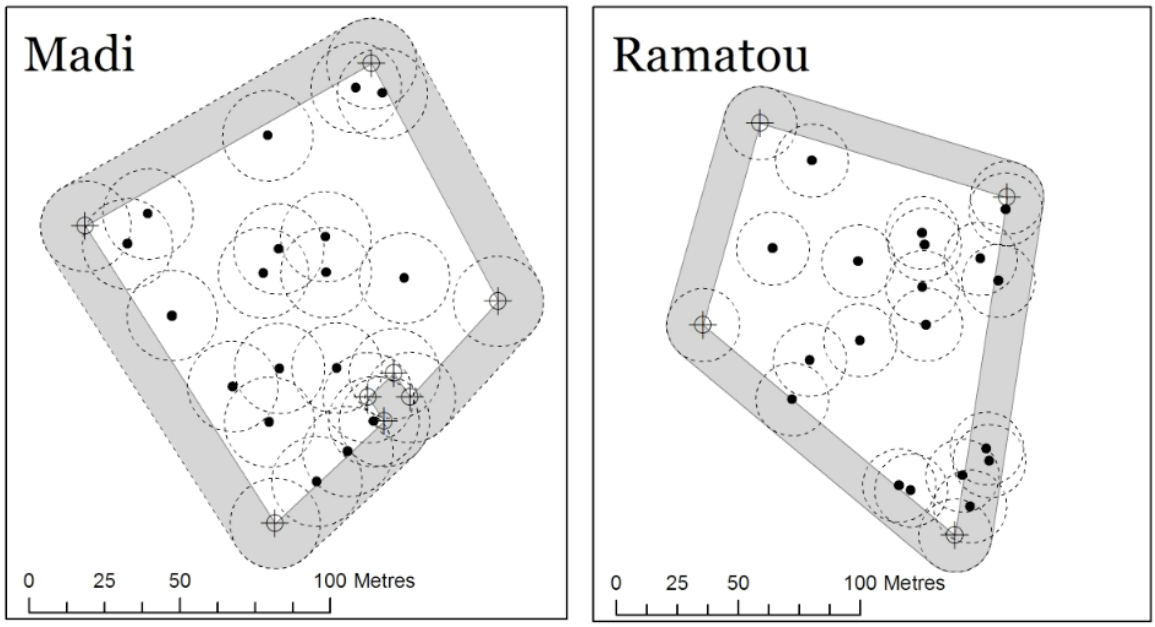
Male participants (n=70) cited similar factors influencing shea tree selection in farmed fields, albeit in different proportions than their wives. As shown in the right-hand column of Table 5.8, one third of male respondents mentioned spacing as the number one factor, with one participant stating that spacing/location is actually the *only* factor determining which trees to retain among crops. That is, if shea trees are appropriately spaced, there is no need to eliminate any specimen. When shea trees grow in clusters of three or more, however, agriculturalists select and protect one or two individuals to allow them to thrive and remove the rest. Moose men from Lan and Prata suggested that an average distance of 10 to 20 meters between trees is optimal and explained that closely aggregated shea specimens loose their fruit prematurely, experience a drop in productivity, and interfere with cultivation due to their shading effects. Figure 5.5 depicts a typical spacing pattern for shea trees in fields cultivated, in this case, by Gurunsi agriculturalists. Although agricultural studies have not specifically focused on optimal spacing patterns of shea trees, Boffa et al. (2000: 173) demonstrate that at densities of 12 to 31 shea trees per hectare, parklands comprising regularly spaced shea trees are biologically more productive than fields without trees. The male participants I interviewed stated that poorly located trees are particularly at risk of being removed. For instance, Aséni (25/10/06) recounts that upon establishing a mango plantation, he felled four shea trees that were situated on the site.

Figure 5.5: Typical Shea Tree Spacing Pattern in Fields Cultivated by Gurunsi Agriculturalists (Source: Author 2005)

Shea tree maps located in Appendices XIII to XVII, depicting the spatial distribution of shea trees in the five different types of land uses and fields surveyed, reflect these spacing preferences. For ease of comparison, Figure 5.6 additionally provides two maps for each type of land use as examples. According to the locational information gathered on shea trees growing in Prata's cultivated, fallow, and brush areas, shea spacing patterns vary among different field types. As shown in Tables 5.9 and 5.10, which display and compare the results of the nearest neighbour analyses across land use types, the average distance between trees located in Gurunsi fields (nine meters, shown in the third row) is significantly smaller than the one separating shea individuals in Moose (13 meters) and FulBe fields (27 meters). Likewise, Table 5.10 indicates that average distances between trees in the two latter types of fields significantly differ (ANOVA, $F=9.02908$, $p=0.0083$). Shea individuals also grow much more closely together in fallows (six meters apart, on average) and brush areas (5.5 meters apart) than in cultivated fields.



Cultivated Gurunsi Fields



Cultivated Moose Fields

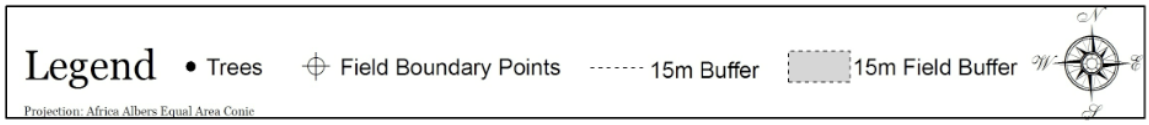
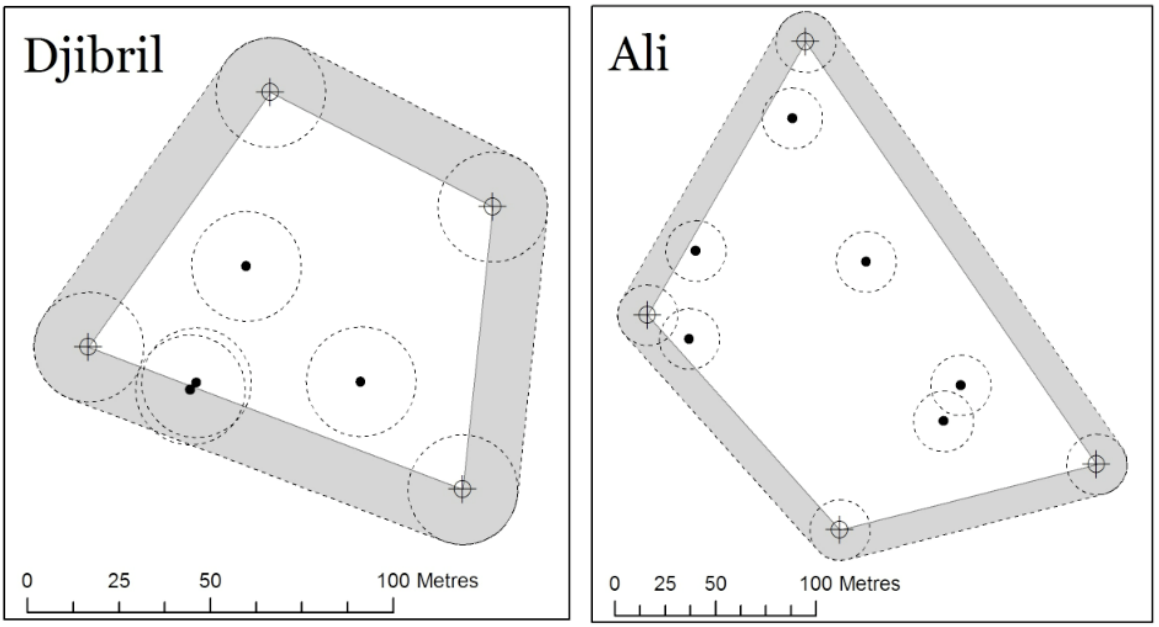
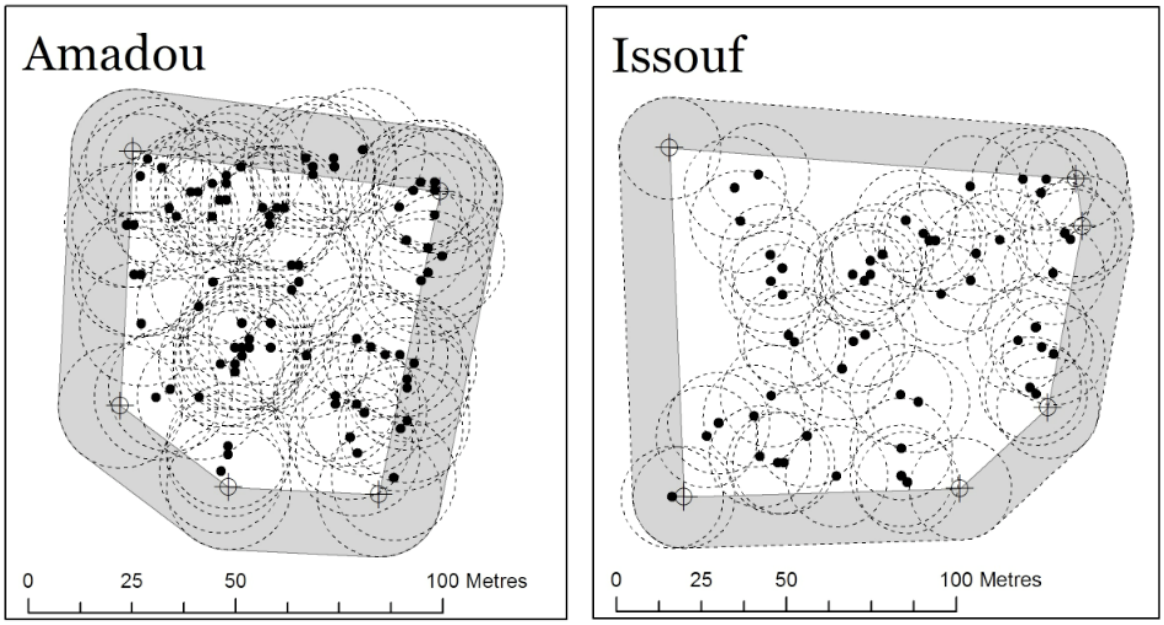


Figure 5.6: Mapped Spatial Distribution of Shea Trees in Five Types of Land Uses

N.B. Names listed in the upper left corner of the maps refer to the male head of the household whose field was surveyed



Cultivated FulBe Fields



Fallow Gurunsi Fields

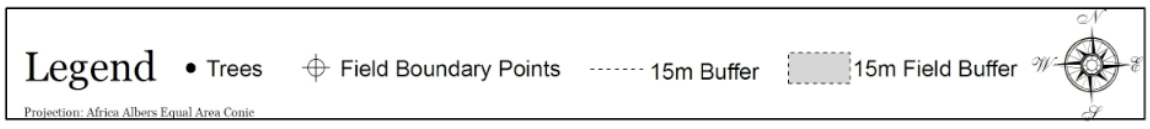
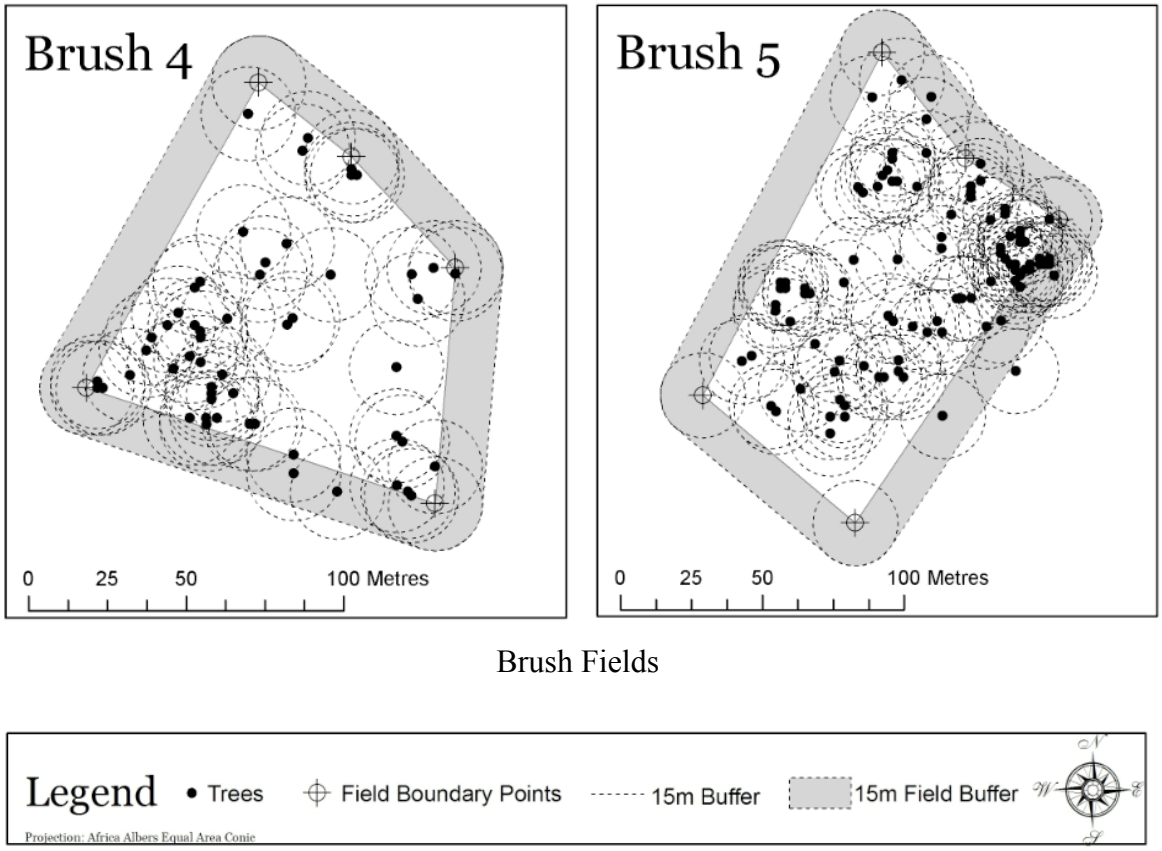


Figure 5.6 (cont.): Mapped Spatial Distribution of Shea Trees in Five Types of Land Uses

N.B. Names listed in the upper left corner of the maps refer to the male head of the household whose field was surveyed



Brush Fields

Figure 5.6 (cont.): Mapped Spatial Distribution of Shea Trees in Five Types of Land Uses

N.B. The titles provided in the upper left corner of the maps indicate that depicted fields were the fourth and fifth brush fields to be surveyed.

Differences in tree spacing are also observed within ethnic groups. Although the average distance between trees found in one Gurunsi farmer's fields was as large as 24 meters, other Gurunsi farmers left as little as seven meters on average between their trees. Likewise, one FulBe field showed an average distance of 47 meters between trees, while another exhibited four times less spacing among shea trees.

Table 5.9: Descriptive Statistics of Prata's Nearest Neighbour Analyses

		Gurunsi Fields	Gurunsi Fallows	Moose Fields	FulBe Fields	Brush Areas
n		18	15	14	4	10
Mean shea tree densities (stems/hectare)		35	77	26	6	74
(meters)	Minimum Nearest Neighbours Distance	7	4	7	12.5	4
	Maximum Nearest Neighbours Distance	24	8	24.5	47	8
	Mean Nearest Neighbours Distance	9	6	13	27	5.5
	Median Nearest Neighbours Distance	8	5	11.5	23	5
	Standard Error	0.94	0.69	1.38	7.65	0.51
	Standard Deviation	3.99	1.62	5.14	15.29	1.62

Table 5.10: F-values of Paired ANOVAs Comparing Nearest Neighbour Distances across Land Use Types

	Brush	Gurunsi Fallows	Gurunsi Fields	Mosse Fields	FulBe Fields
Brush (n=10)					
Gurunsi Fallows (n=15)	0.571				
Gurunsi Fields (n=18)	7.594*	5.924*			
Mosse Fields (n=14)	19.099***	19.661***	5.369*		
FulBe Fields (n=4)	21.184***	28.017***	20.634***	9.029**	

* $p \leq 0.05$; ** $p \leq 0.01$; ***$p \leq 0.001$

As depicted by the shea tree maps in Appendices XIII to XVII, clustering patterns also differ among field types. In the fallow and brush areas (Appendices XVI and XVII, respectively), two thirds and 80 per cent and of the fields surveyed, respectively, showed signs of clustering (a nearest neighbour index less than one).[97] This reflects the fact that most shea fruit fall near or under the tree crown, and that women pile shea fruit at the trees' base, where some of the nuts germinate. Among the 14 Moose fields surveyed

[97] The nearest neighbour index is the ratio of the observed distance between nearest neighbours to the expected distance between nearest neighbours in a hypothetical random distribution. An index of less than 1 suggests clustering, while dispersion or competition is observed when the index is greater than 1.

(Appendix XIV), only those of Arzouma and Aziz exhibited clusters of shea trees, whereas half of Gurunsi fields (Appendix XIII) showed shea tree clustering. None of the FulBe fields (Appendix XV) displayed shea tree clusters. These patterns thus reveal not only the natural regeneration of shea trees, as a reflection of the dispersal and germination potential of their nuts, but also the tree spacing preferences of local peoples. Although preferences for dispersed trees may reduce the overall stock of trees found in cultivated fields, the positive effects these spacing patterns reportedly have on tree yields may offset the lost yields caused by culling closely spaced trees. The net effect on overall shea yields, which have implications for the sustainability of shea butter projects, may therefore be negligible.

In terms of tree densities, one male participant (Sada, 13/02/07) explained that agriculturalists aim to maintain approximately 15 trees per hectare in farmed parklands, but that often over 30 trees per hectare are conserved. Table 5.3 demonstrates that on average 26 trees per hectare are conserved in Moose fields, while as many as 35 trees per hectare are found in Gurunsi fields. One of Lan's participants brings an important nuance to the discussion: tree removal occurs only when *new* fields are prepared. As there are presently few new fields to clear in the village, few trees are being culled. In fields sown with crops over successive years, shea trees are only removed if they have dried up and died (cited by 14 per cent of participants) or have become non-productive.

When trees do grow in close proximity to one another in new fields, male agriculturalists select the specimens they will protect based on the characteristics cited below and listed in Table 5.8. As shown in the upper right column of the table, 41 per cent of participants primarily selected shea trees based on their productivity. Trees with good yields are retained whereas those with poor yields are selected against. Yet, participants specified that tree selection occurs at the time of field clearance, which does not correspond with the period of shea fruit production. It is therefore not possible to assess tree productivity at this time. Similar to their female counterparts, some men stated that they observe tree yields for one to three years before removing shea trees from new fields. 'Male' trees and other poor producers are then culled. The men I interviewed also explained that when fields are left in fallow, shea trees that have been cut at the base will coppice (resprout) and become better producers.

In fields already under cultivation, non-productive shea trees may be eliminated after one to three years of non-production. One-third of male agriculturalists, shown in the right-hand column of Table 5.8, reported that they are further inclined to fell such trees when they provide large shaded areas that interfere with cultivation. Shea trees and branches that produce too much shade—those growing in width rather than height, those that lean, or those that are very low-lying—are then preferentially removed.

For seven per cent of male participants, fruit and nut characteristics also influence tree selection decisions. These respondents claimed the importance of fruit taste supersedes that of productivity. Some consider that fruit size is an important feature, while others still believe that nut characteristics are more important than those of the fruit when deciding which shea trees to conserve.

Some male agriculturalists do not wait to assess tree production before selecting those they wish to retain, but rather rely on the tree characteristics visible during field clearance to guide their decisions. They select individual trees based on their health and vigour, size and/or age, and shape. Foremost among these physical features is the tree's state with respect to parasitism. As indicated in Table 5.8, 16 per cent of male respondents stated that they remove trees that are highly afflicted by semi-parasitic plants or insects, as these sick trees are poor producers. In contrast, healthy trees with firm, green leaves are prized for their superior yields. Male participants also draw a link between age and vulnerability to parasites, with older trees being increasingly susceptible to attacks. For this reason, and due to their reportedly lower productivity as they age, 17 per cent of the men interviewed favour removing older specimens from their fields. In contrast, four per cent of male respondents prefer to cull smaller individuals rather than larger ones. Interestingly, one participant claimed that this is because larger shea trees provide a comfortable shade under which to rest during agricultural labour. This contrasts with the views discussed above whereby large shade-producers are preferentially culled.

Finally, a minority of male participants (six per cent), nearly all of them Moose, from Lan, allegedly conserve all the shea trees in their fields. They explained that felling a shea tree can bring about problems with neighbours, village authorities, and foresters, as many people profit from the species (Ablaye, 12/02/07). Upon requesting land in Lan, the village's indigenous Gurunsi population instructed them to conserve shea trees in

their fields. According to one outspoken Moose migrant (Pamoussa, 15/02/07), whereas the Gurunsi cull some of their own shea trees, they forbid the Moose from following suit. Many migrants resent the fact that the Gurunsi interfere with their tree management regime, and they believe that their hosts want them to conserve shea trees to allow Gurunsi women to collect shea nuts from their fields. Interviewees recounted that in 2006 they could receive a fine of 5000 fCFA (10.56 CAD$) for removing a single specimen. Whereas when they first arrived the Moose could have culled the younger shea trees, these trees have now grown and their removal is no longer permissible nor would it go unnoticed. Although unable to openly challenge their hosts, migrants who perceive and over-abundance of shea trees in their fields covertly reduce shea populations by refusing to remove parasites from their trees. Although this increases the spread of parasites, it represents a natural, and uncontested, method for culling the species (Ablaye, 12/02/07; Pamoussa 15/02/07).

As these results indicate, male and female participants reported similar factors influencing the selection of shea trees in their fields, with high yields, shading effects and spacing ranking at the top of the list. Indeed, as demonstrated by the nearest neighbour analyses, Prata's residents maintain few aggregations of shea trees on farmed lands, and favour instead conserving distantly spaced individuals that will have room to thrive. For this reason, the spatial distribution of shea trees growing in cultivated fields contrasts the clustering patterns of those located in fallows and brush fields. This was also noted in southern Mali, where shea specimens were progressively more clustered from farmland to fallow to brush fields (Kelly et al. 2004). Adequate spacing between trees decreases inter-tree competition, and can improve production and minimize cover charge, thereby creating more homogeneous light and shade conditions conducive to cultivation (ibid 2004).

Interestingly, the female participants I interviewed did not mention the importance of shea nut characteristics in selecting shea trees, whereas a small percentage of the men did. In a comparable survey carried out by Lovett and Haq (2000b) in northern Ghana, female butter makers did cite a preference for trees yielding fatty nuts for butter-making purposes, whereas men considered pulp sweetness, high yields, and shading effects as the most influential shea tree characteristics. In Léo, Lan, and Prata, at

a time where shea nuts have become valuable commodities, it appears that the quantity of shea nuts produced supersedes quality considerations in guiding tree selection.

Tree and nut characteristics aside, half of the women interviewed claimed to conserve all shea specimens growing in their fields; a response shared by only six per cent of men. The assertion may reflect that women are in favour of conserving larger densities of shea trees than their male counterparts, since the species provides them with invaluable revenues. Yet, whether these female participants do, indeed, conserve larger numbers of shea trees in their fields cannot be ascertained, given that tree surveys were performed only in cooperatively cultivated household fields and not in women's personal fields. However, in Thiougou, southern Burkina Faso, Boffa (1995) found that the average density of shea trees in fields managed by male household heads was 20 shea trees per hectare, whereas women's personal fields carried 27 shea trees per hectare.[98] This possibility aside, women's answers may also reflect that, as UGPPK members, female respondents received official training on shea protection and are reiterating the recommendations they were given during the sessions. Finally, female participants, who were generally visibly more socially insecure than their husbands, may be reluctant to admit that they eliminate certain shea specimens, given that this practice is technically against State forestry laws.

5.6.2 Intra-conjugal consultations

As male and female participants cited similar factors influencing tree selection in their fields, the question arises as to whether they select shea trees together in cooperatively-cultivated household fields or whether the process is led only by the (generally male) head of the household. Previous research in West Africa has suggested that although men are the visible managers of arboreal resources in cultivated fields, carrying out field burning and tree culling (Maranz and Wiesman 2003; Chalfin 2004), female knowledge

[98] The Gurunsi and Moose's tenure systems were explained in Chapter 3. Briefly put, households cooperatively cultivate fields, which are under the control of the (generally male) household head for common consumption. In exchange for their labour in these fields, able-bodied men and women of the household are attributed personal plots, from which they retain the value of the yields produced. On these fields, women are solely responsible for the selection and protection of shea trees. However, as these fields are regularly re-incorporated into the pool of household lands during rotational fallows and eventually reattributed, the shea trees encountered in these fields reflect more than women's management practices, but also those of former land managers.

may play a covert role in guiding the management process (Carney and Elias 2006). This is particularly plausible in the case of a tree resource such as shea, which is closely associated with the female sphere of activities.

When asked about whether or not they consult each other before cutting shea branches or removing shea trees from cooperatively cultivated household fields, male and female participants gave different responses. Just over half the female participants claimed that their husbands single-handedly decide whether or not to maintain specific shea individuals in these fields. These women admitted, however, that they become rather upset at their husband if, upon arriving at these household fields, they realize that their spouse has felled productive shea trees or branches. The remaining female participants explained that they and their husbands discuss which trees to conserve, since women are attentive to the best producers. Although the male spouse ultimately chooses which specimens to eliminate, women thus provide input to guide their decisions. In a woman's personal field, she alone decides which shea trees to conserve.

In contrast, nearly three quarters of male participants maintained that they consult their wives before eliminating shea specimens in commonly cultivated household fields. A number of these male participants concurred that women are more knowledgeable about the trees with the highest yields or those providing the best quality nuts. They therefore explained that they inform their wives of the shea trees they intend to fell and gauge their reaction to verify that their choice is sound. Others request their wives' input outright to guide their decisions. One participant explained that he alone decides which branches to cut, but that his wife helps him select the individuals worthy of conservation (Yaya, 13/01/07).

The consultation process is contingent upon women being in the fields at the time of land clearance, when shea trees are eliminated. Male participants pointed out that this is not always the case since clearing fields is a man's task, performed without female assistance. Women's absence in the fields at this time is the primary reason given by the men who reportedly fail to consult their wives about shea tree selection and conservation.

Finally, as one Moose participant from Prata reminded us, the land has been entrusted to him, and he has the final say in all matters of landscape management (Raso, 04/12/06). Moreover, despite any female input in the process, men are the ones who

actually fell the trees and branches.[99] Notwithstanding, the testimonies of more than half of male and female respondents, who contend that spouses discuss the selective conservation of shea trees in their fields, suggest that shea protoculture has been led by both male *and* female agriculturalists. This covert female role in arboreal management and conservation has been overlooked by scholars working in sub-Saharan Africa (Carney and Elias 2006).

5.7 CONCLUSION

In this chapter, I have sought *to investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered.* As I have illustrated, shea is an integral part of the (agri)cultural knowledge systems of Moose and Gurunsi peoples residing in the province of Sissili, Burkina Faso. This is reflected in the features of the shea parklands encountered in and around the town of Léo and the villages of Lan and Prata. The advent of shea butter projects that have consolidated the UGPPK, and of growing international markets for shea butter—which together have increased the economic value of this NTFP—have raised the question of whether increased competition for, and harvesting pressure on, shea nuts are threatening the species' regeneration. In enhancing our understanding of the current state of shea parklands in the province of Sissili, this chapter has contributed towards an assessment of the ecological sustainability of shea projects, which hinges on the existence of a vigorous shea population.

The analyses presented in the initial sections above have shown that the population structures of shea trees growing in the fields of Gurunsi, Moose, and FulBe participants differ. Indigenous Gurunsi villagers conserve a large number of small shea specimens, thereby facilitating the species' regeneration. Hence, their agroforestry practices demonstrate that, under favourable management conditions, shea parklands are not necessarily fated to age and degrade across the shea belt. In contrast, Moose and FulBe migrants eliminate small tree specimens in their fields, which is a cause for concern for shea tree regeneration on their lands. The FulBe, who are primarily herders,

[99] Unwanted trees are usually culled by ring barking. Once dried, their wood is used as charcoal or in the production of mortars and poles. While women do not fell branches themselves, they may ask their husband to remove semi-parasitic plants from the trees as well as undesirable branches.

do not rely on the shea tree to the same extent as their agriculturalist counterparts and have few incentives to conserve the species. In turn, the Moose practice a form of shea agroforestry that evolved in areas with inferior tree densities. The population structure of shea trees growing in their fields also reflects the insecurity of their land tenure due to their migrant status in the area that creates a disincentive to conserve and care for immature shea trees from which they may not benefit in the long term. Programs and projects seeking to enhance arboreal conservation in the study areas must be attentive to these considerations.

Despite these observations, the high densities of shea trees growing in Gurunsi and Moose fields suggest that, given appropriate conservation practices, the species has the potential to regenerate. The fact that regeneration is also occurring in the Gurunsi's fallow fields and in brush areas is important to note, as it brings a local contrast to studies declaring the widespread degradation of shea parklands. The abundance of small specimens in these areas further suggests that the increased harvesting pressure for shea nuts in recent years, discussed in the following chapters, is not (yet) reflected in the state of shea parklands. Ensuring the vigour and persistence of shea parklands will require not only the maintenance of sustainable harvesting conditions and the retention of small and large shea specimens at appropriate densities, but also controlling the proliferation of semi-parasitic plants. These plants, which are prevalent in the study area, stunt the growth of their host and can lead to high mortality rates among shea populations. The difficulty of culling parasites that latch on to the trees' upper limbs thus requires the attention of researchers and extension agents.

The interview data I collected from the three study sites further demonstrates that the extensive knowledge of shea trees and their derivatives held by Burkinabè farmers is not noticeably differentiated according to gender. Women were more knowledgeable about the medicinal properties of shea, yet both women and men demonstrated a profound awareness of the trees providing the best yields, the factors affecting shea tree productivity, desirable shea nut characteristics for making butter, and uses for the species. The benefits the shea tree offers to women and men, who both engage in everyday interactions with the species, as well as the sharing of ecological knowledge within the household, likely explain this occurrence.

Likewise, despite the differences noted in the structure of shea populations growing in the fields of Gurunsi and Moose participants, these two ethnic groups demonstrated a comparable knowledge of shea and similar methods of shea tree management. This is somewhat surprising given that culture mediates men and women's productive and reproductive rights and responsibilities, leading distinct ethnic groups to relate differently to natural resources (Okin 1994; Howard 2003; Kristensen and Balslev 2003). Yet, the similarities found in the Gurunsi and Moose responses may owe to the fact that shea has long been integrated into the livelihoods and experiences of both Moose and Gurunsi agriculturalists. It is also possible that the recent history of co-residence among the Moose and the Gurunsi in the province of Sissili has favoured a convergence of their agroforestry practices (Howorth and O'Keefe 1999b). Through their daily interactions, these different ethnic groups witness and learn agroforestry techniques from one another. These exchanges favour the development of a hybrid form of agroforestry, which integrates features from the farming systems of both ethnicities.

Moose and Gurunsi men and women additionally reported similar factors guiding the selection of shea individuals in farmed fields, among which spacing, productivity, and shading effects played a primordial role. These factors are reflected in the physical features of farmed fields, wherein shea populations show few signs of clustering, as opposed to those growing in fallow and brush fields. These results suggest that shea tree protoculture has been led by both male and female agriculturalists, who frequently consult each other concerning the selection of shea trees in cultivated fields.

In sum, these results signal favourable prospects for the ecological sustainability of shea butter projects. Yet, interview data highlight the importance of considering not only the size and structure of the shea tree population, but also its yield in determining the sustainability of shea projects. Unfortunately, shea butter producers have reported a marked decline in shea yields over the past two decades. As tree productivity is difficult to predict, it is not possible to determine whether this trend will continue in the years to come. It is clear, however, that semi-parasitic plants that negatively affect these yields and lead to the deterioration of the shea population can jeopardize the ecological sustainability of shea projects, and must kept in check.

I have shown in this chapter that the feminist political ecology approach—in its attention to the gendered power relations and culturally-specific, historically-rooted patterns that guide resource use decisions—can gainfully inform the study of indigenous resource management systems. I have additionally demonstrated the value of carefully examining biophysical processes, which political ecology analyses have been criticized for neglecting, in such studies. In my attention to both the biophysical and social features of shea parklands, I have pushed the boundaries of previous studies focusing exclusively on one aspect or the other of the shea resource.

Finally, parkland conservation programs are being widely implemented throughout the shea belt, as shea has been included on the Food and Agriculture Organisation's (FAO) priority list of African forest genetic resources (Lovett and Haq 2000b). These programs, as well as studies on shea, must solicit the cooperation of local farmers who have a profound knowledge of the species' ecology and particular challenges. Moreover, shea tree management and conservation hinge not only on the species' behaviour, but also on farmers' perceptions of this behaviour. Indigenous ecological knowledge and opinions can thus provide critical guidance in the creation of culturally sensitive and rational arboreal management programs. Further research comparing scientific data with indigenous perceptions of species' ecology and vegetation dynamics is required to shed light on the extent to which these forms of knowledge overlap. Moreover, partnerships between researchers, extension agents, and agriculturalists may prove invaluable for improving desirable shea characteristics, ensuring the species' regeneration, and assisting in the longstanding process of shea protoculture led by male and female agriculturalists. As discussed in the following chapter, attention to shea tree ecology becomes all the more crucial at this time, when valued shea nuts are gaining global popularity and entering new international commodity chains.

CHAPTER 6

SHEA NUT COMMODITY CHAINS IN SISSILI AND BEYOND

6.1 INTRODUCTION

The shea nut trade is central to the Burkinabè economy. For centuries, shea nuts have been traded within Burkina Faso and the West African sub-region, particularly by rural women who have few other revenue-generating options. Since the 1990s, this traditional commodity has renewed its importance in the international economy. The growing value of shea exports to Europe, North America and Japan provides an opportunity to examine the ways global market trends can influence producer livelihoods and local development.

According to Dolan (2004), a commodity chain analysis (CCA) provides a useful framework for discerning the local development potential of global economic changes. Indeed, as discussed in Section 2.4 of Chapter 2, where I present my conceptual framework, the study of "networks of labour and production processes whose end result is a finished commodity" (Hopkins and Wallerstein 1986: 159) can shed light on the uneven power relations and distribution of rents among actors at different stages of the commodity's journey, and explain why some agents are able to retain more of the product's value than others (Ribot 1998; Shillington 2002). CCA can further reveal how actors occupying the chain's different nodes manage to access new market niches and capture emerging opportunities. In its commodity circuits strand, the approach examines the meanings imbued in commodities as they journey along the chain, and the ways these meanings influence chain dynamics. Finally, CCA considers the performative nature of commodity chains, which respond to the agency of the social actors (individuals or collective entities) who "ideologically and materially construct, maintain, and transform" them (Raynolds 2002a: 404). The approach thus offers a useful perspective from which to examine the changing configurations of shea nut production and exchange in a context of global market changes.

Using this perspective, in this chapter I examine the collection and exchange of *shea nuts*, before these are transformed into butter. The closely related *shea butter* commodity chains are discussed in the subsequent chapter, as they involve distinct pathways and various other actors than the ones involved in the shea nut trade. In what

follows, then, I address the first part of Objective 2 of this thesis, which is: "to analyse the conventional international shea nut commodity chain originating in the centre-west region of Burkina Faso." This analysis contributes to my overall aim of assessing the sustainability of shea butter projects in the centre-west region of Burkina Faso. The discussion below begins at the node of shea nut collectors, and eventually reaches across the ocean to the agro-industry giants that purchase and transform shea kernels into butter.

In this chapter, which is divided into six sections, I first provide a brief history of the international commerce in shea nuts over the past eight centuries (Section 6.2). The discussion then turns to the contemporary—post West African independence in the 1960s—shea nut commodity chain (6.3), beginning with an examination of the key issues affecting shea nut collectors (6.3.1). Rural and town-based shea kernel vendors are considered in Sections 6.3.2 and 6.3.3, respectively, following which I examine the purchase of shea kernels by small-scale shea butter producers in Section 6.3.4. Large-scale intermediaries as well as the Western agro-food industries that complete the shea nut commodity chain, are discussed in Sections 6.3.5 and 6.3.6, respectively. In conclusion (6.4), I review some of the salient features emerging from this analysis for understanding patterns of local development and the sustainability of shea butter projects.

Through an analysis of the shea nut commodity chain, I illustrate in this chapter how a changing global political economic and ecological context—characterized by emerging markets for shea nuts, shifting consumer preferences, international aid tendencies, improved transportation networks, and fluctuating biophysical processes—affects the livelihoods of women and men involved in the shea nut sector in the centre-west region of Burkina Faso. I argue that, in a constitutive nature, these actors are not passively drawn into the global economy, but are actively carving themselves a space within which they can seize emerging opportunities and redefine these to suit their needs. Along the commodity chain's different nodes, savvy business-men and women are adopting diverse strategies to try and capture the greatest possible share of returns.

I further demonstrate that international political-economic pressures—consisting of demand for inexpensive shea nuts trafficked via Ghanaian businessmen as well as Western demand for high quality shea butter supplied via the shea producers' Union—have created distinct niches for shea nuts and butter of different grades, which are

supplied at distinct prices.[100] In the centre-west region of Burkina Faso, these processes have had deep consequences, reaching down to women's access rights to shea nuts; methods of shea nut preparation; the assortment, roles, and negotiating power of different actors; and the biophysical shea landscape. All of these consequences have implications for the sustainability of shea butter projects in the region.

Third, and related to the first two points, I contend that the consequences of an evolving shea nut market are differentiated across gender and ethnic lines. The ways in which these actors are affected by and respond to international economic prospects and challenges are as varied as the actors themselves. Although shea nut collection has traditionally been the purview of women, men are now joining the ranks of nut gatherers. With their greater access to social and financial capital as well as transportation, men are better able to capitalize upon emerging economic opportunities than their female counterparts. Male intermediaries, exporters, and importers capture the most remunerative positions of the market. In terms of ethnicity, migrant ethnic groups face particular challenges in entering new markets for shea. I elucidate these points as they arise, as well as their influence on the sustainability of shea butter projects, in my analysis of the different nodes of the shea nut commodity chain.

6.2 Brief History of the International Shea Commerce

Over the past 800 years—during which many of the patterns observed in the contemporary shea commodity chain evolved—the international trade in shea nuts and butter has involved a variety of actors and adopted shifting configurations. The earliest recorded references to shea date from the 13th century, when shea butter was traded as far south as the Volta River in Ghana for products from the coast (salt and fish) and forest (kola nut) (Ehret 2002). Traveling along trade routes that crossed the Sahara at the time, Muslim explorers to the region provided written records of the processing and international trade in shea nuts and butter (Lewicki 1974; Levtzion and Hopkins 1981). By the turn of the 19th century, when Scottish Explorer Mungo Park (2000 [1799]) undertook his famed voyage to the West African interior, shea butter represented one of

[100] The shea producers' Union refers to the *Union des Groupements des Productrices de Produits Karité de la Sissili et du Ziro* (UGPPK), an association female shea butter producers that exports shea butter overseas. This Union was formed in the context of the shea butter projects on which this study focuses.

the main merchandises exchanged between African regions via long-distance trade caravans.

In addition to maintaining prominence as a regional trade item, shea gained currency in European countries throughout the era of legitimate commerce.[101] Royal British, French, and Dutch merchant trading houses operating in Africa, such as the Royal Niger Company, exploited the potential of the shea nut commerce via intermediary local and foreign traders (Dorward 1975), and charged duties upon merchants competing for shea exports (Newbury 1972).

During the colonial period, shea butter retained its importance within the aforementioned inter-regional networks centred on salt (Sutton 1989).[102] Concurrently, European demand for shea nuts intensified as Europe's "new vogues of cleanliness and nocturnal illuminations" gathered momentum, drawing upon the use of vegetal oils in candle production and soap making (McPhee 1926: 31). In addition, the expansion of mechanization during the industrial revolution depended on the use of vegetal oil as an industrial lubricant (Hopkins 1973). In exchange for European firearms, spirits, and textiles, Africans produced shea butter surpluses for trade purposes (Awe 1973). The oil trade dominated African-European economic relations and directed West African economic history throughout the century (Pehaut 1976). In light of the importance of shea products to their economy, French and English colonial administrators sought ways to improve shea nut and butter production (Pehaut 1976; Carney and Elias 2006).

Shea nuts were exported from Europe's former West African colonies via colonial merchant trading houses, which favoured the import of raw shea nuts over butter.[103] At the time, shea already provided an ingredient in margarine and a substitute for cocoa

[101] The 'era of legitimate commerce' refers to the nineteenth century, prior to colonialism in 1885, to distinguish it from the illegitimate sale of human beings during the 350-year transatlantic slave trade (Law 1995).

[102] The official partition of Africa into European colonies occurred in 1885, at the Berlin Conference. African colonies gained their independence nearly a century later, as decolonization began in the 1960s (Wickins 1986).

[103] Although importing processed butter over raw shea nuts reduced the weight of the transported product by as much as 50 per cent, firms preferred to import shea nuts because of the dubious quality and odour of the product transformed according to traditional methods. Moreover, processed butter was subject to an import tax in Europe and represented a loss for urban European processing plants. Packaging shea butter also remained a problem, and the specialized containers required to transport processed butter overseas were expensive. Finally, importing raw shea nuts over butter was favoured to free up the labour of African women and children, who could then collect larger quantities of shea fruit (Pehaut 1976: 442).

butter in the manufacture of chocolate. While Belgium, Denmark, the Netherlands, Germany, France and Britain vied for the product, the French and the British dominated its commerce (Carney and Elias 2006). Since the early 20th century, British firms such as Unilever, Holbing, and Taylor, along with French company Rocca et Tassy de Roux, battled for shares of the desired commodity (Pehaut 1976). This context set the stage for the contemporary shea nut commerce, which continues to be dominated by inter-regional exchanges, few large agro-firms and a number of small producers and traders.

As is the case today, the colonial export market was characterized by irregular shipments of shea nuts in terms of volume and quality (Figure 6.1). There are several reasons for this, including marketing and transportation problems and a fluctuating industrial demand for shea. Inter-annual variations in shea exports reflect oscillations in the tree's annual productivity, competition from demand for other vegetable oils (such as sesame, palm, groundnut and cotton oils), large-scale political-economic trends, and wavering international market prices that negatively affect women's incentives to collect and process shea nuts (Crélerot 1995; Elias 2003; Carney and Elias 2006). As with other products which are artisanally produced and informally traded in West Africa, the volatility depicted in the data also results from unreliable statistics (UNCTAD 2006).

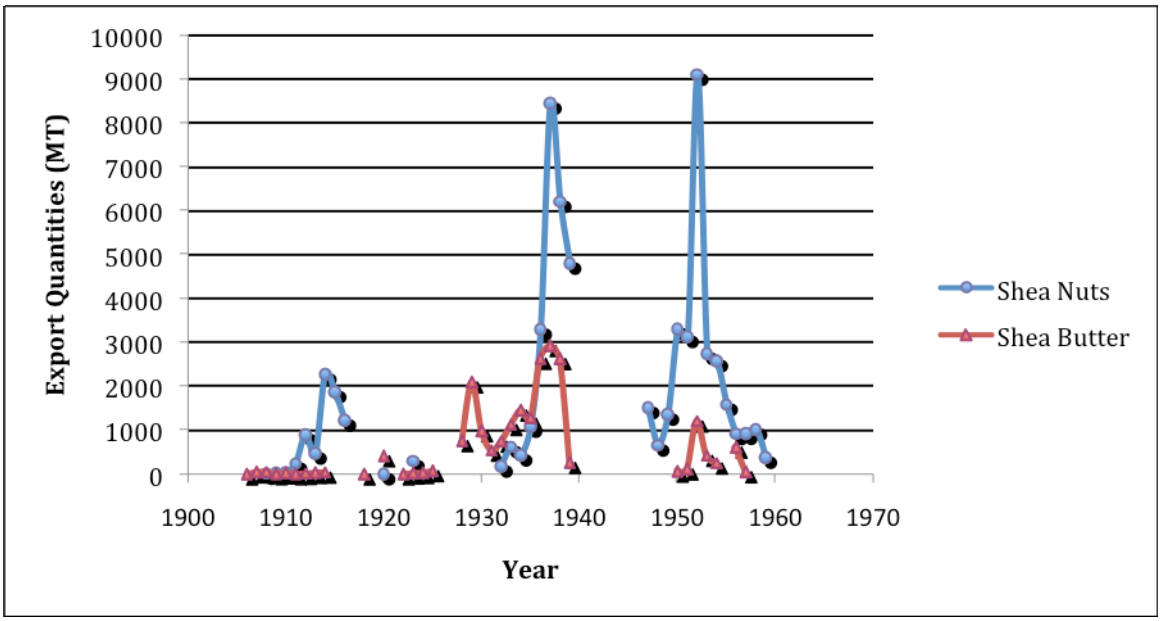


Figure 6.1: Colonial Shea Exports from Upper Volta, 1906-1959
(Source: Péhaut 1976: 446, 673, 874)

Following the independence of Upper Volta and other West African states in the 1960s, international demand for shea nuts and butter continued to grow. At the turn of the 21st century, shea nuts represent an essential source of foreign exchange for impoverished countries such as Burkina Faso, where shea figured as the third most remunerative export in the late 1980s (World Bank 1989; Harsh 2001). In this small, landlocked country, international policies and consumption fads are reshaping the nodes along the shea nut and butter commodity chains. For one, the shea nut and butter vendors I interviewed in the centre-west province of Sissili reported profound changes in the composition, structure, prices, and actors involved in the shea market since 2004 or so. As discussed below, these changes chiefly stem from two interrelated factors; first, the presence of NGO-devised shea projects and the creation of a shea producers' Union (the UGPPK); and second, heightened international demand for shea nuts. Combined, these factors have rendered shea nuts a valuable commodity in Léo and surrounding areas.

6.3 CONTEMPORARY SHEA NUT COMMODITY CHAIN

The international shea nut commodity chain I observed during fieldwork is depicted in Figure 6.2 and is examined in the rest of the chapter. I begin the discussion of this chain by investigating the node of the shea nut collectors, who perform the labour-intensive task of gathering the raw material that fuels the rest of the chain (Section 6.3.1). Specifically, I consider how access rights to shea nuts are renegotiated in light of the increasing competition involved in the collection process, and how emerging markets for shea nuts are altering collection practices (6.3.1.1), including the spatiality of nut collection (6.3.1.2), and the quantities of nuts collected (section 6.3.1.3). I then turn to the process of preparing shea kernels (6.3.1.4), and finally to kernel quality considerations (6.3.1.5). I consider the importance of these processes for the sustainability of shea butter projects in the region, before examining the rest of the kernels' journey along the commodity chain.

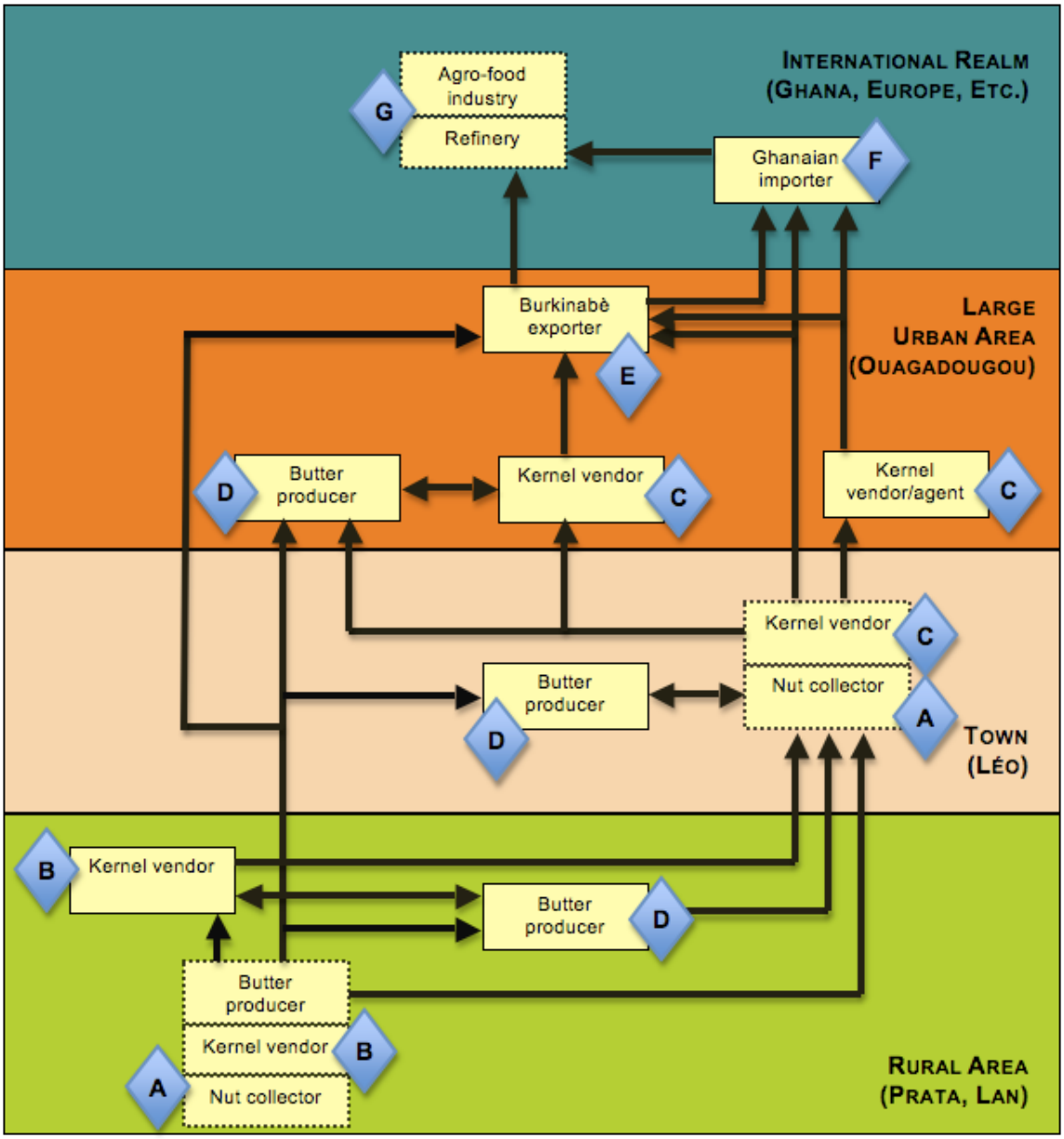


Figure 6.2: Shea nut commodity chain originating in the centre-west region of Burkina Faso

N.B. Dashed lines (---) indicate that the actors involved at a given node may be one and the same.

6.3.1 Shea Nut Collectors

Along with the shea trees that provide the prized shea fruit, shea nut collectors (labelled 'A' in Figure 6.2) form the bottom echelons of shea nut and butter commodity chains. All ethnic groups (Gurunsi, Moose, and FulBe) residing in and around Léo currently

participate in shea nut collection and trade.[104] Nut gathering is customarily a female responsibility; women and children, particularly daughters, collect shea nuts in farmed fields, fallows or in the bush. These nuts are then processed and shelled before being sold as kernels.

As with other natural resource-based activities in the Sudano-Sahelian zone, such as the collection and sale of tamarind pods, African locust beans (*néré*), baobab fruit, and other NTFPs, shea nut collection is seasonal. In the centre-west region of Burkina Faso, shea fruit come to maturity between the months of June and September. This period corresponds with the rains as well as the peak of the agricultural calendar. At this time, agriculturalists are time-constrained as they must sow, weed, and harvest their crops. Whereas female Moose farmers perform each of these tasks, Gurunsi women sow and harvest but are exempt from weeding, which is reserved for men. In both cases, however, nut collection is juxtaposed on a full labour calendar and exacerbates female labour burdens (Figure 6.3). As I explain below, the labour-intensive process of nut gathering traditionally occurs according to normative rules about where and how the activity should be conducted, and is increasingly subject to stiff competition.

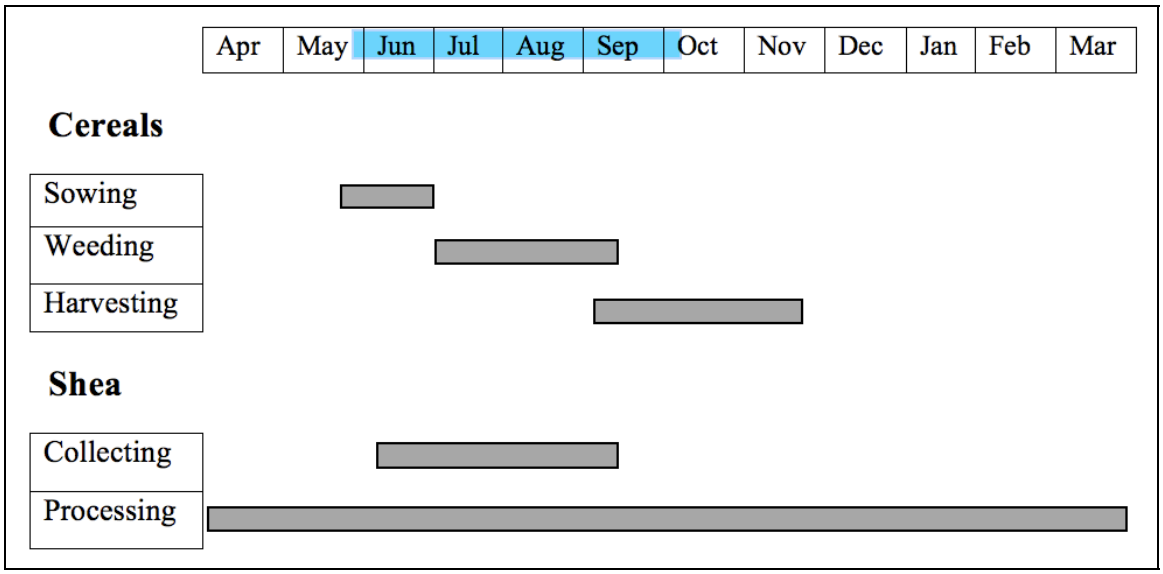


Figure 6.3: Agricultural calendar of female agriculturalists in the province of Sissili

N.B. Rainy season months are highlighted in blue

[104] Most of Léo's residents collect shea nuts on the outskirts of the town, where they cultivate. As the density of Léo residents is high, however, competition for these nuts is particularly fierce.

6.3.1.1 Occupational Competition and Renegotiations of Shea Nut Usufruct

All of the shea nut collectors I interviewed in Léo, Lan, and Prata reported a sharp increase in competition for shea nuts since approximately 2003-2004. Participants, who are nearly all members of the Union of shea butter producers discussed in Chapter 7, attributed this competition to two main and two secondary factors. First, it is related to poor shea yields in the past couple of years. Then, and as further discussed later, the presence of the UGPPK and of Ghanaian buyers on the shea market has increased the demand for shea nuts. To a lesser extent, some collectors ascribed competition to demographic growth, which has led to a greater number of shea nut gatherers. Finally, in Prata, the development of wider footpaths and of a dirt road has facilitated transportation, thereby enhancing competition for the nuts within the village (Minata, 17/01/07). By allowing collectors to head-load their nuts only part way, from the field to the roadside, and to complete their journey on a donkey-cart, the road has increased the mass of nuts each collector can potentially gather.[105]

In the three study sites, this increased competition is triggering changes in regional nut collection activities and access rights to shea nuts. Customary rights to harvest shea nuts, which derive from a spontaneously growing (versus planted) tree species, vary considerably throughout West Africa (Saul 1988; Boffa et al. 1996). A person's access rights to shea trees and products correspond to land type (cooperatively farmed, individually-farmed, or unclaimed) and to a person's indigenous or migrant status, among other factors. In Burkina Faso, shea nuts are most commonly gathered from trees growing in the household's cooperatively farmed fields or in the personal plots women and young men cultivate (Ruyssen 1957; Boffa et al. 1996). [106] As is the case in Burkina Faso's Moose Plateau (Saul 1988; Boffa et al. 1996), the Gurunsi men and women I interviewed agreed that in these fields, shea nuts are the right of the land's custodian.[107]

[105] While gathered nuts are generally head-loaded, some women have access to a bicycle or occasionally to a donkey cart (their husband's) to transport their nuts.

[106] Boffa et al. (1996) report that in a village of southern Bukina Faso, 85 per cent of nut collection occurred in farmed fields. The remaining nuts were gathered in forests and fallowed fields.

[107] Interestingly, however, any person can eat the pulp of shea fruit on farmed lands, but must return the shea nut under its tree for collection by those with privileged access rights (Boffa et al. 1996).

Specifically, in a woman's personal fields, she alone can collect shea nuts and traditionally retains the entire value of these gathered products (Terpend 1982; Boffa et al. 1996). In turn, on cooperatively farmed household fields, the (generally male) household head grants rights to the use of shea trees and products to his wives and daughters-in-law.[108] For instance, in Léo and Prata, all the Gurunsi men I interviewed explained that only their wives and female relatives are allowed to gather nuts from their fields. Likewise, nearly all female Gurunsi participants considered that any non-kin women who collect nuts from their fields are committing theft. Since every woman gathers her own nuts and demand is great, competition is triggered among co-wives and co-daughters-in-law who share access to these trees. Among some co-wives, access to shea nuts is on a first-come-first-serve basis, whereas others have set days during which each woman can collect nuts from household fields (Ayi, 25/10/06; Kadia, 09/01/07). Boffa et al. (1996) have noted that patterns of female income retention vary, as the male head of the household may request compensation for the commercialization of shea products gathered on cooperatively farmed household fields.[109] This practice, which was not reported in my three study sites, may increase as shea gains economic value.

On borrowed fields, the lending landholder maintains rights to the value of gathered shea nuts (Saul 1988). As explained by my study participants, Sissili's Gurunsi land chiefs have accorded Moose and FulBe migrants rights to land for cultivation. Unlike indigenous Gurunsi inhabitants, however, these 'strangers' have weak access rights to shea nuts in these fields (Adiata, 13/01/07). This is reflected in the statements of the Moose migrants who participated in this study. In contrast to Gurunsi interviewees, who stated that only female relatives are entitled to collect shea nuts in household fields, the majority of Moose respondents explained that they could not deny any collector from gathering shea nuts in their borrowed fields. In fact, 87 per cent of male Moose participants in Prata and 53 per cent of those in Lan reported that *anyone* is entitled to collect shea nuts from their fields. Alluding to the fact that the shea tree grows

[108] This is also the case in Ghana where women collects nuts from their husband's plots and fallowed fields (Fobil 2003). In contrast, in Mali, rights to shea nuts in farmed fields are granted to every woman, regardless of the land user (Gakou et al. 1994).

[109] In Thiougou, southern Burkina Faso, women retained the entire value of the income earned with shea commercialization 66 per cent of the time. In 27 per cent of the cases, income was shared between the female collector and the male head of the household, while the latter retained the entire value of shea sales in seven per cent of the cases (Boffa et al. 1996).

spontaneously and is not planted, one Moose participant stated: “God made the shea tree for everyone” (Ouséni, 13/01/07). To be sure, in a highly competitive context for shea nuts, everyone is seeking access to the tree’s bounty.

Finally, throughout the shea belt, nut collectors traditionally gain access to shea derivatives on a first-come-first-serve basis in unclaimed lands, which villagers use for pasture as well as fuel wood and plant collection (Elias 2003; Fobil 2003; Elias and Carney 2005). In these areas, shea trees are customarily considered an open access resource, and only shea nuts that have been piled beneath (shea) trees are off-limits. Across ethnicities, appropriating another woman’s piled shea nuts is considered theft and is highly stigmatized. Moral claims enforce this custom. For instance, in Tenkodogo, south-eastern Burkina Faso, children are said to die if their mother steals a pile of shea nuts (M. Zéba, June 2001). Given the weight of this claim, this form of theft tends to be a very rare occurrence. Open access to shea nuts in bush areas engenders competition among women during the period of shea nut gathering in years and/or areas where tree yields are low and nut demand is great. This has become commonplace in recent years since the shea nut market has become increasingly remunerative.

This intense competition for shea nuts has led to changes in nut collection patterns in cultivated fields. Female and male participants explained that competition for shea nuts has led to an increase in unsanctioned nut collection in these fields and to disputes among female collectors. In fact, nearly all the female participants in Léo, Lan, and Prata claimed that shea nuts are unrightfully harvested from their fields before dawn, prior to their arrival. Gurunsi women mainly attributed nut theft to Moose and FulBe women. Gurunsi women from Lan also believed that people travel from as far as Léo, ten kilometres away, to illicitly collect nuts in their village (Focus group, 01/02/07).

According to Gurunsi interviewees, gatherers who trespass into cultivated fields are verbally insulted and may have their nuts confiscated. Punishment depends on factors such as the familiarity between the land user and the intruder, the number of times the culprit has trespassed, and the indigenous or migrant status of the intruder. Two of the Moose nut collectors confided in me that if they were caught in Gurunsi fields, they would be disparaged (pejoratively referred to as ‘*Gaoulia*’, meaning person of the bush) and chased (Assétou, 27/10/06; Tibila, 16/01/07). In my study, 84 per cent of female

Gurunsi participants living in Léo admitted that they confiscate the nuts of intruders, whereas 17 per cent simply chase the culprit away. The Gurunsi women I interviewed in Prata showed more tolerance; 13 per cent confiscated the intruder's shea nuts, and 67 per cent simply dismissed the intruder. The remaining 20 per cent of participants claimed to tolerate these intrusions, as they are motivated by desperation and the need to eat, which all villagers share.

Female Moose respondents, in turn, explained that they deal with intruders on two levels. They reported that Gurunsi women state that migrants "did not bring the earth" to the village (Bibita, 05/02/07), and that as "strangers", the Moose were granted access to land for cultivation, but not to its shea trees (Brigitte, 27/10/06; Céline, 27/10/06). Gurunsi women therefore openly collect nuts from Moose fields. To avoid problems with their hosts, some migrants claimed to passively tolerate these intrusions (Assétou, 27/10/06). When other Moose or FulBe women collect nuts from their fields, however, Moose women reportedly chase away intruders and may confiscate their pickings (Adissa, 27/10/06).

Intense competition has also led to a renegotiation of access rights to shea nuts between indigenous Gurunsi women and female migrants in unclaimed, brush lands. In the three study sites, female Gurunsi collectors are now claiming greater rights to shea nuts in these areas than their Moose and FulBe counterparts. The migrant women I interviewed in Prata reported problems during nut collection upon encountering Gurunsi nut gatherers on those lands (Yoro, 27/01/07; Sira, 28/01/07). They explained that the indigenous population may confiscate their shea nuts, and that in some instances, clashes have escalated.[110] For instance, one FulBe woman was warned that she would be murdered if she was caught collecting shea nuts in the bush again (Aissa, 27/01/07). Although other villagers assured me that this is an over-dramatization, it does depict the weakness of migrants' claims over shared resources which become scarce and/or gain value. Moreover, these occurrences demonstrate how the prospective economic gains to be made in an increasingly lucrative shea nut market are unevenly distributed across ethnic groups in the province of Sissili. Indigenous ethnic groups, which are in an

[110] The situation is even more critical with respect to the African locust bean (*néré*), which is rarer than the shea tree, and also very valuable. Some Gurunsi women request payment from FulBe women if they encounter them collecting *néré* pods (Yoro, 27/01/07).

advantaged position in terms of their access to the valued resource, are better able to seize these new opportunities than their migrant counterparts. In this way, the new economic prospects arising within the shea nut trade have reaffirmed the dominant power relations among the region's ethnicities.

In light of the fierce competition for shea nuts, female participants from Prata concurred that during the shea season "you must not be lazy" (Koulsoum, 13/01/07); you must wake up at "the crow's first song" (around 4:30 a.m. or 5 a.m.) and arrive in your fields before others do (Nouria, 13/01/07). One female Gurunsi participant stated, "nowadays everyone is looking for money. If you don't wake up very early someone else will have already taken your nuts by the time you arrive in your field" (Azéra, 19/01/07). Respondents recounted that stiff competition also leads some collectors to sleep in their fields during the rains. Others attempt to swiftly arrive at their fields by travelling by bicycle when possible. Old women, who require more rest and move more slowly, are particularly disadvantaged by this competition (Fatimata, 15/11/06; Minata, 17/01/07; Malika, 17/01/07). In fact, many older shea butter producers reported purchasing the greater portion of their nut supplies because they can no longer collect substantial quantities.

Amid such a competitive context, one of men's contributions to their wives' shea nut endeavours is their early arrival at household fields (Alizéta, 20/10/06). Shea trees produce during the sowing and harvesting periods, at which time male farmers must safeguard their seeds and crops from hungry partridges at dawn. As women have to cook, collect water, and care for their children in the morning, they frequently reach their fields after their husbands. Women also travel more slowly than their husbands, as they are generally on foot and spend time collecting shea nuts on their way to their fields. On household lands, participants report that the husband's presence is generally enough to deter intruders from collecting shea nuts that have fallen overnight, and to chase anyone unrightfully collecting nuts from their fields. Fati (20/10/06) explains that in (very) rare instances, husbands will even pile nuts beneath shea trees to claim them for their wives before their arrival.

Beyond its social consequences, competition for shea nuts also affects the quality of the gathered product. As we will later see, shea nut quality partly hinges on the method

and timing of nut collection. Mature shea nuts are traditionally gathered only from the ground, and moral sanctions have traditionally ensured proper collection methods as well as shea tree regeneration. For instance, the Moose have stigmas against the collection of unripe shea fruit. This transgression is believed to upset the balance between humans and the bush, leading to land degradation in these areas (Luning 2007). Likewise, Prata's indigenous Gurunsi participants explained that certain old shea specimens are considered sacred. Unripe fruit plucked from their branches can be used to inflict harm upon others (N. Diasso, January 22, 2007). Hence, it is socially distasteful to be discovered picking shea fruit from these trees. Yet, in recent years, poor yields and increased demand for shea nuts have impelled collectors from the three study sites to shake shea trees to loosen their nuts (Téni, 31/01/07). In some instances, children climb shea trees to send fruit down to their mother waiting below. In addition to representing anti-social behaviour, fruit collected in this way are unripe, and their nuts yield less butter (Kania, 31/01/07; c.f. Hall et al. 1996).

Competition coupled with a new market for poor quality shea nuts (discussed in Section 6.2.5.2) also encourages collectors to collect decaying nuts. Gatherers are now capturing new economic opportunities by selling a greater range of shea nut qualities. Whereas collectors are traditionally selective during nut collection to avoid carrying non-exploitable nuts home, they are now increasingly gathering these nuts for sale. Nine female collectors interviewed in Prata and in Lan reported creating nut piles of different qualities. They first transport quality nuts—which they use in their personal butter production—to their compound, and thereafter transport the poor quality nuts they have piled for local sale. This practice carries ecological implications. Poor quality (germinating) nuts formerly remained in fields, thereby generating shea shoots and favouring regeneration of the species. According to the nut collectors interviewed in Léo, Lan and Prata, however, this is no longer the case. Thirty-two per cent of the women I interviewed reported that, since 2004 or so, they collect all accessible nuts in the areas they frequent in claimed and unclaimed lands. Other participants explained that, whereas they sort their nuts during collection activities and leave the poor quality ones behind, 'thieves' gather all available nuts on their and other lands. In unclaimed lands and fallows, shea nuts are more difficult to detect and collect due to tall grasses. A proportion

of these nuts therefore remains in the bush, potentially yielding offshoots. In cultivated fields, however, there is no such obstacle to collection, and participants report that all of the fallen nuts are gathered in those areas. In the medium to long-term, these emerging collection patterns may affect shea tree regeneration in farmed areas.

Predictably, as shea nuts gain value, new players are drawn into the market at all nodes of the shea commodity chain. Although men have long occupied the upper echelons of the shea sector, male and female study participants reported that young men are becoming increasingly involved in shea nut collection and trade at the village level. The number of male nut collectors reportedly increased in 2006-2007, when shea nuts were worth twice as much as maize. Protective of their traditional monopoly over shea nut collection, female gatherers quarrelled with 'intrusive' male collectors in Léo's bush lands (Suley, 08/01/07). In Prata, ten of the men I interviewed admitted that they now collect shea nuts, leaving as early as 3 a.m. with a bicycle, motorcycle or donkey cart. Their access to these forms of transportation allows them to gather larger quantities of nuts and cover greater and more distant areas, which women have a little access to on foot. Male collectors bring shea nuts home to their mothers or wives, who prepare and sort them for sale. They may offer their female relatives money for their labour, but retain most revenues from shea sales. According to Fati (20/10/06), other male collectors gather nuts for their wives who are members of the UGPPK. These women then reward them financially upon selling their shea butter to the Union. Although I did not gather quantitative data on the matter, study participants agreed that male nut collectors remain rare and represent but a small minority of gatherers. Nonetheless, if their involvement at this level of the trade progresses, women may lose their hold over one of the region's few exclusively female economic activities.

These emerging patterns of nut collection have unfavourable implications for the sustainability of shea butter projects. For instance, the fact that migrants are progressively barred from collecting shea nuts even in unclaimed areas fails to encourage their participation in these projects. Moreover, the fact that men are increasingly competing with women in nut collection activities makes it more difficult for shea butter producers to collect large quantities of shea nuts required for making butter. As shown in the following sub-section, intense competition for shea nuts is also affecting women's shea

nut collection patterns, and this too carries consequences for the long-term success of shea projects.

6.3.1.2 Spatiality of Nut Collection

In light of the prohibition to collect nuts in other people's fields, the shea nut collectors I interviewed frequently travel vast distances to secure their nut supply. These distances depend on the proximity and yield of shea trees as well as the competition involved in nut collection. Each harvesting season, the geography of shea nut collection varies according to women's personal strategies. Market demand, tree productivity, women and men's labour availability, as well as the characteristics of the nut collector's fields affect these collection strategies. In some cases, collectors focus their initial efforts on trees in the bush, as these are unclaimed, open resources; yet they are also subject to the stiffest competition (Schreckenberg 1996). Later the same day, these collectors visit their personal and household fields where their access to shea yields is supposedly more secure. The distance to one's field also affects gathering tactics. As female participants explained, agriculturalists whose fields are distant from the village compounds are less concerned about their fellow villagers pillaging their nuts. They thus gather shea nuts in the bush first, and those in their fields thereafter, while they cultivate other crops (Celestine, 05/02/07; Diaharatou, 02/02/07).

Alternatively, some women adopt the opposite collection pattern. For instance, in south-western Burkina Faso, Crélerot (1995) reports that collectors survey family fields first, and only later seek shea in the common brush. In my study, some of Lan's nut gatherers wake up early to gather nuts around the homestead, before proceeding to nut collection in their fields, and finally to gathering nuts in the bush. These daily nut collection trips during the shea nut harvest are interspersed with agricultural duties. In Prata, collectors who have large fields with many shea trees explained that they may rarely venture into the bush in search of nuts or do so only in years of low shea yields.

The women I interviewed concurred that shea nut collection generally occurs before sunrise, frequently on a woman's way to her field for other activities.[111] Many female respondents additionally collect nuts on their return from the fields. Once their

[111] Likewise, Crélerot (1995) reports that Lobi women leave their compound at dawn and return to the village by nine a.m., devoting approximately three to four hours to their daily nut collection trips.

baskets are full, shea collectors pile shea fruit and nuts at the foot of shea trees, near footpaths. They subsequently return to collect and head-load these heavy piles back to the compound.

The risks involved in shea collection include scorpion and snake bites, particularly when shea trees grow amid tall grasses in uncultivated areas (Schreckenberg 1996). Poor visibility increases the risks involved in nut collection at dawn. Security risks are additionally heightened as women frequently gather nuts barefoot, and experience fatigue due to sleep deprivation during the rainy season. In light of these hazards, the women I interviewed prefer to collect nuts with their co-wives or other female relatives. During such group activities, each woman retains the shea fruit and nuts she has collected.

In sum, nut collectors are adopting diverse strategies to ensure their nut supplies. One feature remains constant, however: as nuts become increasingly scarce due to low productivity or high market demand, as has been the case in recent years, women travel longer distances, often exceeding ten kilometres, and explore remote brush areas to find untapped shea trees.[112] In response to an evolving shea nut market, Sissili's nut gatherers are adjusting their collection strategies and appear to be expending a greater amount of labour to gather a given amount of shea nuts. Whether their returns on labour are superior to what they once were, when shea nut prices and competition were lower, is questionable. This is an important consideration to which I later return as it can affect women's interest in pursuing nut collection, and more generally in participating in shea butter projects.

6.3.1.3 Collection Quantities

The quantity of shea nuts each woman collects depends on the labour she invests in shea nut collection, the competition she faces in her collection activities, as well as shea yields. As detailed in Chapter 5, shea tree productivity as well as fruit and nut quality vary spatially and temporally, and only a limited amount of shea butter can be derived from a mature shea tree from which all nuts are collected throughout the rainy season. To

[112] In Benin, Schreckenberg (2996) explained that at those times, walking circuits may reach 15 kilometres, which women travel carrying heavy head-loads.

produce large quantities of shea butter, women must consequently canvass large expanses to secure their nut stocks from several trees.

Estimates of quantities of nuts collected vary inter-annually and regionally. Although I did not personally attempt to measure nut collection quantities, other authors provide the following figures for the West African sub-region. In Benin, women reportedly gather an average of 20 to 30 kilograms of fruit daily (Agbahunga and Depommier 1989), whereas Ghanaian women collect 20 kilograms of shea fruit per person per day in fields located as many as 16 kilometres away (Puganosa and Amuah 1991). Schreckenberg (1996) reports that 20 to 40 kilograms of shea fruit can be collected in one day, and that, during a bountiful harvest, 25 kilograms of fruit and nuts can be gathered in 40 minutes (excluding journey time). In Burkina Faso, Cador (1989) reports that women gather as many of 40 kilograms of nuts a day, whereas others report an average annual shea nut collection per woman of approximately 302 kilograms (Crélerot 1995) during a year of poor yields to 650 kilograms in a year of favourable yields (Terpend 1982). Drawing from the data I collected from UGPPK documents, which suggest that one kilogram of shea butter is derived from approximately three kilograms of shea nuts, these nuts would yield approximately 100 to 214.5 kilograms of butter.

In Léo, Lan, and Prata, my research participants confirmed that rising shea nut prices are encouraging them to seek greater quantities of nuts. Fifty-three per cent of female participants (n=36) reported colleting more nuts since joining the UGPPK than before, whereas 37 per cent collected fewer nuts than before due to poor tree productivity and increased competition from other nut gatherers. These women explained that although they spend more time seeking shea nuts, they actually find fewer nuts.

Traditionally, most of the nuts collected are destined for own-consumption rather than commercial purposes. The proportion of shea nuts retained for family consumption varies according to shea fruit production, with greater annual fruit yields resulting in a smaller ratio of nuts consumed to nuts sold (Boffa et al. 1996). On average, Boffa et al. (1996) estimate that 60 to 90 per cent of shea nuts women process are consumed by their families, and the rest are marketed as raw nuts or butter. Study participants confirmed that with the current market craze for shea nuts, nuts formerly retained for household use

are now being sold or transformed for money. This is yet another way participants are attempting to extend their nut harvest in response to new market prospects. Yet, since shea butter is the primary source of dietary fat in the region (Agbahunga and Depommier 1989), this can have negative nutritional implications, which will have to be closely monitored over time.

Whereas the above-mentioned studies provide shea nut quantities in kilograms, in Burkina Faso, grain and nut amounts are assessed according to volume. The Yoruba plate is the common local unit of measurement, and one Yoruba contains approximately 2.5 kilograms of shea nuts (Boffa et al. 1996; ANDINES 2002). Forty of these plates fill what is locally considered a '100-kilogram' bag of nuts, although the actual weight of these bags varies according to the characteristics of its constituents. With respect to shea nuts, environmental factors such as the atmospheric humidity as well as quality attributes of the nuts affect the weight of nuts per unit volume (Saussey and Konseiga 2005). These factors thus affect the actual price of shea nuts per unit mass, as well as the quantity of butter extracted. Although prices per Yoruba are standardized during a given period and year, some of the vendors I interviewed disclosed that they, as well as other buyers and sellers occupying the different nodes of the commodity chain, manipulate these volumes so as to retain the maximum return from the transaction.[113] In this way, savvy merchants attempt to bend the rules of the trade in their favour.

Attention to the quantities of nuts gathered by nut collectors reveals the variability involved in the activity both spatially and temporally. Large fluctuations in nut collection quantities in years of good and bad shea yields make it difficult to predict women's potential to produce the substantial quantities of shea butter required in the context of shea projects without resorting to additional shea nut purchases. As discussed in Chapters 7 and 8, such purchases entail substantial costs that can influence the sustainability of shea butter projects.

[113] For instance, they quickly scoop and transfer shea nuts from their tarpaulins to the '100 Kg bags' using the Yoruba plate to prevent the buyer from observing that the Yoruba plate is not as full of shea kernels as it should be.

6.3.1.4 Shea Nut Processing

Collected shea nuts must be readied prior to sale or transformation into butter, and different processing techniques exist across the shea belt. These reflect cultural preferences for the type of butter produced as well as local labour, firewood, and water availability (Chalfin 2004; Elias and Carney 2007). Shea nut preparation must be performed in a timely fashion, and is a crucial determinant of kernel (and thus butter) quality. The process entails pulping, boiling, drying, and shelling shea nuts, which are thereafter sorted according to their characteristics.

As illustrated in Figures 1.3 and 5.2, shea nuts are enclosed within shea fruit. Shea pulp must thus be removed to release the nut for processing. During the wet season (June to September), which is also the hungry period, adults and children consume these fruit as a satisfying and nutritious food supplement (Hall et al. 1996; Crélerot 1995).[114] At this time, shea fruit and butter are vital for family nutrition as granary supplies run low and agriculturalists expend considerable energy working in their fields. Donkeys, goats, and sheep also consume shea pulp. Consumption of shea flesh therefore represents the most common method of pulping the fruit prior to nut processing.

All of the shea butter producers I interviewed begin shea nut processing with a boiling step, which lasts at least half an hour. This process eliminates any pulp remaining after human or animal consumption of the fruit as well as all pulp from uneaten fruit. The heat additionally halts the nuts' germination. This step must be performed promptly after harvesting to prevent an increase in nut acidity, which compromises butter quantity and quality (Audette 1995). Boiling also shrinks the kernel, thereby separating it from its shell and easing subsequent husking (Hall et al. 1996).

As an alternative to boiling, women of certain ethnic groups elsewhere in Burkina Faso bury shea fruit in shallow pits, which naturally reach very elevated temperatures. This interrupts the germination process, such that nuts can remain in these pits for two to three months without germinating (Crélerot 1995). As this method caters to labour shortages at the height of the agricultural period (Hall et al. 1996), it is prevalent among Moose women in central Burkina Faso (Maranz and Wiesman 2003), who bear heavy

[114] This pre-harvest period of the agricultural cycle, often one of food shortages, is termed the "hungry" season (French: *soudure*).

agricultural responsibilities compared to other Burkinabè ethnic groups (SIDA 2004). However, this method was not practised by any of the Moose women I interviewed.

Once these steps are complete, women separate good quality nuts from those that are rotted or have begun germination. Boiled nuts are then sun-dried for two to seven days; a difficult feat during the rainy season (Figure 6.4) (Audette 1995). Alternatively, shea nuts can be smoked over a fire in a clay kiln, such as the one drawn by Harris in the 1930s and displayed in Figure 6.5. In the eighteenth century, Park (2000 [1799]) observed that it took three days to dry the nuts when smoking them over a constant wood fire. A drawback of this method is that it requires a substantial amount of firewood and labour for supervision (Hyman 1991; Elias and Carney 2005). In addition, smoking shea nuts over a fire contaminates them with hydrocarbons (Masters et al. 2004). Although this method continues to be practised in contemporary times (Hyman 1991), it was not used by any of my participants, who preferred the less labour-intensive sun-drying technique.

When sufficiently desiccated by sun drying, roasting or through the burial method, kernels rattle within their shell when shaken (Crélerot 1995; Elias 2003). At that point, they can be processed into shea butter or stored in granaries for up to two years without spoilage (Fobil 2003). These nut preservation techniques, developed by butter makers over the centuries, ensure the availability of nuts throughout the year.

Figure 6.4: Shea Nuts Drying in the Sun (Source: Author 2006)

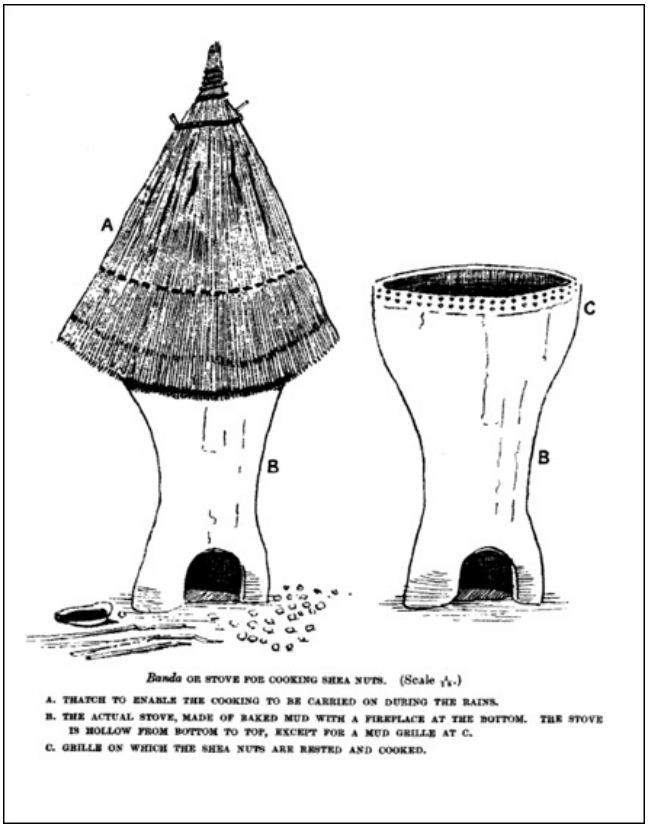


Figure 6.5: Colonial-era Drawing of Clay Kiln Used for Roasting Shea Nuts
(Source: Harris 1930, p. U57, Plate VIII)

Before being sold or further transformed, shea nuts must be shelled. Study participants accomplish this task by crushing nuts in a mortar with a pestle or by hand between two stones. Children frequently assist women during this step (Hall et al. 1996; Elias 2003). Women then sort kernels from broken nut shells by winnowing, if the wind is adequate, or by hand. When done by hand, this crushing step can take hours to complete. In contrast, the mortar and pestle method is more efficient, but has the inconvenience of breaking a substantial amount of kernels (Vuillet 1911). The shea producers I interviewed appreciated the excellent burning properties of shea nut shells, which they reserved to ignite and/or fuel fires. Rich in potassium, the ensuing ashes are then mixed with shea butter in the household manufacture of soap.

When producing shea butter for the UGPPK, shea butter producers sort shea kernels for quality purposes. Good quality kernels are separated from those that have begun germination, before pursuing their journey along the shea commodity chain. This

is one of the many additional steps producers have begun to carry out to access to the more remunerative, high-grade shea butter market.

Performing these labour-intensive kernel preparation steps for the large quantities of shea nuts reported above requires a significant time commitment during a period when female labour is constrained by agricultural duties. This can limit women's ability to produce large amounts of butter for the Union using only kernels they have personally collected and treated. As opposed to perishable produce, however, once processed, shea kernels can be kept in producers' homes despite the lack of refrigeration facilities, and can be used year-round to satisfy the butter demands of the UGPPK's international clients.

6.3.1.5 Kernel Quality

As mentioned above, recent international changes in the shea market are influencing not only shea nut collection and processing patterns, but also the quality attributes placed on shea kernels marketed in my three study sites. In particular, the involvement of new players in the shea sector is pulling quality specifications in opposing directions. International pressures—consisting of demand for inexpensive shea nuts trafficked via Ghanaian businessmen, as well as Western demand for high quality shea butter supplied via the shea producers' Union—have created distinct niches for shea kernels of different grades. On the one hand, the presence of Ghanaian buyers seeking large quantities of kernels, irrespective of their quality, has driven down the quality requirements of kernels sold in and around Léo. As previously mentioned, some of these kernels are even rancid and would previously have been considered worthless for either eating and exchange purposes.[115] On the other hand, the extension of global shea butter commodity chains into European and North American homes via shea butter projects has created a need for the finest quality butter. Supplying this high-grade shea butter to Western consumers hinges upon the production and availability of top quality kernels.

Shea kernel quality is determined by the timing of nut gathering and processing. Quality nuts are picked at maturity. Since shea fruit do not change colour when they ripen, gatherers seeking good quality nuts must harvest only naturally fallen fruit (Hall et

[115] Mariama (10/02/07), one of my interviewees from Léo, reported that prior to the arrival of Ghanaians shea traders, such poor quality nuts served only to ignite fires.

al. 1996; Carney and Elias 2006). Windfalls must be collected and processed promptly, before they germinate, as delayed collection results in poor quality butter that is acidic.

According to some of the shea butter producers I interviewed, kernel quality is additionally affected by nut characteristics, including size, and by the locale where fruit collection takes place. As detailed in Section 5.4.2 of Chapter 5, producers were not always consistent in their interpretations of the relationship between nut size and quality. One third of Lan's female Moose participants believed that medium nuts produce butter of superior quality while 13 per cent claimed that larger nuts yield the best butter. In contrast, 83 per cent of Prata's female Gurunsi respondents reported that small nuts yield the best butter, and one fifth of these women specified that these quality nuts are encountered in the bush. They explained that shea trees located in fields are larger and produce larger fruit and nuts. Yet, they believed that a superior amount of quality butter can be extracted with greater ease from the smaller shea nuts encountered in the brush.

Previous research substantiates that on a regional scale, variations in the fatty acid content of shea kernels also affect butter quality. The ratio of stearic acid to oleic acid in kernels is a measure of fat hardness. A smaller fraction of stearin results in soft butter that cannot retain a solid form at room temperature (Ferris et al. 2001). This is observed in oil derived from Uganda's *V. paradoxa* subsp. *nilotica* populations, which is locally sold in jugs due to its liquid form (Maranz and Wiesman 2003). In contrast, shea butter from West African *V. paradoxa* subsp. *paradoxa* populations contains a high stearin to olein content, and remains in a solid state even when temperatures exceed 40 degrees Celsius. This solid state facilitates the moulding and transport of shea butter. Shea populations with the highest kernel fatty acid content are found on the Moose Plateau of central Burkina Faso, where they exhibit a particularly high percentage of stearic acid (ibid 2003: 1509).[116] Shea butter characteristics thus also hinge upon the regional provenance of shea nuts. The interplay between kernel characteristics and processing methods determines butter quality.

[116] Maranz and Wiesman (2003) suggest that the high stearic acid phenotype is the result of human selection for solid shea butter. Based on the convergence of a number of locally valued traits such as fat content, type of fat, and pulp sweetness in different shea populations, these authors suggest that the Moose Plateau is the species' centre of domestication.

It was carefully explained to me that shea nut processing techniques also influence nut quality. For instance, shea nuts which have been dry-smoked generate a smoky tasting butter that is enjoyed in certain communities, but unappreciated in others. Further, fat extracted from nuts which have been processed according to the shallow-pit method outlined in Section 6.2.1.5 is of lesser quality than that extracted from boiled nuts.

Finally, the quality of shea kernels commercialized on the local market depends on the familiarity of shea nut collectors with nut quality attributes and their willingness to engage in the time-consuming process of sorting kernels. Some of the women I interviewed believed that the introduction of inexperienced male collectors into the shea market has driven down the quality of shea nuts gathered. As men are generally less knowledgeable regarding shea nut quality and seek only to maximize the volume of nuts collected, they gather shea nuts indiscriminately (Bliss and Gaesing 1992, in Boffa 1999). However, participants recognized that female collectors are also to blame for the low quality of kernels marketed, as they retain those of superior quality for personal use and commercialize the remaining, poor quality, kernels. As a market is evolving for these poor quality kernels, incentives to sort and sell high-grade kernels are decreasing.[117]

In light of the multiple factors affecting shea nut and butter quality, NGOs have mobilized significant resources in the context of shea butter projects to train butter maker associations in the production of top quality shea kernels. Five NGO personnel and consultants working on these projects whom I interviewed in Burkina Faso explained that efforts have focused on promoting superior, standardized, nut collection and treatment techniques.[118] Via workshops, NGOs have promoted boiling rather than burying nuts, sun-drying over smoking, washing kernels prior to their transformation, selecting kernels with a high percentage of fat, and discarding poor quality kernels. In this way, shea projects have helped women comply with international specifications for a quality commodity. Maximizing the use of their inputs, participant producers then sell the undesirable quality kernels they sort on the local market. As a large number of producers

[117] Some shea producers explained that they pay slightly more for quality kernels. For instance, in October 2006, producers paid 300 fCFA ($CAD 0.63) rather than 250 fCFA ($CAD 0.53) per Yoruba for high-grade kernels (A. Traoré, October 9, 2006; numerous interviewees).
[118] These key informants are: S. Bahl (August 2001), M. Briard (November 12, 2006), E. Guiro (December 14, 2006), A. Tagnan (various interviews, 2006-2007), F. Traoré, (January 11, 2007).

pursue this strategy, local kernels vendors have begun visiting UGPPK headquarters to acquire stocks of these poor quality kernels.

The large-scale availability of high quality kernels is essential to the sustainability of shea butter projects. Interestingly, in the province of Sissili, the shea nut processing techniques promoted by shea projects have been disseminated beyond the confines of the UGPPK. The Union members who participated in my study explained that they have taught their suppliers—frequently other women from their village or kin in neighbouring villages—how to provide quality shea nuts. In Prata, Gurunsi participants reported that they have trained FulBe women in shea nut preparation. As noted earlier, the FulBe are herders who rely on animal rather than vegetal fat. Hence, they are not traditionally involved in shea nut collection and processing and do not make shea butter (Seignobos 1982). Yet, in light of the growing profitability of the shea market, FulBe women have entered the trade in recent years. Partly due to the transmission of nut processing knowledge from Gurunsi shea producers, FulBe women are now locally reputed to sell excellent quality kernels (Mam, 28/01/07).[119]

It may seem surprising that Gurunsi women have shared their knowledge of shea nut processing with their FulBe counterparts, given that they compete in their collection activities. Yet, UGPPK producers recognize the need to access large amounts of good quality kernels in order to produce high-grade shea butter. Moreover, the relatively small quantities of shea nuts collected by Prata's FulBe women do not represent a serious threat to the Gurunsi's shea nut enterprises. Despite the manifest inter-ethnic tensions in the shea arena, this example demonstrates that new economic prospects have also prompted fruitful knowledge and commercial exchanges among Sissili's ethnic groups. In so doing, Union members have also promoted the sustainability of their enterprise.

[119] According to Gurunsi and Moose shea producers with whom I spoke, there is another reason behind the high quality of FulBe shea nuts. Unlike Gurunsi and Moose agriculturalists, FulBe women have few competing activities during the period of shea fruit production. This allows them to engage in nut processing immediately after shea nut collection (before nuts germinate) and to invest more time in the activity. Nonetheless, FulBe women collect only small quantities of shea nuts. The Gurunsi and Moose women I interviewed explained this with racial slurs, such as: "FulBe women are lazy." Gurunsi women in Prata also resented the fact that FulBe vendors retain their shea kernels until their price increases (A. Nébié, November 23, 2006; N. Diasso, January 25, 2007). Unlike shea butter producers who maintain a portion of the nuts they have collected for processing and consumption purposes, FulBe women sell all the shea nuts they gather.

6.3.2 Rural kernel vendors

Although the shea nut collectors discussed above may retain some or all of their collected kernels for butter processing, many also sell their kernels within their village, in neighbouring villages or in the nearby town of Léo (Figure 6.2). Since the advent of shea projects, some women have become increasingly vested in the kernel trade. Others, including the majority of UGPPK members, now prefer to process their kernels and sell the ensuing butter to the Union. The following section describes the significance of the shea nut trade within women's economic portfolios, the prices and prospects rural vendors (labelled 'B' in Figure 6.2) can expect in the kernel trade, as well as the different marketing strategies these vendors adopt to access distinct markets and maximize their returns in the shea sector.

In the centre-west region of Burkina Faso, where my study sites are located, income streams are gendered, and the majority of rural women have few revenue-generating opportunities (refer back to Chapter 3, Section 3.6.3). Factors constraining female earnings include the culturally-sanctioned gendered division of labour, as well as general ails that commonly afflict rural populations, such as lack of investment capital, inadequate transportation infrastructure, and poor access to market information (Page and Slater 2003). Yet, women require money to meet their financial responsibilities within the household. According to male and female interviewees from the three study sites, these female expenditures include the purchase of condiments, grain (when shortages occur), clothing for themselves and their children, cooking utensils, soap, petroleum (for lighting), children's school supplies, medicine, as well as water in Léo.[120]

In light of these expenses, Burkinabè women are progressively more reliant on income obtained through local and international shea sales. This is particularly the case for poor women, who devote more time to shea collection than those with financial resources due to a lack of other means to obtain cash (de Beij 1986; Crélerot 1995).[121] Participation in the shea trade involves few risks or barriers to entry, with labour being the primary asset required to enter the trade. Attesting to this fact, even residents with

[120] Husbands are technically responsible for providing medicine and clothing for their wives and children. However, as they frequently cannot afford these goods, women end up purchasing them if they are financially capable of doing so.

[121] Poorer households have been shown to be more reliant on NTFP extraction in general (Schreckenberg 1994; Neumann and Hirsch 2000).

limited access rights to shea nuts are generally able to collect small nut quantities from fields or open access areas. Moreover, returns per unit labour in shea nut sales are relatively high compared with cultivated crops such as maize or groundnuts because shea nuts do not have to be cultivated and shea trees require minimal-to-no maintenance.

For impoverished women who have no other savings and no access to formal credit or insurance, shea nuts and butter represent a form of 'natural insurance' (de Beij 1986; McSweeney 2003). In the three study sites, the shea producers I interviewed reported selling shea kernels to "solve problems" including illnesses, social obligations such as donations at funerals, and reimbursements of outstanding debts. As the end of the shea season corresponds with the beginning of the school year (in August-September), many participants also sell kernels to settle their children's school-related expenses. Poor women who strongly rely on this income to make ends meet are thus particularly squeezed during years of inadequate shea yields or of fierce competition for shea nuts.

As with other NTFPs (Angelsen and Wunder 2003; Shackelton and Shackelton 2003; McSweeney 2004; Tugault-Lafleur and Turner 2009), shea nuts also provide a safety net to which villagers turn to smooth consumption throughout the year. The shea tree fruits during the hungry period, when cereal supplies from the previous year decline. At this time, granaries are nearly empty and subsistence-farming families have difficulty fulfilling their nutritional needs. It is a woman's responsibility to ration the family's food supply and remedy food shortages, which are commonplace during the lean season (Thorsen 2002; Elias and Carney 2005). In addition to the direct consumption use of shea fruit and butter at this time, the sale of shea kernels and butter represents one way to extend the food supply, as ensuing revenues are used to purchase grain (Gosso 1996). Hence, shea nut collectors traditionally retain a portion of their gathered kernels for household consumption, and sell or barter the rest. In this way, shea revenues complement agricultural production to ensure basic household subsistence. Study participants assured me that although these revenues are meagre, they provide significant nutritional and economic benefits in a context of extreme poverty.

Small-scale rural kernel vendors do not tend to specialize in kernel sales. Rather, shea figures among a diverse portfolio of NTFPs which rural women market to make ends meet. In Sudano-Sahelian West Africa, shea kernels and butter as well as *néré*

(*Parkia biglobosa*) are the NTFPs of primary economic importance to rural women since revenues from their sale accrue to women (Ferris et al. 2001; Gutierrez and Juhé-Beaulaton 2002; fieldwork data, 2001; 2005; 2006-2007). Female agriculturalists also commercialize crops they have cultivated on their personal fields, including okra (gumbo) (*Abelmoschus esculentus*), sorrel (*Hibiscus sabdariffa*), groundnuts (*Arachis hypogaea*), cowpea (*Vigna unguiculata*), Bambara groundnut (*Voandzeia subterranean*), and cereal crops such as maize (*Zea mays*), millet (*Pennisetum glaucum*) and sorghum (*Sorghum bicolor*). Those who have access to a *bas-fond* (lowland) also cultivate rainfed lowland rice (transgenic NERICA rice, which is a cross between species *Oryza glaberrima* and *Oryza sativa*, is now the most commonly planted) (Fieldwork data, 2006-2007). A woman's personal production is primarily consumed within the household, but surpluses (should they materialize) are sold locally.

Shea kernel prices vary inter-annually, seasonally, and regionally according to tree yields and market demand. Prices are lowest between June and September, when shea tree derivatives abound in local markets. In Léo, one Yoruba of shea kernels costs approximately 125 fCFA ($CAD 0.26) at this time (A. Traoré, October 9, 2006). Prices climb steadily during the dry season, as shea kernels become increasingly scarce. By May 2007, dry season prices had reached 500 fCFA ($CAD 1.06) per Yoruba in Léo; four times the product's wet season price (A. Tagnan, May 15, 2007). The fluctuation in shea prices offers possibilities for village women and local speculators, who acquire kernels via collection or purchase during the rainy season, stockpile them, and sell them when their price rises. As I observed in my three study sites, however, village women are frequently compelled to sell their shea kernels before their price increases due to a pressing need for money. Ironically, these female vendors sometimes purchase shea kernels later in the year for own consumption or trade purposes from the merchants they had originally sold them to when their cash needs forced them to part with the kernels so cheaply (Terpend 1982; Audette 1995).

In light of the importance of shea revenues to rural women's subsistence, rural kernel vendors abound. In Léo, Lan, and Prata, nearly all the UGPPK members I interviewed (n=78) had been involved in the local shea trade before the advent of the Union. Specifically, prior to Union membership, 17 per cent of female participants in

Prata sold shea kernels, while 58 per cent sold shea butter, and 12.5 per cent marketed both shea kernels and butter. The remaining 12.5 per cent of female interviewees were not involved in the shea trade at the time. In Lan, all female respondents partook in the shea trade prior to joining the UGPPK: 43 per cent sold shea kernels, 38 per cent sold shea butter, and the rest (19 per cent) sold both shea butter and kernels. Since joining the Union, half of Prata's shea butter traders and 92 per cent of Lan's shea vendors supply shea butter only to the UGPPK. These women maintain their shea kernels for making this butter rather than selling or transforming shea nuts for sale on the local market.

In general, rural kernel vendors supply several frequently dispersed markets. Some of the vendors I interviewed sell their kernels to fellow residents for use in their income-generating activities. These activities include the sale of pure shea butter and of foods fried in shea oil (fritters). Others reported selling kernels to women in neighbouring villages with whom they maintain a trust relationship, or through their kinship networks to relatives from their native village.[122] In addition, the rural vendors I spoke with traded shea kernels in weekly/rotational rural markets in their village or in nearby villages. For instance, Prata's shea vendors travel to Bieha, 13 kilometres away, to sell their kernels at the village's well-frequented Tuesday market. In addition to hosting villagers from proximate villages, these markets are visited by intermediary traders who purchase shea kernels for subsequent sale in towns such as Léo. Markets like Bieha's also attract larger-scale buyers who purchase truckloads of agricultural goods and NTFPs for resale in large urban centres. Travelling by lorry, these buyers overcome the transportation barriers faced by rural kernel vendors. Finally, some of the rural kernel vendors I interviewed in the peri-urban village of Lan personally deliver their kernels to Léo's nearby market, where they may be purchased by town-based kernel vendors.

6.3.3 Town-based Kernel Vendors

Upon leaving rural areas, the shea kernels I followed continued their journey to the provincial capital town of Léo, one of my three study sites. In Léo, shea kernels are marketed by small-scale vendors, labelled 'C' in Figure 6.2, who populate the town's

[122] As discussed in Chapter 2, the ethnic groups living in the province of Sissili are patrilocal (or virilocal), meaning that women move to their husband's residence upon marriage. They nonetheless maintain close ties with their native village.

Saturday market.[123] The characteristics and marketing strategies of these vendors, as well as the revenues they earn through participation in the kernel trade are explored below.

Of the ten vendors I interviewed—all of the town-based kernel vendors present and available during my market visits—four were women, and all were between 25 and 45 years of age and lived in Léo. Nine of these vendors were of Moose origin and one was Gurunsi, which lends support to the Moose's local reputation of being more business-oriented than the Gurunsi. Whereas one male vendor from Léo had only been involved in the trade for three months, others had been selling shea kernels for between three and nine years. The sample included a pair of female UGPPK members who had long been involved in the trade. They were the only Union members figuring among these vendors. Yet, before the advent of the Union, many current UGPPK members participated in this town-based trade. For instance, 12 per cent of the Union members I interviewed in Léo (n=33) sold unprocessed shea kernels prior to Union membership.

Léo's kernel vendors sell their goods year-round except during periods of poor health or when kernels cannot be easily acquired due to seasonal scarcity. Some of the vendors I interviewed work in pairs, but most trade on their own. Along with shea kernels, they sell a range of cereals and foodstuffs. Shea, rice, millet, maize, sorghum, beans, and groundnuts, are displayed side by side, frequently on large tarpaulins laid on the ground (Figure 6.6). All the vendors I interviewed enthusiastically indicated that in recent years, shea kernels have been the most profitable of these sales items.

Town-based kernel vendors pursue different marketing strategies. To begin, some vendors are also shea nut gatherers. Since most of Léo's residents cultivate on the outskirts of town, they collect shea nuts from their fields and process or sell them at the town market. As discussed in Section 6.2.1.2, however, nut gathering in and around Léo is subject to intense competition, which makes it difficult for women to collect large quantities of nuts for sale.

[123] Small-scale kernel vendors are also found in Burkina Faso's larger cities, such as Ouagadougou and Bobo-Dioulasso, and are similarly identified as 'C' in Figure 6.1.

Figure 6.6: Shea Nut Vendors Displaying their Sales Items
(Source: Author photograph 2007)

Alternatively, and this was the case for all of the vendors I interviewed in Léo, town-based kernel vendors act as intermediaries between shea nut collectors/rural kernel vendors and other town-based kernel vendors, Burkinabè exporters or Ghanaian importers. Due to the current economic benefits to be made in the shea trade, these intermediary traders are proliferating. Using this trade strategy, vendors acquire shea kernels in one or more of three ways. First, they may travel to surrounding villages during the week in a shared rental truck, by bicycle or donkey-cart to purchase kernels from female and male rural kernel vendors. In rural areas, they tour the compounds in search of kernels, attend weekly markets or transmit their kernel requests to local relations who help them find sellers. Chalfin (2000, 2001) reports similar buying strategies in Ghana, where traders purchase shea nuts and butter at local markets as well as from shea gatherers and producers selling from their homes or along the roadside. In mid-February 2007, five months after the end of the shea nut harvest, town-based kernel vendors purchased shea kernels from Léo's surrounding villages for 375 fCFA ($CAD 0.79) per Yoruba.

Léo's intermediary kernel vendors sometimes also acquire kernels from rural kernel vendors/nut collectors who frequent the town's weekly market to sell their goods. As mentioned above, when visiting villages, intermediary town-based kernel vendors

inform locals that they seek shea kernels, and request deliveries to the town market. Town-based shea kernel vendors also stand on the roadside to solicit deliveries from rural kernel vendors/nut collectors. In mid-February 2007, Léo's kernel vendors acquired kernels in these ways for 400 ($CAD 0.84) to 425 fCFA ($CAD 0.90) per Yoruba. Table 6.1 summarizes these acquisition and sales prices along the shea nut commodity chain.

Finally, some town-based kernel vendors also purchase kernels by the Yoruba or by the 100-kilogram bag from other town-based kernel vendors in Léo on market days. In mid-February 2007, vendors purchased shea kernels for 425 fCFA ($CAD 0.90) per Yoruba in this way, only to bulk and resell them for 450 fCFA ($CAD 0.95) to Ghanaian agents who frequent the town. Town-based kernel vendors may also sell some of their kernels to small-scale shea butter producers, who transform them into butter.

Table 6.1: Distribution of Returns along the Shea Nut Commodity Chain Originating in the Province of Sissili in mid-February 2007.

	Location of sales	**Sales price/Yoruba**	
		(fCFA)	**($CAD)**
Rural kernel vendor	Village	375	0.79
	Town (Léo)	400-425	0.84-0.90
Town-based kernel vendor	Town (Léo)	425-450	0.90-0.95
Burkinabè exporter	Ouagadougou	450-460	0.95-0.97

6.3.4 Small-scale Shea Butter Producers

After being exchanged among local vendors, a portion of traded shea kernels is destined for local consumption. Female shea butter producers—whose characteristics are outlined below, and who are identified as 'D' in Figure 6.2—process kernels into vegetal butter, which is used for frying foods and dressing traditional dishes. The fraction of kernels transformed in this way and used for local consumption far outweighs the proportion of kernels entering export markets (Ferris et al. 2001; Masters et al. 2004). Yet, the local trade in shea kernels does not reflect the magnitude of local butter consumption, as most

women preparing butter for household consumption personally collect some or all of the kernels used in their cooking.[124]

Shea butter production and trade are described in Chapter 7, yet a few points merit a mention here. Small-scale Burkinabè butter makers who purchase shea kernels are generally involved in selling shea butter and/or foods cooked in shea oil. As the quantity of shea nuts they personally collect is insufficient to uphold their income-generating activities, they must buy some or all of the shea kernels required for their production. Due to limited financial resources, these shea butter producers normally acquire small quantities of kernels at a time, on a weekly basis for example. This was the case for seven of the 20 female *shea butter* vendors (versus shea kernel vendors, already discussed) I interviewed at Léo's market, who were not members of the UGPPK. Upon marketing their shea butter or processed food, these tradeswomen earmark a portion of their revenues for the purchase of additional shea kernels. As is the case for Dabirée (03/02/07), some small-scale shea butter producers also acquire kernels on credit from regular suppliers or relatives from their native village. They reimburse their suppliers, with interest, upon the sale of their butter or food products.

Unlike many intermediary kernel vendors, small-scale shea butter producers who purchase shea kernels are knowledgeable about, and attentive to, kernel quality. Their trade relies on a traditional female expertise—that of processing shea butter—which is passed down from mother to daughter. Shea butter producers seek high quality kernels, which they sort prior to processing. In a study performed in Burkina Faso in 2004, butter makers considered a batch of shea kernels with a five to 12 per cent nut rejection rate to be of prime quality (Saussey and Konseiga 2005). The shea producers I interviewed in Léo reported that as many as one quarter of the kernels they purchase are of poor quality and cannot be used in high-grade butter production. As a new market exists for low-quality kernels, Mariama (10/02/07) explained that butter makers now resell undesirable kernels to local intermediary traders. By diversifying the range of shea products they sell, these established actors in the shea trade are thus capturing novel economic opportunities.

[124] There are no reliable statistics to assess the relative importance of the local, national, and international trade in shea kernels (UNCTAD 2006).

Local shea butter producers may work independently or be (loosely or formally) associated in a women's village work group, or *Groupement Féminin Villageois* (GVF). In and around Léo, there are dozens of GVFs, many of which are affiliated with the UGPPK. These GVFs and the UGPPK are discussed in more detail in Section 7.3.1 of Chapter 7. Yet, of importance here is the fact that each shea producer who partakes in the UGPPK purchases her own shea kernels, transforms them, and supplies the ensuing butter to the Union. Union members also sometimes sell shea kernels to each other, and both compete and collaborate in the collection and purchase quality kernels. As the advent of the UGPPK has opened up a new, international niche for shea butter produced locally, demand for shea kernels from Union members has drastically increased, and affected the local shea market.[125]

6.3.5 Large-scale Intermediaries

Aside from local shea butter producers, town-based kernel vendors sell their product to large-scale intermediaries. In the province of Sissili, these intermediaries are influential male Ghanaian importers (Section 6.3.5.1) and urban Burkinabè exporters (6.3.5.2) (Figure 6.2). As the international market for shea booms, they have become increasingly vested in the kernel trade. Their networks of agents, purchasing strategies, and the effects their presence are having on the local shea sector are discussed below.

The female UGPPK members who participated in my study were aware that they now compete on the open market for shea kernels against these traders, who occupy some of the top echelons of the shea nut commodity chain. Via a system based on dense and personalized networks of agents, these businessmen acquire their shea nuts countrywide, from geographically dispersed towns and villages (Chalfin 2004). Contrary to small-scale shea butter producers, large-scale intermediaries have access to market information, communication channels, transportation, political ties, and capital resources to ensure the success of their endeavours. Accordingly, they hold an oligopoly over the shea kernel export market (Saussey and Konseiga 2005).

Burkina's domestic and international shea kernel sales rely on a similar network of agents as in Ghana (Ferris et al. 2001), and kernel exports influence the price of shea

[125] For instance, over the 2005-2006 agricultural year, the UGPPK exported 60 tonnes of shea butter, extracted from three times as many tonnes of shea kernels.

kernels sold on the local market. Multinational firms that control the market maintain kernel prices low, yet export demand for shea kernels can raise the price of this commodity beyond the purchasing power of local users (Ferris et al. 2001; Chalfin 2004). Adding to the demand for shea kernels created by the shea producers' Union, the local residents I spoke with who purchased shea nuts and butter for their own consumption complained that the growing involvement of large-scale intermediaries in the shea trade—including the urban Burkinabè exporters to whom we now turn—has driven up the demand for and prices of shea kernels in the province of Sissili.

6.3.5.1 Urban-based Burkinabè Exporters

Although less prevalent in the province of Sissili than the Ghanaians, urban Burkinabè exporters (listed as 'E' in Figure 6.2) are important players in the country's shea sector. According to my sources, a handful of businesspeople primarily situated in Ouagadougou and Bobo-Dioulasso, Burkina Faso's two largest cities, dominate the country's shea export trade.[126] Only two of these businesspeople allegedly control 80 per cent of Burkina Faso's shea export market (M. Saussey, July 18, 2007). My investigations showed that even the country's Chamber of Commerce lacks reliable statistics on the matter, yet it appears that fewer than ten large-scale businesspeople (they are all men, with one exception) with significant financial capital export shea kernels to their West African counterparts and overseas to European agro-food industries and refineries. Much of the trade in shea kernels across African borders—predominantly to Côte d'Ivoire, Bénin, Ghana, Mali, and Togo—occurs informally (as contraband) and remains unaccounted for. Shea kernels transit in neighbouring coastal countries (and Mali) before being processed and/or exported to the West (Saussey and Konseiga 2005). The small size of most exporters' warehouses limits the quantity of kernels that can be stored and exported at one time (M. Saussey, July 18, 2007).

Operating through a network of agents, urban Burkinabè exporters acquire and stockpile shea kernels in the country's capital. They provide their agents, such as town-based kernel vendors working in Léo, with '100 Kg' plastic or jute bags to fill with

[126] To a lesser extent, shea kernels are also exported to Burkina Faso's southern, coastal neighbours from the Burkinabè towns of Pô and Léo.

kernels.[127] As mentioned in Section 6.3.3, where these town-based vendors were discussed, the vendors I interviewed in Léo purchased shea kernels from rural kernel vendors and other town-based vendors for 375 fCFA ($CAD 0.79) or 400 fCFA ($CAD 0.84) per Yoruba in February 2007, when shea nuts were becoming rare. These town-based kernel vendors/agents then rent space in shared trucks or transport their packed bags to Ouagadougou in the private trucks of the exporters who employ them. One such town-based kernel vendor/agent (Maxime, 03/02/07) explained that in the capital, shea kernels are weighed and agents, who follow their goods to the capital by bus, are remunerated. During the month of February 2007, intermediaries received 17,000 ($CAD 35.89) to 17,400 fCFA ($CAD 36.74) per '100 Kg' bag of kernels, which works out to 425 to 435 fCFA (0.90 to 0.92 $CAD) per Yoruba. They were left with net returns of 1000 ($CAD 2.11) to 2000 fCFA ($CAD 4.22) per bag after paying local vendors for their goods (Afiata, 03/02/07; Maxime, 03/02/07).

When selling to African importers, such as those based in Ghana, urban Burkinabè exporters then stand to gain at least 1000 fCFA ($CAD 2.11) per '100 Kg' bag of shea kernels (Désirée 05/02/07).[128] This margin appears relatively small, but the gains to be made hinge on these exporters' ability to export large quantities of shea kernels. In figures provided by Saussey (2009), one of these players demonstrated an export capacity of approximately 2,000 metric tonnes of kernels per year, while the largest exporter (*Établissements Vélégda*) sold approximately 35,000 metric tonnes of kernels overseas in 2004. Urban Burkinabè exporters additionally trade in other products, such as grain, which adds to their annual revenues (Saussey 2009).

6.3.5.2 Ghanaian Importers

Ghanaian importers (identified as 'F' in Figure 6.2) purchase Burkina's shea kernels from urban Burkinabè exporters, yet they also acquire them, as they do in Ghana (Chalfin 2004), from smaller-scale agents working throughout the country. As Léo sits near the border with Ghana, indigenous Gurunsi participants explained to me that shea has long been traded between the town and its southern neighbour. Yet, renewed Ghanaian interest

[127] As mentioned earlier, these bags contain 40 Yorubas of shea kernels
[128] As shown in Table 6.1, this means that they sell the Yoruba plate of shea kernels for 450 to 460 fCFA (0.95-0.97 $CAD).

in the shea trade has instigated important changes in the province of Sissili's shea market. The local shea producers I interviewed reported that, since 2003 or 2004, Ghanaian importers have significantly increased their demand for shea kernels from the province.[129] Prior to 2002 or so, shea kernels from Ghana were reportedly sold in Léo; yet kernel flows across the border have since been reversed (Téni, 31/01/07). Exports from Burkina Faso to Ghana may signal favourable economic prospects for Sissili's kernel vendors, but the *shea butter* producers I interviewed found the associated surges in the price of shea kernels, which they must purchase to pursue their income generating activities, devastating.

According to Téni (31/01/07), a local shea butter producer and member of the UGPPK, Ghanaian importers have "broken the market" with their purchasing strategies. As is the case for urban Burkinabè exporters, large-scale Ghanaian businessmen operate via networks of geographically dispersed agents, who purchase shea kernels from local vendors (Lovett 2003). In Léo, these kernel vendors are predominantly of Moose origin. As the town-based kernel vendors/agents I interviewed explained, their role is to amass large volumes of shea kernels, which were sold to Ghanaian agents for 425 fCFA ($CAD 0.90) or 450 fCFA ($CAD 0.95) per Yoruba in mid-February 2007 (Table 6.1). Léo's intermediaries thus earn between 25 fCFA ($CAD 0.05) and 75 fCFA ($CAD 0.16) per Yoruba sold to the Ghanaians. Shea kernels are then transported to depots in Tamale, northern Ghana, in private lorries or rented vehicles (Lovett 2003).

Several factors ensure the Ghanaians an adequate supply of kernels even in times of scarcity. First, the prices Ghanaians offer for shea kernels are superior to the going market price in Léo. For instance, in February 2007, shea kernels typically sold for 425 fCFA ($CAD 0.90) per Yoruba in Léo, but town-based kernel vendors/agents employed by Ghanaian exporters were purchasing them for as much as 450 fCFA ($CAD 0.95) per Yoruba. Second, Ghanaians advance funds to their local agents, thereby enabling them to acquire large volumes of shea kernels. Over the course of the week, the town-based kernel vendors/agents I interviewed contacted their Ghanaian employers to provide them

[129] This study focuses on the shea commodity chains originating in the centre-west region of Burkina Faso, yet Ghanaian importers apparently also operate in other Burkinabè zones, including those farther away from the Ghanaian border. In Tenkodogo, south-eastern Burkina Faso, shea kernel prices supersede those of Léo largely due to the strong Ghanaian demand and feeble shea nut production in the region (E. Zéba, February 26, 2007).

with an estimate of the quantity of kernels they expected to gather, for which they received pre-financing. Cash advances are essential as agents typically do not otherwise have the capital to purchase large quantities of kernels. One kernel vendor/agent in Léo stated that Ghanaian importers can advance as much as one million fCFA ($CAD 2111) to their local partners. In Tenkodogo, south-eastern Burkina Faso, Ghanaian importers had begun advancing funds to local agents by February 2006 to secure kernel stocks from the future shea campaign, which would only begin in June (E. Zéba, February 26, 2007). Ghanaian importers also provide their agents with the '100 Kg' bags they will need to transport their product. Finally, these importers purchase shea kernels of all qualities, indiscriminately and for the same price. In so doing, they have instigated a market for poor quality shea kernels, and increased the quantity of nuts available for sale on the local market.

What, then, do the Ghanaians do with the large volume of shea kernels they purchase? I was unable to meet with any of the Ghanaian importers in the course of this study, but the local Burkinabè agents I interviewed provided the following explanations. Whereas many did not know where their nuts were heading, others advanced the following possibilities: 1) kernels are exported from Ghana to other West African countries such as Togo; 2) Ghanaians use the kernels to industrially produce shea butter and soap in new factories (Caba, 14/10/06; E. Zéba, 26/02/07); 3) kernels are used to industrially produce shoes and basins/receptacles (Fatimata, 15/11/06); and 4) kernels are exported to Europe (Caba, 14/10/06). In reference to this fourth possibility, one shea producer stated that upon exportation, good quality shea kernels are labelled as coming 'from Ghana' while poor quality kernels are labelled 'from Burkina' (Kacora, 20/10/06).

In fact, at least three trends in the global political economy explain the recent increase in Ghanaian demand for shea kernels. First, the adoption in 2000 of a European Commission (EC) directive allowing the inclusion of up to five per cent of non-cocoa vegetable fats in chocolate has stimulated demand for the product (Fold 2000; Harsch 2001; Masters et al. 2004; Saussey 2009). Then, greater international demand for shea stems from the economic revival of post-Soviet countries, and the associated rise in their consumption of chocolates and pastries within which shea butter is an ingredient (Ferris et al. 2001). Finally, Ghanaian demand for shea nuts owes to stricter European and

Japanese legislation against the development of oil extraction firms and other 'dirty' industries (Ferris et al. 2001). Due to this legislation, interest in importing shea butter processed industrially in African countries has grown, and Ghana is capitalizing upon this emerging market opportunity. According to Lovett's (2003) study of the Ghanaian shea sector, some shea kernels are indeed processed in-country, in recently established small to medium scale oil milling companies located in Kumasi, Juaben, Savelugu, and Tamale. This butter is then sent to the refineries of Loders-Crocklaan in the Netherlands. Alternatively, shea kernels are sent from Tamale, in northern Ghana, to Ghana's portal cities of Tema or Takoradi. Kernels are then transported by boat to European or Asian oil mills, where they are transformed and consumed as chocolate or in cosmetics products.

6.3.6 Western Agro-food Industries and Refineries

As discussed in Section 6.2, Western demand for shea dates back to the nineteenth century, when France and England extracted vegetal oils from Africa to support a rapidly modernizing Europe. The contemporary shea market remains characterized by raw shea nut—rather than processed butter—exports, which represent 95 per cent of shea exports from Africa (FAOSTAT 2007).[130] This perpetuates colonial patterns, whereby value-added activities are pursued outside the producing areas. The preference for shea nut imports owes to the superior conservation potential of nuts and the greater quality control (particularly with respect to the butter's free fatty acid content, which causes rancidity) firms can exert when transforming nuts in-house than when importing butter (Ferris et al. 2001; Saussey and Konseiga 2005). In addition, problems continue to arise with butter preservation during transportation due to inadequate packaging techniques (Saussey and Konseiga 2005). As also shown in Figure 6.7, shea nut exports fluctuate considerably from year to year. This is due to the same biophysical and political-economic reasons, outlined in Section 6.2, which accounted for oscillations in shea exports during colonial times.

[130] It is frequently unclear whether export statistics refer to shea nuts or shea kernels. The statistics provided in this figure are said to refer to shea nut exports. As reflected in the commodity chain detailed in this chapter, importers have recently shown a preference for shea kernels rather than nuts due to the problem of disposing with the nut shells during the butter extraction procedure.

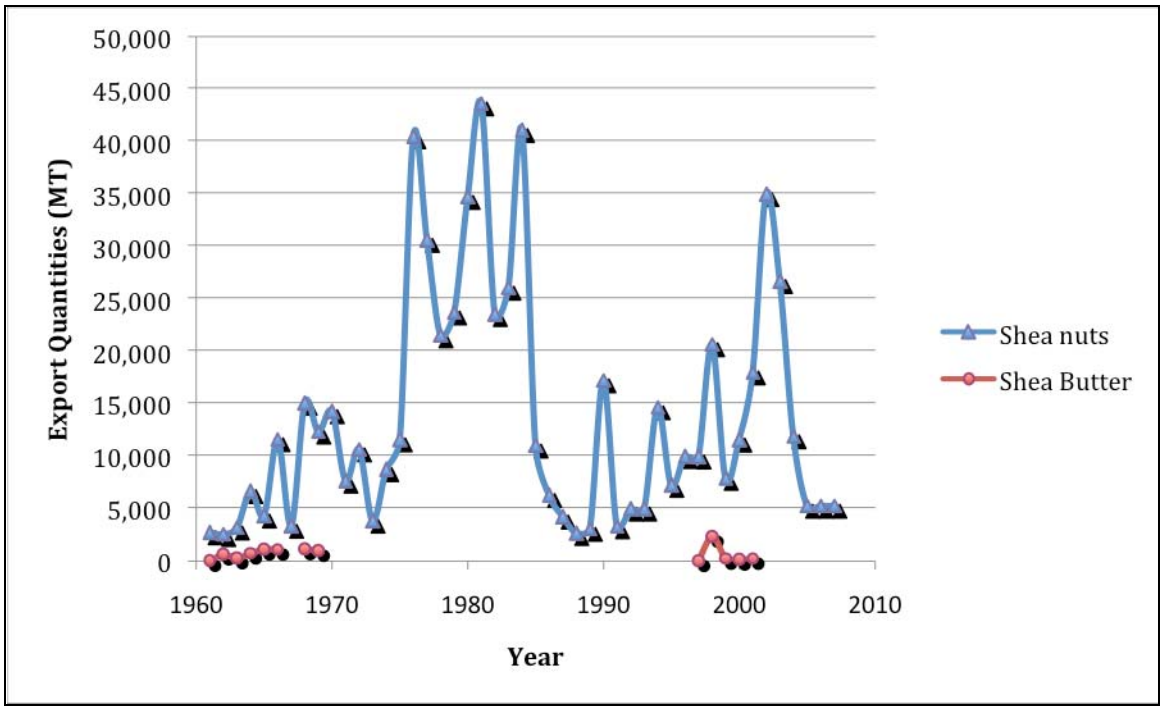


Figure 6.7: Post-colonial Shea Exports from Upper Volta (pre-1984)/Burkina Faso (post-1984), 1961-2005.
(Sources: Péhaut 1976: 1319 (nut data 1961, butter data 1961-1969); FAOSTAT 2010 (nut data 1962-2007); ONAC (butter data 1997-2001))

N.B. Missing points for certain years reflect the poor availability of statistical data.

France, Great Britain, Scandinavia, Japan, and North America absorb most of the West's contemporary shea nut and kernel imports (Pehaut 1976). Agro-industries and refineries, labelled 'G' in Figure 6.2, dominate the shea import market with their high demand for shea butter as a cocoa-butter substitute in chocolates. Statistics on the international shea market are difficult to obtain because the few companies that dominate the trade operate in a highly secretive manner (Fold 2000). Four large European agro-industries—AarhusKarlshamn (Swedish), Loders-Croklaan (Dutch), Unilever (British), and Van Demoortele (Belgian)—as well as Japanese-owned Fuji Vegetable Oil Inc., capture the lion's share of shea nut and kernel imports overseas along well-defined and longstanding marketing channels (UNCTAD 2006). Reminiscent of colonial merchant trading houses, these companies enjoy an oligopoly over the shea market and carry

disproportional authority in establishing international shea prices and quality standards.[131] Their power is further enhanced by their purchasing strategies: in years of good shea yields, companies amass large stocks of shea nuts or kernels to withstand oscillations in supply and demand (Boffa 1999). Since 2001, these leading firms have been allegedly accumulating sufficiently large stocks to last them three years (Saussey and Konseiga 2005). With these stocks and a system of long-term purchase agreements with African exporters, this handful of multinational firms nearly single-handedly controls the industrial extraction and refinery of shea butter from shea nuts and kernels (Ferris et al. 2001; Masters et al. 2004). This transformation of shea kernels into butter as well as the subsequent steps of the shea *butter* commodity chain are discussed in Chapter 7.

6.4 CONCLUSION

This chapter has demonstrated that the shea nut commodity chain involves diverse actors who reap distinct benefits from their involvement in the trade. Many African stakeholders spanning rural and urban areas depend on the shea nut trade for their livelihoods. These include shea nut collectors; rural, town-based and urban kernel vendors; small-scale female shea butter producers who purchase nuts for their income-generating activities; as well as large-scale intermediaries including urban Burkinabè exporters and Ghanaian importers. Their respective roles in the chain have historical roots dating back to pre-colonial and colonial times. Colonial merchant trading houses that monopolized shea exports set the stage for the handful of contemporary multinational agro-firms that now control the importation of shea nuts into Europe, North-America and Japan. In a pattern reminiscent of colonial-era trade in shea, these firms control the pricing and quality specifications of the international kernel trade.

Renewed overseas demand for shea kernels has raised the local price of the resource and had significant socio-economic consequences in all the nodes of the shea nut commodity chain. These consequences include greater competition in nut collection and sales leading to renegotiations in access rights to shea nuts, new spatial patterns of nut collection, as well as the introduction of additional actors throughout the shea nut commodity chain. Responsive to emerging economic opportunities, new and established

[131] In fact, some of these companies, such as Unilver, were founded over one century ago as colonial trading houses.

actors in the shea sector are attempting to manipulate the rules of the trade in their favour. Among other initiatives, vendors adjust the volume of shea nuts sold per standard unit measurement to manoeuvre around arranged prices for the product. In these endeavours, there have been winners and losers. Superior shea nut prices have signalled favourable prospects for some shea nut vendors, but the competition they have triggered for the resource has compelled nut collectors to expend more energy in their gathering activities. Collectors now report having to survey larger areas than in the past to amass a given quantity of shea nuts. Whether improved prices for shea nuts compensate for the additional labour invested in nut collection is questionable.

The phenomena described above pose a potential threat to the sustainability of shea butter projects. As competition for shea nuts increases, the projects' participant butter makers, who are also some of the nut collectors discussed in Section 6.3.1, have expressed having difficulty collecting sufficiently large quantities of shea nuts for use in their UGPPK orders. Moreover, the high price of shea kernels is inauspicious for small-scale shea butter producers, who now pay more for the large quantities of raw material they use in their trade. The rise in kernel prices, caused by increased international demand for these products and for shea butter sold through the UGPPK, can additionally encourage women to sell raw shea kernels rather than processing these into butter for sale to the Union. Adding to these considerations is the likelihood of poor shea yields further driving up the price of shea nuts in given years, and rendering participation in the UGPPK altogether unprofitable, unless butter revenues compensate for high production costs.

This chapter has also shown that increased competition during shea nut collection activities have prompted a proliferation of shea nut 'thefts' in cultivated fields as well as disputes among collectors. While these have exacerbated ethnic tensions and reaffirmed dominant power relations, they have also encouraged fruitful exchanges among ethnic groups needing to collaborate to each benefit from the shea trade. Gains to be made in the shea market have nonetheless been unevenly distributed across ethnic groups at different levels of the chain. At the chain's bottom echelon, Sissili's indigenous collectors with privileged access rights to shea nuts are attempting to safeguard and improve their access to the prized resource. Yet, in the highly competitive climate for shea nuts, they feel that

they are nonetheless unable to collect as many shea nuts as in the past. Migrants, who have weaker claims to these nuts, are even more vulnerable as they vie with the region's indigenous residents for the valuable NTFPs. Older women, who have physical difficulty accessing shea nuts, are also disadvantaged as the resource is sought after by swifter collectors.

Gender roles in the shea trade are similarly both renegotiated and reaffirmed as the resource gains value. Moose and Gurunsi men, who are not traditionally involved in shea nut collection, are progressively drawn into this activity as it seemingly becomes more remunerative. As this threatens to undermine women's monopoly over this node of the commodity chain, it has fomented disputes among male and female gatherers, with the latter seeking to defend their enterprise. The more remunerative echelons of the chain continue to be dominated by men, whose expansive networks of traders and access to capital permits them to exploit emerging opportunities.

New shea markets have also prompted changes in the quality attributes of the shea kernels traded. The demands of the UGPPK for high grade butter, discussed in the following chapter, have prompted producers to seek high quality kernels and adopt standardized kernel processing techniques. In parallel, nut collectors are gathering nuts of inferior quality, which satisfy the requirements of a new commercial niche promoted by Ghanaian interests. Practices such as shaking immature shea fruit off the trees or collecting decaying nuts are thus increasingly common and have extended the supply of nuts sold on local markets. As discussed in Chapter 5, the fact that *all* accessible shea nuts are now being collected in cultivated fields can have repercussions on the long-term regeneration of the tree species. Yet, while adding to the competitive flavour of the shea market, this emergent market for poor quality kernels is not inevitably fated to hinder shea projects. The distinct quality requirements of the Ghanaian and UGPPK markets could theoretically allow women to trade in poor quality kernels, while retaining high quality kernels for their production and sale to the Union. Indeed, some producers have begun pursuing this practice. So long as quality kernels are worth more when processed into butter than they are raw, the development of distinct kernel markets may signal promising prospects for producers able to diversify their activities to seize both economic opportunities.

Finally, as the case of the shea nut commodity chain illustrates, socio-economic changes occurring at the international level have decidedly local consequences, and the benefits and drawbacks of these developments are unevenly distributed within a population. Ethnicity, gender, and age factors, among other identity features, mediate the ways actors are able to respond to emerging opportunities. The local manifestations of emerging markets extend well beyond the economic sphere. Global economic trends affect the very way societies are organized and the norms surrounding the use and trade of traditional commodities. As is also demonstrated in Chapter 7, which focuses on the shea butter commodity chain, renewed attention to these phenomena is required to create policies that can ease the transition of local actors into new economic configurations and ensure that vulnerable segments of the population can benefit from emerging opportunities.

CHAPTER 7

CONVENTIONAL AND ALTERNATIVE SHEA BUTTER COMMODITY CHAINS IN SISSILI AND BEYOND

7.1 INTRODUCTION

As alternative trade becomes increasingly prevalent in the Global North, scholarly interest in this market niche has burgeoned (Blowfield 1999; Barrientos 2000; Raynolds 2000; Freidberg 2003; Bechetti and Costantino 2008). Researchers are calling for empirically-based studies to examine the potential of Fair Trade to meet its goals of improving producer livelihoods and engendering local development (Rice 2003; Maseland and de Vaal 2002; Utting 2009). Evidence provided in this way is essential to ensure that companies are carrying out their declared commitments, to build consumer confidence in the Fair Trade movement, and to maximize the benefits of this initiative for producer communities. As detailed in Section 2.4 of Chapter 2, commodity chain analysis (CCA) provides a useful entry point into such a study of production, exchange, and consumption, in their conventional and alternative expressions (Hopkins and Wallerstein 1986; Gereffi and Korzeniewicz 1994; Raynolds 2002). Such an analysis illuminates the flows and transformations of products within a context of global market integration (Long and Villareal 1998; Leslie and Reimer 1999; Raynolds 2002).

According to Hughes (2001: 390), "the growing strategic emphasis on responsible business has been particularly visible in the context of global commodity networks involving the production of goods in economically less developed countries for retail and consumption in Europe and North America." With a focus on one such globally and alternatively traded commodity—shea butter—I illustrate in the following chapter how the stakeholders of the shea butter trade shape and are affected by different forms of production and exchange, operating at various scales. In so doing, I address the second part of Objective 2 of this thesis, namely: "to analyse the conventional and alternative international shea butter commodity chains originating in the centre-west region of Burkina Faso".

International consumer demands and policies—such as European Commission directives, Western quality standards, the growth in the Fair Trade movement, and

heightened international demand for shea nuts—are refashioning the shea butter sector as well as the socio-economic and physical environment in Burkina Faso. In the country's centre-west province of Sissili, study participants reported that since 2004 or so, there have been wide-ranging changes in the composition of shea butter commodity chains. By examining the nodes where shea butter chains 'touch down', this chapter illuminates the distribution of rents in the shea trade, its beneficiaries, and the ways the international aid community as well as butter producers are reshaping shea butter commodity chains to improve producer livelihoods. This investigation contributes to the overall aim of my thesis, which consists of assessing the sustainability of shea butter projects in the centre-west region of Burkina Faso.

Prior to its emergence in European and American inventories, shea travels thousands of kilometres and encounters countless individuals who contribute to its "idiosyncratic biography" (Appadurai 1986: 42). Between the nodes of female shea butter producers and the product's consumers, shea butter is conventionally exchanged among intermediary traders, refiners, exporters, and multinational industries that import the product. As the commodity is altered, so too are its associated meanings. By means of these expansive networks, shea butter materially and hermeneutically bridges "two largely isolated worlds of meaning and function" (Appadurai 1986: 44). Drawing from the commodity circuits strand of CCA, which focuses on flows of meanings along a commodity's journey, the analysis of shea butter commodity chains helps us understand commodity "cartographies of conversion from meaning to economic value and back again" (Goodman 2002: 274).

Centred on a multi-scalar analysis of the production, exchange, and consumption of shea butter, this chapter is divided into two major parts. First, I examine the conventional shea butter commodity chain that draws its origins in the centre-west region of Burkina Faso (Section 7.2). Subsequently (7.3), I compare this chain to the alternative trade in shea butter from local producer associations to local consumers or multinational firms. In this second, shorter commodity chain, emphasis lies in an increasingly popular commercial model—Fair Trade—wherein producers and importers comply with a set of criteria imposed by a third-party certification agency.

By way of a comparative analysis, I demonstrate that the growing international integration of shea butter markets and the development of alternative market niches for the product are causing profound changes in Burkina Faso's shea landscape. Following Belcher and Kusters' (2004) review on NTFPs, I illustrate how changes in the nature and magnitude of the shea market affect local credit arrangements, the use of labour-saving technology, and the distribution of rents along the shea butter commodity chains. As previously argued in Chapter 6, these impacts are differentiated across gender, ethnic, and class lines. While women occupy the production node of shea butter commodity chains, male small and large-scale intermediaries and importers dominate the chain's middle and upper nodes and capture the most remunerative positions of the market. In its attention to these considerations, my examination of shea butter commodity chains reaffirms the importance of horizontal factors, such as gender, in forming chain dynamics (Leslie and Reimer 1999; Ramamurthy 2000). Finally, my analyses illustrate that, bolstered by NGOs and reflexive Western consumers, Fair Trade shea butter sales are allowing producers to access more remunerative markets for their product. Yet, this form of trade also entails drawbacks, which preclude certain producers from partaking in this market niche. These findings carry implications for the sustainability of shea butter projects, which are discussed throughout the chapter.

7.2 Conventional Shea Butter Commodity Chain

The international conventional and alternative shea butter commodity chains I observed in Burkina Faso in 2006-2007 are depicted in Figures 7.1 and 7.2, respectively, with colours reflecting the gender of the actors controlling each node: in a stereotyped colour scheme, women dominate the pink nodes, while men command the blue ones, and green nodes encompass both male and female actors. As Figure 7.1 illustrates, similarly to the international shea nut commodity chain depicted in Figure 6.1 and discussed in Chapter 6, there exist several convoluted conventional shea butter commodity chains. This section examines these chains beginning with the female shea butter producers who occupy their bottom echelons (7.2.1). Specifically, I describe the transformation of shea nuts into butter (7.2.1.1), and rural-urban distinctions in the availability of production inputs and in shea revenues (7.2.1.2). In subsequent sub-sections (7.2.2 and 7.2.3), I focus on local

shea butter consumers and intermediaries, respectively, who have divergent interests in the product.

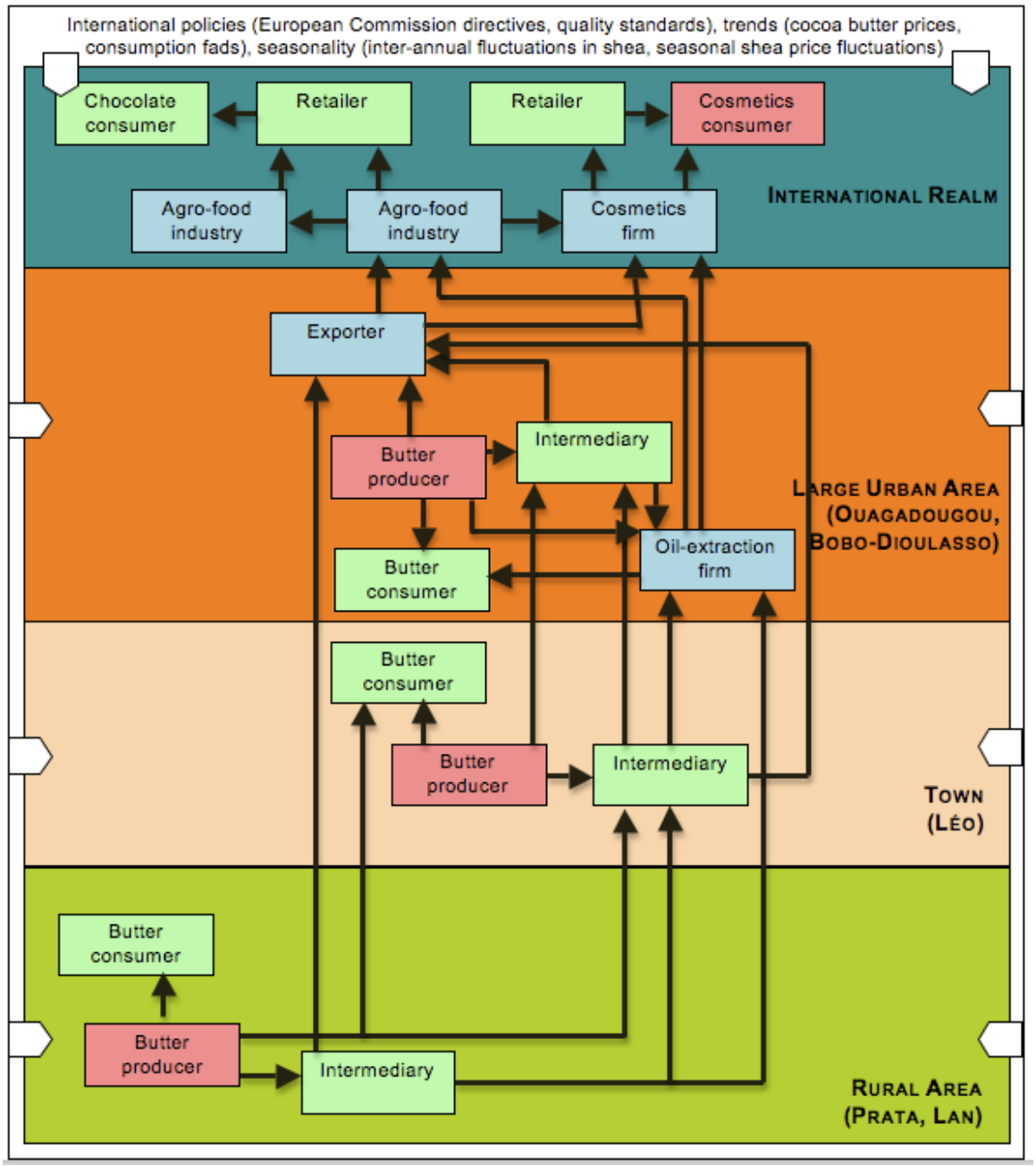


Figure 7.1: Conventional Shea Butter Commodity Chain Originating in the Centre-West Region of Burkina Faso

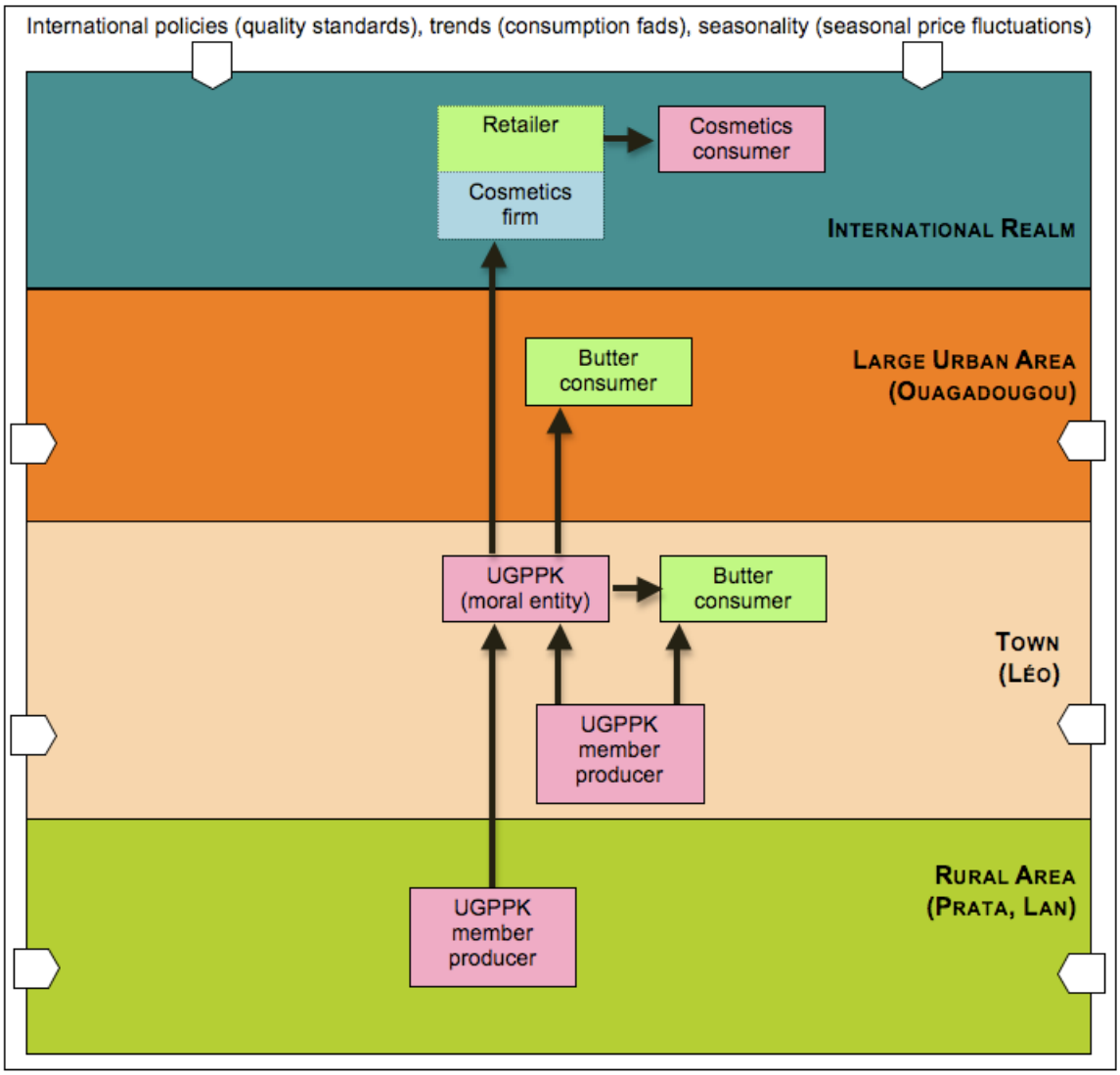


Figure 7.2: Alternative Shea Butter Commodity Chain Originating in the Centre-West Region of Burkina Faso

Once artisanally processed by female producers, shea butter may also be refined by oil extraction firms and sold directly to Western importers; this process is described in Section 7.2.4. Travelling along a different pathway within the conventional shea butter commodity chain, shea butter may transit among urban Burkinabè exporters (7.2.5), who then sell the product to Western importers (7.2.6), before it makes it way to international consumers (7.2.7). The nodes of this commodity chain, and the meanings imbued within the product along the chain, are explored below, as these influence the sustainability of shea butter projects in Burkina Faso.

7.2.1 Local Shea Butter Producers

Shea butter is central to Burkinabè livelihoods, particularly in rural areas. Due to the local importance of the product, butter making figures prominently among female responsibilities. As the women I spoke with proudly told me, daughters master the skills required for shea butter production at a young age via observation and direct participation in the transformation process. In this way, the knowledge imbued in the process is transmitted across the generations. In rural areas, making shea butter is constitutive of womanhood, and excelling in butter making is a source of pride for women, who recognize the best butter producers in their community. The female knowledge guiding shea nut processing comprises social and ritual significance.

As mentioned in Chapter 6, different ethnic groups and communities within the shea belt have developed diverse methods of processing shea nuts, yielding shea butters with distinct tastes. In some communities a dark and bitter shea butter is produced, whereas other communities prefer a clear and sweeter butter (Saussey and Konseiga 2005). Appreciation for these different tastes is culturally and regionally specific (Elias and Carney 2007).

I repeatedly observed and experienced in my three study sites that shea butter processing is an exhausting, labour-intensive process, requiring mutual help and support. Making shea butter is a social process, which strengthens the bonds between producers. Group work and song keep spirits high throughout the arduous task. Women produce shea butter as an independent enterprise, but they receive assistance from their daughters-in-law, co-wives, and female kin. A woman planning to process shea butter requests the assistance of other women to whom she will also offer her help when they prepare butter. The labour of unmarried daughters is particularly invaluable in the collection of shea nuts, water, and firewood, as well as during all shea processing steps.

7.2.1.1 Shea Butter Processing

The traditional transformation of shea kernels into butter occurs in seven steps, namely crushing, heating, pounding, grinding, kneading, washing, and boiling. Proper execution of each step is crucial for obtaining a favourable quantity of good quality butter. Although diverse processing methods exist, the method outlined below is traditional

among Moose and Gurunsi women living in the province of Sissili, and is that in which I participated during my study.

Before initiating butter production, producers have already invested several hours collecting firewood and water, and gathering and preparing shea nuts. The actual nut transformation process begins as women and/or children crush the shelled shea kernels one by one between a hand-held stone and a rock base. This step is not the most physically taxing, but the producers I spoke with admitted that it the most demoralizing of all steps because it extremely time-consuming and performed without the help of other women (Djénébou, 05/02/07; Focus group, 01/02/07). Once kernels are crushed, they are roasted and stirred in a large cauldron until they begin to exude oil (Figure 7.3).

Figure 7.3: Shea Butter Producer Roasting Shea Kernels (Source: Author 2006)

After this second step, heated shea kernels are pounded in a mortar with a pestle until a thick dark brown, chocolate-like paste results. In Prata, where I observed this exhausting step being performed, it lasted between three and four hours. It is generally performed by a group of two or more women, each with her own pestle, who alternately pound the kernels in a common mortar following a rhythmic tempo. By making work rhythmical, women encourage and challenge each other. As the pounding proceeds, the paste weighs down the utensil's course and it becomes gradually more difficult to lift the pestle.

The crunchy, heavy brown paste is then removed from the mortar and thinned by way of stones. On their knees and with both hands, women grind the paste between a large hand-held rock and a larger flat stone placed on the ground. Over two hours of arduous work are required to smooth the paste in this way. Pounding and grinding, two strenuous steps, can be by-passed if a mill is accessible. According to my observations, which corroborate an earlier study performed by Brondex (1999), one kilogram of shea kernels can be ground at the mill in just over one minute.

Once the paste is ready, it is placed in a large clay or metal container and kneaded. This fifth process separates the nut residues from the oil, which rises to the top. Kneading is the most critical step in determining the quality of the butter produced. In a rhythmic fashion, two or three women reach into a common bucket and churn the paste (Figure 7.4). Cold and/or hot water, depending on the paste's consistency, are gradually added. The amount and temperature of the water as well as the duration of kneading are crucial for ensuring a good yield of high quality butter (Hall et al. 1996). The shea producers I interviewed reported that kneading is the most physically demanding step of butter production, requiring muscular strength in the upper body. Every few minutes, kneaders replace one another to avoid becoming overly tired. Meanwhile, women on the sidelines provide encouragement by singing and clapping to the tempo of the kneading. After sufficient kneading, a greyish-white, foamy substance rises from the paste with residues sinking to the bottom.

Figure 7.4: Kneading the Shea Paste (Source: Author 2001)

This foam emulsion, which contains the fatty substance of shea butter, is skimmed off and transferred to a bucket filled with clean cold or lukewarm water. With a twirling hand motion, women cleanse the foam of residues, which sink to the bottom (Figure 7.5). The foam, which gets progressively whiter, is transferred once more to another bucket of clean water. According to traditional methods, this sixth process is repeated as many as three times to eliminate further residues. This is the most water-intensive step of butter preparation. The residue-filled water is brownish with a sandy bottom composed of tiny kernel fragments, which are discarded on the ground and left to dry. Once desiccated, this 'shea cake' is used as a combustible or as animal fodder (Conti 1979).

Figure 7.5: Washing the Shea Paste (Source: Author 2006)

The final phase of butter production involves boiling the clean white paste in a cauldron to clarify the butter. During this process, water evaporates from the emulsion and the remaining impurities precipitate out of the shea oil. The boiling substance is intermittently stirred with a wooden stick. When all the water has evaporated, the boiling subsides. Residues settle to the bottom, and the overlying oil layer is decanted from the impure bottom fraction. When the butter prepared cools to between 32°C and 42°C, shea butter becomes a solid, whitish product (Figure 7.6). On average, only 0.7 to 1.5 kilograms of shea butter result from the transformation of four kilograms of dried nuts, derived from 20 kilograms of fruit (Terpend 1982).

Figure 7.6: Pats of Shea Butter at Room Temperature (Source: Author 2006)

7.2.1.2 Inputs: Rural-Urban Distinctions

The inputs involved in shea processing include shea nuts, firewood, water, labour, and some financial resources and labour-saving technology. Inputs are acquired in distinct ways depending on the rural or urban location of production activities. Shea butter production is generally less expensive but more strenuous in rural areas than in towns or urban centres, where some labour inputs can be substituted by purchased goods or technology.

The yield of butter from shea kernels varies according to nut quality and processing methods. According to NGO personnel I interviewed in Burkina, NGOs involved in Burkina's shea projects generally calculate butter yields based on a 33 per cent extraction rate.[132] Due to the substantial amount of shea kernels required to process one kilo of butter, women wishing to produce a large quantity of butter for sale may buy a portion of their shea kernels. Very poor women who lack access to credit or financial capital are therefore constrained in their butter production endeavours, as their ability to produce shea butter ultimately hinges upon the success of their nut gathering activities. In

[132] The extraction rate refers to the quantity of shea butter that can be derived from a given quantity of shea nuts—namely 33 kilograms of butter for 100 kilos of kernels. This figure closely corresponds with Hall et al.'s (1996) extraction rate of 34 per cent.

villages, where shea nuts are more readily available and cash less so, producers generally collect a greater proportion of their nuts than in towns.

Large amounts of firewood are also required for use during the kernel warming and boiling steps of shea butter production. Niess (1988) estimates that between 8.5 and 10 kilograms of fuelwood are burned to produce a single kilogram of shea butter. Women who have access to a donkey-cart have greater ease collecting large bundles of wood, which is also more easily found in villages than in and around Léo, where many shea producers resort to purchasing wood.

In fact, the creation of the *Union des Groupements des Productrices de Produits Karité de la Sissili et du Ziro* (UGPPK), which produces large quantities of butter for export, has heightened the local demand for firewood.[133] Recognizing a ready-market for their product, vendors transport wood to Union headquarters, where they earn approximately 2000 fCFA (CAD$ 4.22) per (donkey) cartload of product sold (Assétou, 27/10/06). As the president, treasurer, and assistant treasurer of the Union all explained, one cartload of fuelwood purchased collectively by Union members can be used to extract 120 kilograms of shea butter (N. Diasso, M. Bassia, and A. Diasso Yago, October 10, 2006).

As many as 200 litres (one barrel) of water are additionally consumed in the transformation of ten Yoruba plates (27 or so kilograms of kernels) into approximately 8.5 kilos of butter (M. Saussey, July 17, 2007). Easy access to potable water therefore facilitates shea butter processing. While water availability remains tenuous during the dry season, pumps are more readily accessible in Léo—where producers pay 60 fCFA (CAD$ 0.13) per barrel of collected water—than in rural areas. As I observed, some rare town-based producers may even own a water bin on wheels or have water delivered to their compound.[134] In contrast, rural producers tend to suffer from inadequate access to potable water. Women must walk many kilometres to collect water, and return carrying

[133] For background on the UGPPK, refer to Section 7.3.1.

[134] The 60 fCFA (CAD$ 0.13) cost per barrel remains fixed at the pump. To have water delivered to their doorstep, households generally pay a total of 200 fCFA (CAD$ 0.42) per 200-litre barrel of water. Delivery boys (they are generally boys) may increase their rates to 1000 fCFA (CAD$ 2.11) during periods of water scarcity. Water revenues are shared between the *Office Nationale de L'Eau et de l'Assainissement* (ONEA) and the pump manager, who purchases a concession to operate the water pumps. Very few villages in Burkina Faso are serviced by the ONEA. Water in rural areas in generally free, although many villagers amass small monthly contributions (20 fCFA (CAD$ 0.04) or so) for the maintenance of their water pumps.

heavy buckets on their heads. Due to the large quantities of water required for shea transformation, butter production is reduced and may be altogether suspended during the dry season in villages where water sources are distant and unreliable (Crélerot 1995). In Prata, where only two water pumps service over 1200 residents, I was aware that shea producers leave the homestead or send their children off as early as 4 a.m. to collect water on days of shea preparation (Fatimata, 15/11/06). As I experienced, line-ups (as well as conflicts) at the pump are commonplace, and add to the total duration of shea production. Moreover, in some villages, the poor quality of the water drives down the quality of the butter produced (A. Traoré, January 25, 2007).

In addition to these material inputs, making shea butter requires a significant amount of female labour. Table 7.1 compares the approximate duration of each processing step based on my observations as well as those of two other authors. In general, producers invest approximately eight to ten hours in the production of a single kilogram of butter (Crélerot 1995; Faucon et al. 2001; Elias 2003). One woman (assisted during group steps) spends nearly two days completing the process.[135] Shea butter production therefore competes with other female productive and reproductive activities. As such, time constraints during the agricultural period represent a drawback for shea commercialization. As women's time for the collection of shea nuts, firewood, and water in addition to nut processing is limited, the producers I interviewed do not complete all nut processing steps at once. Rather, they produce shea butter gradually, before heading to their fields or upon their return in the evenings.

As noted earlier, some of the steps involved in processing shea can be eased with the use of labour-saving technology, such as a mill. According to Wiemer et al. (1989), as much as 70 per cent of the time involved in shea production can be reduced by using mechanized processing technology. In my three study sites as well as other villages I visited, it was obvious that town-based producers have greater access to production equipment than do village dwellers. While mills are available in urban or semi-urban

[135] In a first attempt to measure labour requirements for the shea transformation process, Chevalier (1948) estimated that 20 to 30 hours were needed for a single woman to produce one kilogram of butter, including the collection, pulping and boiling stages. Once collection and drying are complete, others describe a four to ten-hour process per woman to make one kilogram of shea butter (Fleury 1981; Terpend 1982; Hyman 1991; Hall et al. 1996). A recent study of ten female producers in a women's group in Nariou, central Burkina Faso, calculated a rate of 25 kilograms of kernels being transformed per day (Audette 1992).

areas and in some larger villages, neither the villages of Prata nor Lan have any equipment to assist their shea producers. Many of Prata's residents transport their shea nuts 13 kilometres away to Bieha to have them mechanically ground, whereas Lan's butter makers travel to Léo, ten kilometres away, for this purpose. Queues at the mill are commonplace. Further, some mill owners request that women clean the machinery themselves when grinding shea nuts, which further adds to the labour involved in shea butter production.

Table 7.1: Approximate Duration of Shea Processing Steps (1 Kg Butter, 1 Woman) (Sources: a) Faucon et. al 2001 b) Crélerot 1995 c) Elias 2003)

Step	**Labor time**		
	a) Faucon et al.	b) Crélerot	c) Elias
Crushing kernels	4 hours	*	2 hours
Warming kernels	30 min	1 hour	40 min
Pounding kernels	**	3-4 hours	15 min at mill
Grinding paste	**	2 hours	**
Kneading and washing paste	4h 20 min	2 hours	3 hours
Boiling butter	30 min	1 hour	1h20 min
Filtering	40 min	***	30 min
Total	10 hours	9-10 hours	7h45 min

N.B. a) Labor time is calculated according to work performed by the *Laafi* women's group in Tenkodogo, south-east Burkina Faso. The process here begins once shea nuts have been collected, boiled and shelled. b) Durations are calculated among the Lobi of Dimolo, south-west Burkina Faso. No weights are provided in Crélerot's estimates, thus impeding the determination of yield/time/woman. c) Production times of the *Laafi* women's group in Tenkodogo, south-east Burkina Faso. Women from the Laafi women's group grind their shea kernels at the mill, thus bypassing the labor-intensive pounding and grinding steps. Milling the crushed, heated kernels requires 15 minutes, excluding travel time and line-ups at the mill.
* Missing data
** Steps by-passed at the mill
***Step not performed in given study site

Where such technology is available, the producers I interviewed partly substitute their labour by financial inputs, such as milling fees. When I conducted research in Tenkodogo, south-east Burkina Faso, in 2001, producers paid as much as 450 fCFA (CAD$ 0.95) to grind six Yoruba plates (approximately 16.8 Kg) of shea kernels (Elias

2003). Five years later, in Léo and surrounding areas, mill owners charged 50 fCFA (CAD$ 0.11) to grind one Yoruba plate of kernels (Fati, 20/10/06, Kadia, 09/01/07).

Besides experiencing relatively less hardship in shea butter production, the town-based shea producers I interviewed benefit from greater access to markets for their product than their rural counterparts. Although rural producers do sell some of their butter locally, they frequently have to travel over poor roads and footpaths to larger markets to liquidate their stock at superior prices. I repeatedly observed this in Prata, where producers travel by foot, bicycle or donkey-cart to Bieha on a weekly basis to sell butter. Likewise, Lan's producers sell their shea butter at Léo's Saturday market. Much of this butter is sold to local Burkinabè consumers.

In the context described, constraints such as seasonal water scarcity, inadequate infrastructure, and poor access to labour-saving technology, particularly in rural areas, coupled with women's lack of resources to purchase production inputs including shea nuts, limit the quantity and quality of shea butter individual producers can process and sale. Moreover, the laborious steps involved in making butter and the specialized knowledge involved in the process should be borne in mind when examining women's earnings from shea sales, in the following section. As discussed later in the chapter, these points carry implications for the sustainability of shea butter projects.

7.2.2 Local Consumers

Shea butter is widely consumed within the Burkinabè household. According to a SAED (1989) study, 88 per cent of rural households used shea butter as their only cooking oil in 1989, and an additional eight per cent consumed it one to three times weekly. That same year, one quarter of urban households cooked with shea butter on a daily basis, with 40 per cent reporting its use twice a week or more.[136] More recent data for West Africa reveals a consumption of approximately ten kilograms of shea butter per person per year (Boffa 1999). Although Burkinabè households frequently produce some shea butter themselves, they also represent a market for the ready-made product. A large portion of

[136] Likewise, Hatloy et al. (2000: 61) report a high consumption of shea butter in Koutiala County, southern Mali, where 90 and 65 per cent of the rural and urban households interviewed cooked with shea butter the day preceding the survey. Similarly, shea butter is almost exclusively used as cooking oil in rural households of Bénin's northern Sudan-savanna zone (Honfo et al. 2010), and 86 per cent of rural participants involved in a study performed in nothern and central Ivory Coast consumed shea butter three times a week (Diarassouba et al. 2008: 82).

the local demand for shea butter, however, stems from food vendors who purchase the product for use in their income generating activities. Female entrepreneurs sell fritters made of beans or flour and other dishes prepared in shea butter along transportation routes, at stands, and at markets. As I observed in my study sites, these women generally purchase only a few pats of shea butter at one time.

The local cost of shea butter oscillates annually, seasonally, and regionally, in tandem with the price of shea nuts. Within a given year, the economic value of shea butter is lowest between June and September, and nearly doubles during the dry season. Based upon annual means in local Burkinabè markets between 1990 and 2000, ANDINES (2002) calculated a weighted average producer price of 500 fCFA (CAD$ 1.06) per kilogram of shea butter. The data I collected in Léo's market during the 2006-2007 season suggests a slightly lower price of 451 fCFA (CAD$ 0.95) per kilogram of shea butter. Whereas during the rainy season month of September, 500 fCFA (CAD$ 1.06) can purchase approximately 1.5 kilograms (or 333 fCFA (CAD$ 0.70) per kilogram) (A. Tagnan, February 18, 2007), I noted that the same price only fetches slightly less than half that amount, or 720 grams of shea butter, when prices rise in mid-February. Throughout Burkina Faso, shea butter is sold in pats (depicted in Figure 7.6) for 25 fCFA (CAD$ 0.05) per pat, 50 fCFA (CAD$ 0.11) for three smaller pats, or (more rarely) for 100 fCFA (CAD$ 0.21) for 5 small pats. The cost per pat remains the same throughout the year, but the size of the pats vary seasonally and annually.[137] That is, a given amount of money can buy approximately twice as much butter during the rains as during the dry season, when shea nut prices reach their annual peak.

Based on personal observations as well as interviews with shea vendors at Léo's market, there is a lack of client fidelity among small-scale shea buyers. In Prata, selection for ready-made shea butter is limited, such that buyers have little choice with respect to the characteristics of the butter they purchase and the vendor from whom they purchase it. In Léo, however, buyers circulate around the market and inspect the butter displayed by different producers. They opt for a particular vendor's butter based upon product quality and price criteria (pat sizes and deals). Two of the vendors (Nassiratou, 16/01/07; Abibata, 22/10/06) I interviewed complained that they also sometimes advance their

[137] Approximately 50 grams is an approximate, seasonally weighted average of pat size.

butter on credit to acquaintances who then fail to reimburse them for their product. Hence, social networks based on reciprocity also contribute to a client's propensity to purchase from one vendor over another, albeit it seems to a smaller extent than quality and price criteria.

The meanings and uses associated with local consumption of shea butter vary along class lines. Although the cost of shea butter has recently increased, shea remains the most affordable source of cooking oil in Burkina Faso during most of the year. On January 17, 2007, when I assessed the prices of cooking oils in Léo, one litre of shea (equivalent to just under one kilogram of butter) could be purchased for less than 450 fCFA (CAD$ 0.95). In comparison, groundnut, cotton, palm, and sesame oil cost on average 600 fCFA (CAD$ 1.27).[138] Concurrently, I witnessed in Prata that very poor households cannot even afford to purchase shea nuts or butter. In these households, meals are frequently prepared without any oil at all when gathered shea nut supplies expire, time-constraints prevent women from making butter, or when women prefer to sell their butter than to retain it for their own consumption. In that context, I was aware that shea butter represents a luxury bestowed upon visitors to enhance their meals or upon certain household members on festive occasions.

The contrary is true in urban areas, where shea butter consumption is increasingly stigmatized. Urbanites claim that shea butter has a disagreeable taste and prefer purchasing alternatives oils such as sesame, cottonseed, groundnut or imported palm oil (Hall et al. 1996; Schreckenberg 2004a, 2004b). Similar stigmas against indigenous foods have been reported in other sub-Saharan African and Asian countries (Lykke et al. 2002; Daniggelis 2003; Malaza 2003). Shea butter has thus become a form of class distinction, as poorer urban households and rural dwellers still cook with shea, but well-to-do families consume more prestigious 'modern' imported oils (Compaoré 2001). The stigmatization of this traditional food, which is increasingly considered an ingredient in "poor women's sauce", represents a loss with respect to the product's domestic market prospects. I return to this point later, as it relates to the sustainability of shea projects.

[138] One liter is equivalent to 0.99 kilograms of shea butter.

7.2.3 Local Intermediaries

In addition to the consumption of shea butter within Burkinabè households, the local market for shea butter is characterized by intermediaries who purchase large quantities of the product for resale (Figure 7.1). The intermediaries I interviewed were agents for large-scale, male, urban Burkinabè exporters. Alternatively, intermediaries may supply shea butter to Burkina's vegetal oil extraction firm discussed in the subsequent section: the SN-Citec. In some cases, intermediaries frequent villages to purchase shea butter, which they resell in urban centres. In other instances, they attend weekly town markets, where they acquire sizeable quantities of butter in a single stop. Akin to the town-based kernel vendors who work for large-scale intermediaries (refer back to Chapter 6), shea butter intermediaries transport their goods in shared rental trucks.

Local intermediaries pay producers as little as 275 fCFA (CAD$ 0.58) per kilogram or slightly more, immediately upon purchase of their butter (Tiendrébéogo 2005-2006). The intermediaries I spoke with explained that, when working for urban Burkinabè exporters, they purchase shea butter by weight, which they determine with portable scales. Although the use of weight-based measures may standardize shea transactions, many producers I spoke with complained that the fact that they are unable to read the scale makes them vulnerable to fraud. Despite being poorly remunerated for their efforts, women trade with these intermediaries due to the ease of the transaction. Rather than spending the entire day selling individual shea pats at the market, the presence of these buyers allows women to liquidate their stock in a matter of hours, or less. It also ensures that they will not leave the market with unsold stock. In light of the low prices they receive for their butter, however, some producers covertly renegotiate the terms of trade to improve their returns. As intermediaries are not attentive to product features, producers sell them a low quality commodity, which is sometimes adulterated with water, porridge, or even pebbles to increase its mass (Saussey and Konseiga 2005). Local intermediaries shift this fraudulent product further along the shea butter commodity chain.

7.2.4 Domestic Oil Extraction Firm

In one configuration of the conventional shea butter value chain, local intermediaries sell their product to Burkina Faso's industrial vegetal oil extraction unit: the SN-Citec

(*Société nouvelle huilerie et savonnerie Citec* - New Society for Oils and Soaps Citec). Established in 1940, when it was named the 'Citec', the SN-Citec is a former State-owned company turned private in 1995. With its 300 or so employees, the SN-Citec primarily processes cotton oil. Yet, it is also the only industrial unit in Burkina Faso to refine shea butter, albeit in small quantities.[139] To do so, the SN-Citec purchases butter from the intermediaries discussed above, as well as from female butter makers who deliver their product to the firm's gate in Bobo-Dioulasso, south-western Burkina Faso (A. Tagnan, October 7, 2007).[140] Based in the country's second largest city, which is a prime area for shea trees, the industrial unit enjoys a steady supply of artisanally-produced shea butter. For each kilogram of shea butter delivered, the firm offers producers 375 fCFA (CAD$ 0.79) for butter weighed post-filtration by the company (E. Guiro, November 27, 2006). This is more than the 275 fCFA (or slightly more) producers receive from local intermediaries, but some of the butter's mass is lost during the filtration step, which reduces the price women actually earn per kilogram of butter sold to the company.

The SN-Citec supplies the domestic market with refined cooking oils and soap. Yet, the majority of its refined shea butter is exported to multinational cosmetics companies abroad (Saussey and Konseiga 2005). The firm additionally produces soap shavings—which serve as ingredients in the manufacture of soap—for sale on the international market. The SN-Citec maintains ties with international clients, thereby by-passing Burkina's urban exporters with whom they compete for market shares.

[139] The SN-Citec is secretive about its activities and did not share any of its figures with me or other researchers (see for example Saussey 2009). Yet, refining shea butter is clearly a minor part of its activities. Until 2004 or so, another Burkinabè industrial oil mill—SOPHIB—extracted and refined shea butter. Situated in Bobo-Dioulasso, SOPHIB offered 450 fCFA (CAD$ 0.95) to producers per kilogram of shea butter delivered to its gate (Saussey and Konseiga 2005). SOPHIB has since abandoned its shea oil extraction activities (M. Saussey, July 18, 2007).

[140] Given that the SN-Citec is distantly located from Léo, none of the shea producers I interviewed directly supplied their butter to the firm. Yet, the SN-Citec is described here due to its importance in the country's conventional shea butter commodity chain.

7.2.5 Urban Burkinabè Exporters

Compared to shea nuts or kernels, shea butter represents a small fraction of Burkina Faso's total shea exports.[141] Beyond the SN-Citec and a few women's associations of shea producers, a small group of large-scale urban businessmen control the national shea butter export market. These entrepreneurs, who are also involved in the shea kernels business, acquire shea butter via networks of intermediaries (described in Section 7.2.3) who frequent village and urban markets and purchase butter from small-scale shea butter producers. Although accurate export statistics are difficult to obtain, other experts working in the shea sector estimate that, at most, 1,000 tonnes of shea butter are exported from Burkina Faso during any given year (M. Saussey, July 18, 2007). This butter is shipped overseas to a handful of multinational companies.

7.2.6 Western Importers

European, North American, and Japanese demand for shea butter primarily stems from two multinational industries. The first is the agro-food industry—by far the largest consumer of exported shea—which employs the commodity in the manufacture of chocolate. Secondly, absorbing a smaller portion of the supply, the cosmetics industry is now integrating shea butter in skin products due to its moisturizing and healing properties. To a lesser extent still, the pharmaceutical industry has begun using shea butter in the treatment of dermatosis (Saussey and Konseiga 2005). As they represent the primary global outlets for the product, the following sections (7.2.6.1 and 7.2.6.2) describe the use of shea butter in the multi-billion dollar food and cosmetics industries. As my fieldwork was based in Burkina Faso, the information presented on this overseas segment of the conventional shea butter the commodity chain stems primarily from secondary sources.

7.2.6.1 Agro-food Industries

Outside of the African continent, 90 per cent of demand for shea stems from its role as a 'hidden' ingredient in margarine, pastries, animal feeds, and chocolate (UNIFEM 1997; Boffa 1999; Masters et al. 2004). The primary role of shea butter in the food industry is

[141] Based on the limited data available on shea butter exports, which is displayed in Figure 6.7, the ratio of shea butter to shea nuts exported is around nine per cent.

as a cocoa butter equivalent (CBE) or cocoa butter improver (CBI), in which shea confers a favourable consistency and melting point to chocolate products.[142] The market for shea is thus closely linked to that of cocoa, and competition between the two commodities drives producer prices down. In years of poor cocoa yields, the shea market benefits, whereas the reverse holds true during years of high cocoa production (Fold 2000). As noted in Chapter 6, the role of shea as a CBE/CBI has expanded since 2000, when the European Commission (EC) sanctioned the inclusion of up to five per cent of non-cocoa vegetable fats in chocolate (Fold 2000; Harsch 2001; Masters et al. 2004). The adoption of this EC directive has resulted in increased international demand for the product (Saussey 2009). In addition, demand for shea in chocolates and pastries is being stimulated by the economic revival and associated consumer demand of post-Soviet countries (Ferris et al. 2001). Yet, despite this growing market for the commodity, the fact that the CBE/CBI market is dominated by only a handful of companies does not bode well for Africa's shea nut collectors and butter producers (Masters et al. 2004).

The agro-food industry acquires shea butter in one of four ways. As mentioned in Chapter 6, there exists an oligopoly of influential (mainly European) importers who purchase raw shea kernels from a handful of large-scale exporters in West Africa. Using industrial extraction technology, importers process these kernels into refined butter for its use as a CBE (Fold 2000). Alternatively, and to a lesser extent, agro-food industries purchase ready-made shea butter from urban Burkinabè and other West African exporters and proceed to its industrial refinement. According to Ferris et al. (2001: 25), Western agro-industries will increasingly import butter over raw kernels due to stricter European and Japanese legislation against the development of so-called 'dirty' industries, such as oil extraction firms. This legislation has caused Western oil mills to curtail investments in their factories, and acquire unrefined shea butter produced in African countries, such as Ghana (ibid 2001). Third, a minor fraction of shea butter comes to the Western food industry in a refined form from the SN-Citec, Burkina Faso's oil extraction firm (Section 7.2.4). Finally, agro-food companies can procure shea butter from other Western agro-food industries that extract or refine the desired product. Most of the agro-food industry's

[142] Shea butter is industrially separated into two fractions: stearin, or vegetable fat, which serves as a CBE or CBI and is used in margarines, and an oil fraction that serves as a as low-value base in the production of margarines and animal food (Masters et al. 2004).

shea butter is integrated into food products, yet the industry also sells butter to cosmetics firms at double its original purchase price (Boffa 1999).

7.2.6.2 Cosmetics Industries

Since 1990 or so, more promising opportunities for African producers have arisen with shea butter's emergence as a key ingredient in 'natural' and high-end lines of cosmetics (Compaoré 2000). In this industry, shea is sought for its moisturizing, anti-aging, sun-screening, and skin healing properties. Cosmetic and pharmaceutical interest in shea butter represents a minor but fast-growing international market (Masters et al. 2004). In 2004, these industries consumed between 2000 and 8000 tonnes of shea butter, an amount which is forecasted to increase (Alander 2004). As opposed to raw shea kernels, which are imported by multinational food companies, some cosmetics companies have shown a willingness to import artisanally-processed shea butter, thereby creating potential for value-added activities among African producers. Export figures illustrate this point. In 1997 one tonne of unprocessed shea nuts sold domestically for 70,000 fCFA (CAD$ 147.79) and externally for 100,000 fCFA (CAD$ 211.13). The same tonne processed into shea butter obtained 148,000 fCFA (CAD$ 312.48) (Harsch 2001). Superior prices fetched by cosmetics products also open up a space for improving shea producer remuneration for a premium quality good.

Yet, a number of bottlenecks hinder the participation of local female producers in this niche market. For one, the international agro-food industry is poised to purchase excess production in West Africa at low prices or to import raw kernels and produce the shea butter demanded by cosmetics firms. Cosmetics companies prefer the quality of this industrially-processed shea butter, whose chemical characteristics meet their specific needs. Demand for shea butter in the cosmetics industry also remains limited, given the minor percentage of the ingredient in lotions and other cosmetics (Saussey and Konseiga 2005). Finally, although the use of shea butter in the cosmetics industry is presently fashionable, the longevity of this consumer preference is uncertain (Ferris et al. 2001; Greig 2006). As a result, some of the NGO personnel involved in shea butter projects who partook in a conference I attended in Ouagadougou in 2006 favour the development of a domestic high-end market niche for quality shea butter for cooking purposes, where continuity is more likely assured (Conférence SIAO, November 1, 2006).

When they *do* manage to sell their butter to cosmetics companies (as in the case of UGPPK members, discussed later in this chapter), female shea butter producers stand to earn higher returns than when selling their product on other markets. Hence, in 2010, demand for shea in cosmetics remains the most promising opportunity for African shea butter producers. Yet, the most inequitable distribution of benefits also arises within this commodity network. Whereas 50-gram chocolate bars, such as Mars or Aero, containing five per cent of shea butter sell for approximately CAD$ 0.90 in Canadian stores, one ounce (30 grams) of *L'Oréal*'s "Wrinkle De-Crease Collagen Filler" containing approximately 10 per cent of shea butter can fetch as much as CAD$ 20. More shockingly, Saussey (2009) calculates that French firm *L'Occitane* sells the shea butter it purchases from small-scale Burkinabè producers for 500 times its original purchasing price to French consumers. By the same token, Provost (1995) estimates that by the time shea butter products reach market shelves, producers will have received no more than a 1/84 share of the final sales price. Clearly, other considerations factor into these prices, but the point remains that returns are highly biased. Nevertheless, equity in the distribution of rents along the commodity chain is only moderately relevant to the producer's livelihood security. What ultimately matters to producers is the price *they* receive for their product, irrespective of profits made further along the commodity chain. Thinking about rents in this way, social activists have devised an alternative marketing system to enhance the base-line remuneration of female shea butter producers, without jeopardizing the high profit margins of cosmetics companies. As detailed in Section 7.3, this strategy hinges to a large extent on the willingness of international consumers to pay slightly more for a high grade product carrying a valuable social content.

7.2.7 International Consumers

In international market outlets, shea butter is cleverly marketed by some of the world's most influential firms. Depending on its market niche, the commodity is either an inconspicuous component or a prominently emphasized product ingredient. In these distinct niches, shea caters to different populations and commands different prices as well as different amounts of prestige. In chocolate, it is unnoticeably consumed by the masses of all ages as an inexpensive substitute for cocoa butter, which can be replaced by numerous other CBEs. In contrast, in cosmetics, shea butter primarily attracts well-heeled

female consumers, who purchase the good as a high-end ingredient for its unique properties. As discussed below, the meanings the commodity acquires in the Western consumer imaginary is fluid and context-specific.

7.2.7.1 Chocolate Lovers

Whereas in the local shea trade, shea butter represents a staple ingredient in the Burkinabè diet, in its international commodity chain, over ninety per cent of the shea butter exported is unknowingly ingested by Western consumers in one of the most desirable sweets: chocolate. The love of chocolate dates back at least to the 16th century, when José de Acosta reported its consumption among Meso-American nobles (Off 2006). In the 21st century, however, chocolate consumption is no longer reserved for the nobility; it has instead become the privilege of the global consumer-class. In fact, in the Global North "chocolate—in its many forms—is deeply integrated in a number of social interactions and has many meanings which cannot be removed or replaced by other types of food: gift, reward, comfort, etc." (Fold 2000: 103). In different contexts, chocolate also assumes distinct meanings: from an inexpensive snack or energy booster to a sophisticated dessert or treat. What is common among chocolate consumers, however, is that despite their chocolate craze, only few of them realize the presence of shea butter in their treats. Further, among informed chocolate aficionados, shea butter is not always a welcome ingredient.

The so-called "European Chocolate War" which transpired in the mid-1990s revealed how the significance of chocolate varies according to culture and culinary traditions (Fold 2000: 94). As Fold (2000) explains, between 1990 and 2000, the European Union (EU) debated the composition and significance of chocolate. Divided into two nearly equal camps, EU countries disputed the right to substitute some cocoa butter for other vegetal oils and still call their product chocolate. Older EU member countries (Italy, France, Germany, Belgium, the Netherlands and Luxemburg) contended that chocolate containing CBEs or CBIs was adulterated, in contrast to the EU's newer members (Denmark, the United Kingdom, the Republic of Ireland, Sweden, Finland, and Austria). Since the European Chocolate War, many people still associate the use of shea as a CBE with an inexpensive, mass-marketed sweet consumed by people who lack a sense of quality. Hence, particularly in older EU member countries, the use of shea butter

in chocolate represents low quality standards and ruptures the sweet's association with sophistication and luxury. Unsurprisingly, chocolate companies prefer not to advertise the presence of shea butter or other CBEs in their product. The opposite holds true in the cosmetics industry, where shea butter occupies a prominent position.

7.2.7.2 Cosmetics Connoisseurs

Leslie and Reimer (1999) stress the importance of considering spatialities of consumption, as the significance of consuming a given commodity is transformed not only along the commodity chain but also in different localities. For instance, Weiss' (1996) work illustrates how the relationship between coffee consumption, sociality, and selfhood in coffee-producing Tanzania is different than in Europe and North America, two consuming regions (Leslie and Reimer 1999). This also holds true for shea: the consumption of unrefined shea butter, even for the same purpose, carries dissimilar meanings in West Africa than in the Global North. In both areas, women use shea as an emollient. In Burkina Faso, rural and urban women anoint themselves with shea oil to protect their skin from the dry Harmattan winds. Yet, the Burkinabè women I interviewed indicated a preference for alternative moisturizing ointments, as they consider that shea has an unpleasant odour, is overly thick, and attracts dust particles to the skin. These research participants were adamant that pure shea butter is a poor person's cosmetic, particularly used among women who cannot afford scented, manufactured skin creams.[143] The opposite holds true in Europe and North America, where pure (but fashionably packaged) shea butter reaps top dollar and acquires luxury status. Whereas 150 grams of shea butter traded in Léo commands a price of approximately 67.5 fCFA (CAD$ 0.15), French company *L'Occitane* markets the same quantity of pure shea butter (also produced in Léo) for CAD$ 44.[144] At that price, the commodity is accessible only to wealthy cosmetics consumers. In contrast to shea's 'hidden' use in chocolates, even trivial amounts of the substance are highlighted on cosmetics labels to attract cosmetics connoisseurs knowledgeable about the properties of shea butter.

[143] The advent of high quality shea butter locally is beginning to challenge this conception, which nonetheless remained prevalent among female interviewees.

[144] The figure provided for the local cost of shea butter is based on an average annual cost of 450 fCFA per kilogram of shea butter sold on the conventional market in Léo (refer back to Section 7.2.2).

The integration of 'natural' or 'pure' shea butter—not to mention of the growing incidence of certified organic shea butter—in the global cosmetics industry caters to multiple consumption fads. The first, green consumerism, or consumer interest in natural products, is manifest in various consumption domains. This is evidenced in patterns revealing upward trends for foods with 'natural' ingredients (Sloan 1995; Guthman 2002; Franz and Hassler 2010), for holistic medicine and for natural cosmetics (Ainsworth 1993; Lee 2001). As Goodman and Redclift (1991: xi) demonstrate with respect to organic foods, "Nature commands attention, and the 'natural' has an ideological force." Amid the growing health concerns in the West, a sense of security can accompany the purchase of natural products such as shea butter.

As with other 'natural' products, highlighting shea butter's 'natural' character addresses a number of perceived needs. Health problems and allergies associated with synthetic cosmetics are now widely recognized, whereas the potential hazards related to natural products are under-appreciated. The 'natural' is frequently, and at times erroneously, associated with security and wholesomeness (Clarke et al. 2008). Moreover, there are symbolic reasons for purchasing natural products. Consumption of these goods may represent the need to be reconciled with nature or the desire to position oneself against the threats posed by a complex "risk society" (Dürrschmidt 1996).

In addition to being a fashionable symbol of the natural, shea butter and other tropical commodities satisfy fantasies of the Western imaginary. As most Western iconographic and textual representations of shea on the Internet, in shop displays, and on product labels reveal, the commodity's exotic origins are a market lever for the product. Western fascination with the exotic is reflected in the growing consumption of 'ethnic' goods, such as holidays, food, and clothing (May 1996; Cook 1999). Hence, Rutherford (1990: 11) contends that, "capital has fallen in love with difference […] cultural difference *sells*." Capturing this market trend, shea retailers are now positioned among numerous businesses that partake in the 'commodification of ethnicity.' A combination of textual and iconographic representations promotes shea butter as foreign/exotic, traditional, authentic, and natural to appeal to the modern shopper. Fantasies of communing with traditional values as well as nostalgia for the 'simple' past accompany the consumption of exotic goods, such as shea butter.

In her study of 'Banana Republic' advertisements, Elli (1992) offers a potential explanation for the success of the exotic as a marketing strategy. As is the case for Banana Republic consumers, the majority of Western shea butter consumers are young to middle aged White women, university educated, perhaps with children and a husband, probably with middle to high incomes. To these women, exotic goods embody the fantasy of what is lacking in their lives: simplicity, nature, tradition, and authenticity. The Other is romanticized as being 'natural,' 'authentic,' and lying beyond the realm of time in conditions of coevalness. As Rogers (1992: 514) states, there is "a romantic or pastoral streak that seeks out in the Other what the Same has lost (innocence, respect for nature, etc.)."

Finally, advertised typecasts and images of shea butter's origins appeal to the Western, urban consumer's belief in the rural idyll. As Little (1999: 439) argues, "no discussion of rural society or community appears complete without some reference to the peaceful, wholesome, tight-knit, caring, timeless, etc., etc. myth that is the rural idyll." Internet images of beaming women and children, gathered in a communal fashion and happily working side by side to produce shea butter for European and American consumers propagates such conceptions.[145] In these advertisements, the constructed Other becomes fixed in the consumer's mind as a 'pristine native,' lying outside the realm of time, modernity and progress. Further, the representation of Africa as a serene, mystical place in product advertisements revives romantic, atemporal myths of the continent (Elli 1992). The group of smiling women portrayed in shea butter advertisements conceals the fact that shea butter is produced with the toil of these impoverished producers. In contrast, as discussed in the second major part of this chapter (Section 7.3), Fair Trade campaigns explicitly seek to raise consumer awareness of product origins and producer livelihoods.

7.2.8 Section Conclusion

I have argued in this section that significant constraints in shea butter processing and trade coupled with low returns on women's labour characterize the conventional shea butter commodity chain. Moreover, prospects for increasing these returns on the domestic

[145] See, for example, http://www.sheabuttermarket.com/pure_shea_buttter_market_tapko.htm .

market remain low, since shea butter is primarily sought by poorer households who purchase it due to its competitive pricing. In contradistinction, the use of shea butter (except in a few traditional dishes) is stigmatized among better off households, which prefer to consume 'modern' imported vegetable oils.

While at its origins, shea butter exported from Burkina Faso is artisanally-processed by female producers, many actors occupy the middle echelons of the commodity chain and have a stake in preserving the chain's conventional structure. As Figure 7.1 depicts, these stakeholders include intermediary traders, Burkina Faso's oil extraction firm, and urban Burkinabè exporters. These actors, most of them men and some of them quite powerful, operate within the market's neo-liberal paradigm and contribute to keeping prices low for female shea butter producers.

Finally, the commodity's use within the agro-food industry where shea butter serves as an inexpensive substitute for cocoa butter, offers little promise for improving the product's international price. This is aggravated by the fact that, despite high demand for shea butter in mass-marketed chocolate products, the product is consumed inconspicuously or perceived as a tasteless additive by chocolate aficionados. In contrast, in its growing niche in the cosmetics industry, shea butter is actively sought by connoisseurs who appreciate its distinct properties, as well as its representation of the natural, exotic, and traditional. These meanings associated with shea butter are important as they justify the cosmetics consumer's willingness to pay higher prices for the product. Renewed demand for the product as well as the superior prices the commodity fetches in the cosmetics market offer the best hope for improving the incomes of shea butter producers. These considerations have served as a launch pad for the shea butter projects that play a central role in the alternative shea butter commodity chain analysed in the rest of this chapter. Moreover, as discussed in the chapter's conclusion, these considerations influence the sustainability of the projects in the centre-west region of Burkina Faso.

7.3 Alternative Shea Butter Commodity Chain

In the following section, I focus on the alternative shea butter commodity chain, which at the time of my fieldwork included three types of trading relationships: international sales in which clients are Fair Trade certified, international sales in which clients are not Fair

Trade certified, and domestic, non-Fair Trade certified sales.[146] The three versions of the chain involve the *direct trade* in butter from the Union of shea producers to international or domestic clients (Figure 7.7). Figure 7.2 depicts the pathways shea butter follows in this alternative shea butter commodity chain. Shea butter projects have instigated the development of, and play a decisive role in, the three versions of this commodity chain.

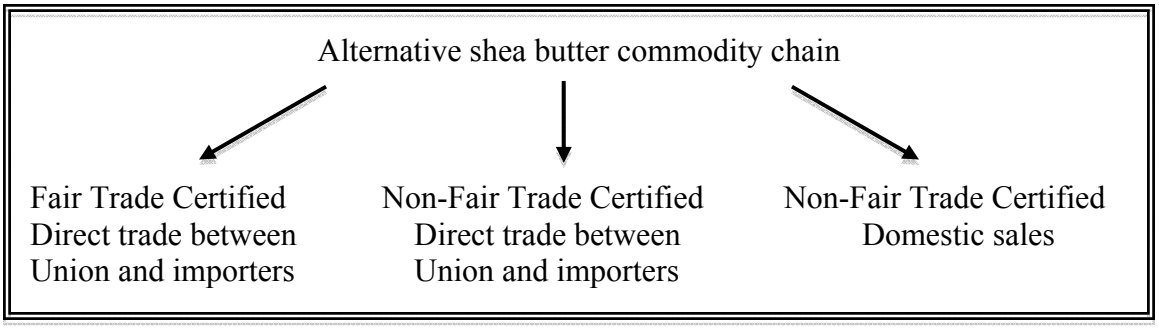


Figure 7.7: Three markets supplied in the alternative shea butter commodity chain

As described in Chapter 1, Fair Trade is a partnership that seeks to promote greater equity in international commerce by offering improved production and exchange conditions to producers and workers in the developing world (Whatmore and Thorne 1997; Raynolds 2000; Bryant and Goodman 2003; FLO 2005). The most commonly cited definition of Fair Trade is provided in Figure 7.8a along with the six principles underlying the movement. In turn, Figures 7.8b and 7.8c outline the production and trade criteria which producers and importers participating in the movement must follow. As evidenced by these norms, Fair Trade aims to improve the remuneration of small-scale producers and shield them from unfavourable market fluctuations.[147] Fair Trade also carries an emotive content, particularly on the consumption end of the value chain. Consumers purchase Fair Trade products partly in an effort to build solidarity between themselves and the producers of their goods in the Global South.

In the shea sector, Fair Trade activists and international organizations working primarily in Burkina Faso, Mali, and Ghana are encouraging cosmetics companies to

[146] Shortly after the end of my fieldwork in March 2007 the UGPPK also began supplying the certified organic market.
[147] Plantations employing waged labourers can also receive Fair Trade certification, yet for the purpose of this thesis I focus on the small-scale producers involved in the movement.

purchase shea butter directly from West African female producer associations. As a result, shea producers directly supply a handful of European cosmetics companies and Fair Trade specialty stores with their product. In this alternative configuration, the number of non-value-added transactions that separate producers and consumers is reduced, such that the shea commodity chain is shortened, and women command a greater proportion of the nodes than in conventional trade. This is apparent when comparing the conventional and alternative shea butter commodity chains depicted in Figures 7.1 and 7.2, respectively.

According to FINE (cited in Fair Trade Advocacy Office 2006: 10):

> Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South. Fair Trade organisations (backed by consumers) are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of international trade.

Organizations participating in the Fair Trade movement must adhere to six underlying principles:

1. Improving the livelihoods and well-being of producers through increased market access, strong producer organizations and higher remuneration as well as through long-term trading relationships.
2. Promoting development opportunities for marginalized producers, including women and indigenous peoples, and protecting children from exploitation during production.
3. Raising consumer awareness about the disadvantageous effects of international trade upon producers to allow them to put their 'consumption politics' to good use.
4. Maintaining a trading partnership based on communication, respect and transparency.
5. Campaigning for practical changes in the conventional global trading system.
6. Protecting human rights through social justice, economic security and sound environmental practice.

Figure 7.8a: Defining Fair Trade and its Underlying Principles
(Sources: Murray and Raynolds 2000; Mayoux 2001; FINE 2010)

1. Trade relations between producers and importers should be as direct as possible.
2. Producers should be organized into democratic associations of small growers or plantation workers. The organization must be politically independent, publicly accountable and transparent. Profits should be distributed equitably between members.
3. FLO-imposed minimum producer sales prices or fair wages should be respected. Set prices consider production costs, organic bonuses, and social and environmental reinvestment premiums.
4. Importers should engage in long-term contracts, provide advance credit and financial or technical assistance to producers.
5. Labor standards set by the International Labor Organization (ILO) should be met. Basic labor standards include freedom of association and collective agreements, and healthy and safe working conditions. They proscribe forced labor, child labor, discrimination, and unequal pay.
6. Integrated farm management system should be upheld to ensure the basic environmental objectives of biodiversity maintenance, pesticide and fertilizer control, composting, waste reduction and anti-erosion efforts.

Figure 7.8b: General Production Criteria for Fair Trade
(Sources: Murray and Raynolds 2000; TransFair Canada 2004)

1. Prices should cover producer costs of living and sustainable production.
2. Prices should include a fair trade premium earmarked for community development.
3. Pre-financing should be provided to producers upon request.
4. Traders and producers should engage in long-term contracts.

Figure 7.8c: General Trade Criteria for Fair Trade (Source: TransFair Canada 2004)

The following section focuses on the alternative shea butter commodity chain that originates in the central-west region of Burkina Faso, where producers organized in an association of women's groups process the commodity. These female shea butter

producers—all members of the UGPPK—are the subjects of Section 7.3.1. The discussion revolves around the costs and constraints of participation in shea butter projects (7.3.1.1), the returns to UGPPK members stemming from Fair Trade and other direct sales to domestic or international clients (7.3.1.2), and the meanings imbued in the processing of shea butter for these alternative markets (7.3.1.3). In Section 7.3.2, attention turns to the NGOs and third-party certification agencies involved in the Fair Trade shea butter movement, before considering the Burkinabè consumers who purchase the Union's shea butter (7.3.3). European importers and retailers are discussed in Section 7.3.4, whereas Section 7.3.5 focuses on the consumption of Fair Trade shea butter in Europe and North America. As I proceed to examine the different nodes of the alternative shea butter commodity chain, I consider the ways the shifting representation of the commodity influences the sustainability of shea butter projects.

7.3.1 UGPPK Member Producers

One of the criteria for Fair Trade certification is that shea producers be organized in democratic associations such as cooperatives, which are owned and controlled by their members (Figure 7.8b). As briefly introduced in Chapters 1 and 4, the UGPPK is one such association, which comprises 33 primary-level women's work groups (*Groupements villageois féminins* or GVFs) located throughout the provinces of Sissili and Ziro. UGPPK headquarters are situated in Léo and run by an executive committee composed of eight of the Union's female members. National and international shea butter orders are channelled through the head office, which distributes orders among member GVFs according to set criteria. Each association subsequently divides its share of the order among its members. Upon product delivery, overseas clients pay the UGPPK, which distributes the funds to its participating GVFs according to the quantity of butter they respectively produced. Likewise, each association then remunerates its member producers according to their individual contributions. In this manner, international sale opportunities reach the UGPPK's 1200 female producers. As most members are illiterate and dwell in remote areas lacking infrastructure and information on the global shea market, the Union offers them a unique opportunity to tap into more remunerative international commercial circuits than those accessible to them on the local market. As discussed in the following section, integrating into these markets requires producers to

modify their shea butter processing techniques to supply a product with specified characteristics.

7.3.1.1 Butter Production for the UGPPK

Producing butter for sale to the UGPPK, as opposed to sale on the local market, entails supplemental labour, water, firewood, and *savoir faire* (know how) to produce a commodity that meets the stringent quality standards of international clients. In particular, Fair Trade products including shea butter typically enter specialty markets within which they command high consumer prices. The high quality of these products partly confers them the required leverage to justify superior shelf prices (Bray et al. 2002). To achieve a high-end product, the NGOs involved in shea butter projects train Union members to follow standardized processing techniques. As discussed in Section 6.3.1.5 of Chapter 6, through capacity-building workshops, NGOs detail how shea nuts should be selected and treated to yield quality kernels. These organisations then promote washing these high quality shea kernels prior to their transformation into butter. Other additional steps required to produce quality butter include washing the shea paste as many as five times—rather than three times as when selling butter locally—to obtain a product with fewer impurities. An additional boiling step is also performed; that is, after a first boiling, shea oil is decanted from an impure bottom fraction and boiled again before being collected and left to cool. Finally, UGPPK members filter their shea butter to improve its purity. The high quality butter obtained in this way is whitish, as opposed to poor quality butter, which is dark yellow with a potent smell. Quality butter meets the low acidity, impurity, and humidity indices requested by international clients. Three Union members, trained by NGO personnel, conduct simple chemical analyses to ensure product compliance with set quality standards. Specifically, they test butter samples from each participant GVF in a rudimentary laboratory located at UGPPK headquarters.[148]

Although these additional processing steps add to the duration of butter production, participation in the UGPPK allows producers to access labour-saving technologies. In fact, UGPPK headquarters are fully equipped to ease the butter production process. A crushing machine enables producers to by-pass the manual

[148] The building itself as well as the equipment it houses were funded by project donors.

crushing step, while the hand-operated heating machines shown in Figure 7.9 facilitate the warming step, and two mills facilitate nut grinding (Figure 7.10).[149] The adapted fireplaces depicted in Figure 7.11 reduce firewood consumption during the boiling steps, and clean, running water is provided. The added benefit of using UGPPK equipment is that—as opposed to private mills—it is used on credit. Producers pay for the use of the Union's equipment only upon receiving remuneration for their butter, at which time the cost of using UGPPK machinery is automatically deducted from their revenues. This allows women to incur less debt and reduce out-of-pocket expenses during production activities.

In principle, Union equipment is available for all UGPPK members. In practice, however, only women residing near Union headquarters are able to access it. Nonetheless, since over half of the Union's producers live in Léo, machines are in short supply when large orders are executed. At those times, I witnessed producers waiting as many as three days for their turn to use some of the machines. Women's bags of shea kernels, neatly lined up, preserved their place in the queue.

Figure 7.9: Labour-saving Technology to Facilitate Kernel Warming
(Source: Author 2006)

[149] Despite the benefits this labour-saving technology offers producers, frequent breakdowns in machinery, the high cost of spare parts and fuel inputs, as well as the purchase price of the equipment represent significant costs to the UGPPK. In fact, Compaoré (2000) has demonstrated that the costs associated with such labour-saving technology have left other shea butter producer associations in Burkina Faso shouldering large debts.

Figure 7.10: Mill used for grinding shea kernels (Source: Author 2006)

Figure 7.11: Adapted Fireplaces Used for Boiling the Shea Emulsion
(Source: Author 2006)

As a result of the production techniques promoted by NGOs involved in shea projects throughout Burkina Faso, Burkinabè shea butter has won the confidence of international buyers. In 2006, at an international conference on shea butter held in Bobo-Dioulasso, I was informed by an expert in the shea sector that Burkina Faso is reputed to sell the best artisanally-produced shea butter in the world (E. Masters, Pro*Karité* conference, November 6, 2006). Moreover, within Burkina Faso, UGPPK shea butter is particularly appreciated. The achievement of top-quality shea butter is essential for maintaining a faithful client base, and bodes well for the sustainability of shea projects. As we will see below, the efforts involved in producing this quality shea butter are

relatively well remunerated in the Fair Trade configuration of the shea butter commodity chain.

7.3.1.2 Economic Returns from UGPPK Membership

As mentioned earlier, the UGPPK supplies shea butter to three different markets; the non-Fair Trade certified domestic market, the non-Fair Trade certified international market, and—since receiving its Fair Trade certification in July of 2006—the Fair Trade certified international market (Figure 7.7). On the domestic market, the Union sells shea butter for 750 fCFA (CAD$ 1.58) per kilogram. The UGPPK retains a percentage of this amount to finance its activities; namely, developing ties with customers, performing administrative duties, collecting butter from participating GVFs, filtering butter at Union headquarters, and packaging butter in sealed plastic bags or plastic containers supplied by its clients. Thus, the producer receives only 500 fCFA (CAD$ 1.06) of the 750 fCFA (CAD$ 1.58) from these sales (Table 7.2). On the non-Fair Trade certified international market, clients such as multinational company *L'Occitane* set the purchasing price, generally between 700 fCFA (CAD$ 1.48) and (on the rare, high end) 1000 fCFA (CAD$ 2.11) per kilogram of shea butter. Between 500 (CAD$ 1.06) and 750 fCFA (CAD$ 1.58) of this value returns to the producer.

Finally, shea butter sold on the Fair Trade certified international market commands a minimum set price of 1469 fCFA (CAD$ 3.10) per kilogram. Of this far higher price, 1198 fCFA (CAD$ 2.53) per kilogram reach the producer, and 150 fCFA (CAD$ 0.32) per kilogram cover the Union's operational costs. The UGPPK also receives an additional 121 fCFA (CAD$ 0.26) per kilogram as a social premium earmarked for local development projects (Table 7.2).[150] Fair Trade shea butter prices are dictated by the Fairtrade Labelling Organisations International (FLO), which offers third-party certification to the UGPPK (see Section 7.3.2).[151] Depending on the type of market supplied, then, producers selling their butter to the UGPPK stand to receive between 500 fCFA (CAD$ 1.06) per kilogram for butter sold on the non-Fair Trade certified market and 1198 fCFA (CAD$ 2.53) per kilogram for butter sold through certified Fair Trade

[150] The use and impacts of this premium are discussed in Chapter 8.
[151] Inaugurated in 1997, FLO is an umbrella organization that comprises 17 Fair Trade labelling initiatives throughout the world. FLO sets global criteria for, and offers third-party certification of Fair Trade products.

channels. Whereas the former price is nearly commensurate with the price for conventional, informal local butter sales, producers can earn more than twice as much when selling to the Fair Trade market.

Table 7.2: Union and Producer Shares of Shea Revenues per Market Type in the Alternative Shea Butter Commodity Chain

Type of market supplied	**Price paid/Kg butter**	**Margin retained by the UGPPK/Kg butter**	**Producer revenue/ Kg butter**
Non-Fair Trade certified domestic market	750 fCFA (CAD$ 1.58)	250 fCFA (CAD$ 0.53)	500 fCFA (CAD $1.06)
Non-Fair Trade certified international market	700-1000 fCFA (CAD$ 1.48-2.11)	200-250 fCFA (CAD$ 0.42-0.53)	500-750 fCFA (CAD$ 1.06-1.58)
Fair Trade certified international market	1469 fCFA (CAD$ 3.10)	150 fCFA (CAD$ 0.32) + *social premium* 121 fCFA (CAD$ 0.26)	1198 fCFA (CAD$ 2.53)
COMPARE WITH Conventional local market sales (not via UGPPK)	*annual mean: 450-500 fCFA*	---	*annual mean: 450-500 fCFA*

In light of the price producers receive per kilogram of butter, what net returns can UGPPK members actually expect for their labour? To determine these returns, the cost of inputs must be subtracted from the revenues producers earn for their butter. In rural areas, save for the labour invested in the enterprise, the cost of inputs may be virtually non-existent, if producers collect all the nuts, water, and firewood required and do not have access to labour-saving technologies. In Léo, however, producers generally pay for these inputs. All of the producers I spoke with in Léo reported that collecting firewood for shea butter production has become increasingly difficult. Women must venture deeper into the brush to amass dried wood, and those without a cart cannot transport sufficient quantities of firewood to meet their production needs. Consequently, over one-third of Léo's producers purchase some or all of the wood used in their butter making endeavours. Wood purchases cost them approximately 500 fCFA (CAD$ 1.06) for 30 kilos of butter produced, or 17 fCFA (CAD$ 0.04) per kilogram of butter (Figure 7.12).

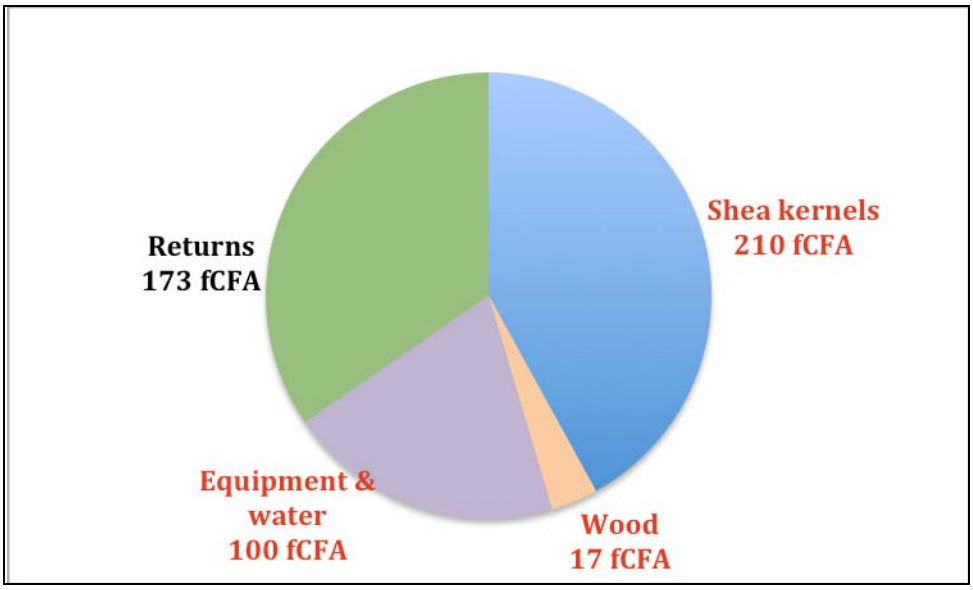


Figure 7.12: Breakdown of Costs and Returns of UGPPK Members for One Kilogram of Butter Produced in Léo, Based on the *L'Occitane* Order, October 2006.

N.B. Total producer revenues per kilogram of butter were 500 f CFA (CAD$ 1.06). Production costs are in red, leaving net returns in black.

Producers working at UGPPK headquarters also have 100 fCFA (CAD$ 0.21) per kilogram deducted from their revenues for the use of common equipment and water (Figure 7.12). They spend slightly less when grinding shea kernels at another mill (in villages or in Léo) and paying for public water use in Léo. However, additional crushing and kernel-warming equipment as well as running water at the Union facilitate their production activities.

The biggest monetary commitment to shea production, however, is in the purchase of shea kernels. The large quotas of butter allocated at once to Union members compel over 80 per cent of the shea producers I interviewed to supplement their own stocks of collected shea nuts with purchased kernels. As the cost of kernels varies throughout the year, the timing of kernel purchases determines the profitability of the enterprise. For producers who are unable to stockpile kernels when their prices are low, the timing of UGPPK orders is crucial in determining net returns. When shea kernels are worth 175 fCFA (CAD$ 0.37) per Yoruba plate, 210 fCFA (CAD$ 0.44) are spent on

their purchase to produce one kilo of shea butter.[152] This was the going price of shea kernels during the Union's largest shea butter sale to *L'Occitane*, in October 2006. Adding the cost of equipment, water, and firewood (total of 117 fCFA (CAD$ 0.25) per kilogram), producers were therefore left with a net return of merely 173 fCFA (CAD$ 0.36) per kilogram of butter. When producer remuneration is set at 500 fCFA (CAD$ 1.06) per kilogram of butter, producers break even but derive no monetary benefit from their labour if kernels are worth 320 fCFA (CAD$ 0.68) per Yoruba. When kernel prices exceed this amount—which is the case during approximately half the year in Léo—selling raw shea kernels becomes more profitable than selling shea butter, even without factoring in labour inputs. At this time, only women partaking in Fair Trade—and thus receiving 1198 fCFA (CAD$ 2.53) per kilogram of shea butter—earn positive returns on their labour. In Burkina Faso, unprocessed shea kernels were worth 425 fCFA (CAD$ 0.90) per Yoruba in February 2007. The UGPPK members I spoke with lamented having sold their butter earlier to *L'Occitane* for 500 fCFA (CAD$ 1.06).[153] Those who still had kernel stocks, however, saved them to be poised for potential Fair Trade orders. At a price of 1198 fCFA (CAD$ 2.53) per kilogram of butter, the labour involved in processing kernels would be relatively well remunerated compared to shea sales in other available market outlets. I revisit these returns to labour in Section 8.3.1 of Chapter 8.

Evidently, the substantially greater remuneration women receive when participating in Fair Trade markets encourages their participation in the UGPPK, and the sustainability of shea butter projects more generally. In contrast, the 500 fCFA (1.06$) per kilogram women earn through the Union's direct sales to international and local clients continue to poorly remunerate their efforts and dissuade some producers from Union membership and project participation. Although this amount is usually superior to per kilo earnings in the conventional shea butter commodity chain, it does not necessarily compensate for the added costs women incur due to the use of additional inputs—in the form of water, firewood, and greater labour provision—required for quality butter

[152] This figure is based on the approximation that one Yoruba contains 2.5 kilograms of shea nuts and that three kilograms of shea nuts yield one kilogram of shea butter.
[153] Yet, as one of the Union's support personnel pointed out, it is unlikely that these producers would still have nut stocks to sell at that time of year, even if they had not participated in the *L'Occitane* order. Most women would have sold their kernels at lower prices earlier in the shea season due to pressing income needs (A. Traoré, February 21, 2007).

production. As discussed in the following chapter, in Section 8.3.2, UGPPK members also pay membership dues for participation in the Union. Moreover, the fact that, as opposed to conventional sales, the price of shea butter sold through the Union does not reflect the seasonality of the shea market can further disadvantage women at times when shea kernels command high prices on the local market.

The significance of the costs involved in acquiring inputs for the production of large quantities of quality butter for the Union must be contextualized. Due to their limited savings, UGPPK members pursue various arrangements to purchase large quantities of shea kernels. Some of the producers I interviewed request a monetary loan from acquaintances, whereas others reported selling goats, stocked groundnuts, and grain for cash to purchase kernels. Alternatively, women acquire shea nuts on credit, predominantly from relatives in their natal village. In Prata, 41 per cent of the UGPPK members I asked (n=16) reported paying cash for their kernels, while 47 per cent acquire them exclusively on credit, and 12 per cent use both means for their purchase. In Lan, half of female interviewees (n=18) pay cash for their kernels and avoid credit-based transactions, while 33 per cent rely on credit, and 17 per cent do so occasionally. In the town of Léo (n=30), fewer than half (40 per cent) of interviewed Union members acquire their kernels on credit, all or some of the time. Interest rates range between as little as five per cent (Focus group, 01/02/07), to ten per cent (Céline, 27/10/06) or 25 fCFA (CAD$ 0.05) per Yoruba, a rate which varies seasonally according to kernel prices and which is reimbursed to the kernel provider (Nadia, 17/01/07).

Many women are not in a position to receive credit however, because they are too poor to inspire the trust of a lender or because they do not have the social capital to do so (Awa, 16/11/06). This impedes their participation in UGPPK orders. Otherwise, UGPPK producers who prefer to avoid credit engagements find it difficult to refuse even poorly remunerated orders as this penalizes them during subsequent participation in Union activities. Sanctions include exclusion from Fair Trade contracts, which offer promising remuneration. According to the UGPPK's general manager, this measure is necessary to guarantee clients that the specified quantity of shea butter will be delivered to them within set deadlines.

In light of the importance of credit for successful completion of UGPPK orders, the UGPPK's general manager informed me that the Union attempts to facilitate (monetary) credits to its members through its constituent GVFs. Each GVF, as a group, is eligible to request credit at a 13 per cent interest rate from the *Caisse Nationale de Crédit Agricole* (CNCA) of the *Banque Agricole et Commerciale du Burkina* (BACB) upon completion of the necessary documentation. However, the Union members I interviewed believed that the delays involved in formal credit acquisition frequently conflict with the short deadlines afforded by international clients for butter deliveries. In addition, the treasurer of the Union informed me that the paperwork and logistics involved in loan applications are prohibitively difficult, particularly for rural producers, given that bank branches are rarely located in rural areas, few shea producers are literate, and fewer still are familiar with the bureaucratic requirements of banking institutions. The fact that acquiring a bank loan is even a remote possibility for these producers, however, illustrates how participation in shea butter projects carries the potential to alter the longstanding practices—such as local credit arrangements—upon which women's livelihood strategies rely. In so doing, these projects also imbue the production of shea butter with new meanings that depart from those experienced along the conventional shea butter commodity chain. These meanings, and their implications for the sustainability of shea projects, are explored below.

7.3.1.3 Fair Trade Shea Butter: Metamorphosis of Meaning

Pushing the boundaries of traditional commodity chain analysis, the commodity systems strand of commodity chain analysis promotes attention to the symbolic value of commodities as they are produced, exchanged and consumed. In the following sections, I demonstrate that these meanings are indeed integral to an understanding of why particular actors participate in the alternative shea butter commodity chain, with emphasis on the Fair Trade commodity chain. Meanings associated with products change over time and in novel socio-economic conditions.[154] Hence, as I argue below, UGPPK members envision

[154] For instance, Spooner's (1986) study of Oriental carpets reveals that the age-old techniques involved in carpet production remain relatively unchanged, but that weavers have largely forgotten the original meanings of the woven motifs.

their butter processing activities and the ensuing product differently than do women who produce shea butter exclusively for household (material and cultural) use and local sale.

To begin, Fair Trade shea markets represent an exceptional prospect for women who have virtually no access to individual wage employment or political power due to socio-cultural restrictions (Hyman 1991). Income differences stemming from butter sold on Fair Trade and conventional markets can have significant impacts on the well-being of participant producers. As will be demonstrated in Section 8.2.4 of Chapter 8, the female producers I interviewed acknowledged that higher returns for their commodity has allowed them to solve financial problems, invest in their children's schooling and productive activities, and purchase bicycles to reduce the time and physical demands involved in daily travel, among other things. At a basic level, study participants thus made it clear that the superior prices they receive for fairly traded butter generate a sense of security by allowing them to satisfy their and their children's basic needs. As the economic value of shea butter rises, its significance also increasingly shifts from its use to its exchange value.

Shea butter projects have additionally affected the ways women perceive themselves as shea producers. During the interviews I carried out in Léo, Lan, and Prata, women expressed a sense of being professional shea butter makers since receiving official training in butter production. This is best understood in the context of Burkina Faso's educational system. Two main types of schools exist in the country: the traditional *lycée*, devised around the French educational system during colonial times, and technical schools, wherein students receive training in a practical skill. Although very few UGPPK members obtained a formal education in either, the discourses of the women I interviewed suggested that participants associate the butter production training sessions in which they participated with a technical education. As I witnessed, this training is a source of pride for women, who are locally recognized as qualified Union members and producers of quality shea butter.

The way the UGPPK organizes its production activities further contributes to a feeling of professionalism among butter makers. UGPPK members process butter upon demand to fulfil contracts, and receive vouchers attesting to the quantity of butter they have delivered. Rather than producing inexpensive butter for an informal, own-account

enterprise, women now supply a prized product to a large Union, and ultimately to multinational corporations and their international customers. The UGPPK has been awarded national distinctions, and its reputation is a source of pride for the province of Sissili. Likewise, the producers I interviewed who were knowledgeable about the UGPPK's clients and standing were proud to be associated with the Union. Their narratives further reflected a sense that their connection with international markets and NGO projects connected them with the 'modern', Western world. Adding to these considerations, it was apparent during my interviews that producers valued their membership in a female-owned and run enterprise as a means of female emancipation from a decidedly patriarchal societal structure, all the while keeping with traditional norms of gendered production. Finally, through shea butter projects, study participants subscribed to the discourse of development that upholds the notion that women are 'alleviating their community's poverty' and 'developing' their country through shea butter production and sales.

Since the inception of shea projects, the perception of what constitutes quality butter has also been recast according to the perspective of NGOs and international clients. External Fair Trade and quality standards now overlay cultural referents dictating social relations of production, and homogenize some of the local idiosyncrasies of shea butter production. The locally-specific preferences for different types of shea butter discussed in Chapter 6 are replaced by standardized notions of 'quality' butter. In addition to qualitative criteria, such as appearance, smell, and taste, the UGPPK's executive officers now assess the quality of the Union's butter scientifically, in terms of its acidity, humidity, and impurity content.

The symbolic significance of participation in the alternative shea butter commodity chain departs considerably from the meanings imbued in the conventional shea butter trade. In both instances, shea butter production keeps with traditional notions of womanhood, yet in this alternative commodity chain, membership in a woman's association, NGOs interventions, and transactions with multinational firms, among other factors, confer producers with the feelings of security, professionalism, modernity, and pride discussed above. These non-tangible project benefits are analysed in Chapter 8,

where they are shown to play a primary role in assuring the sustainability of shea butter projects, despite the lack of economic incentives projects sometimes offer.

What, then, of the meanings producers associate with participation in the Fair Trade movement per se? Interestingly, with the exception of the Union's executive officers, and to some extent the three elected delegates of each GVF who attend the Union's general assembly (see Section 8.3.2, Chapter 8), research participants were unfamiliar with the meanings behind the Fair Trade movement and its associated guidelines. In fact, most of the producers with whom I spoke did not even know they were supplying their product to a Fair Trade market, nor had they ever heard of Fair Trade. The majority of participants were completely unaware of the final destination and use of their butter. In the village of Prata, not a single producer I interviewed knew where her butter would be consumed; in Lan, half of female participants did not know where their butter was headed upon leaving UGPPK headquarters, whereas 40 per cent knew it would be exported, but not to what ends. Léo's producers were most familiar with the Union's clients and with Fair Trade, given their greater proximity with Union headquarters and the executive officers; but even then not all were aware of the destination of their product.

The general lack of understanding about Fair Trade I observed in this study is not specific to shea producers. In her review of the impacts of Fair Trade on producer communities throughout the Global South, Le Mare (2008) similarly recognizes three levels of producer understanding of the Fair Trade movement. She explains that although the elected leaders of producer associations have a fairly good knowledge of Fair Trade, this knowledge decreases among the delegates of each primary-level organization comprising the associations, and can be virtually inexistent among individual producers. Schreck (2002) provides further evidence of the difficulty of decentralizing information to individual producers in the Fair Trade movement. She claims that in the Dominican Republic, growers supplying Fair Trade bananas failed to recognize the difference between Fair Trade and other forms of aid (Schreck 2002). In turn, Latin American coffee producers described Fair Trade as a market that pays them better and provides them with credit, but were unaware of the ideological motivations and principles of global solidarity behind the movement (Mendez 2002; Utting-Chamorro 2005; Utting

2009). In light of these findings, Raynolds (2002: 14) suggests that the message of Fair Trade "gets lost in the daily activities of making a living in capitalist society where competitiveness and markets are paramount." Renard (1999: 498), in turn, argues that "most producers do not have an awareness of the role they play within the network, nor do they understand the demands they must fulfill, in terms of quality and fidelity in delivering their products." This is aggravated by that fact that producers have minimal contact with FLO, save from an annual inspection visit by a FLO inspector (Lyon 2002). Moreover, producers have little power over the transactions occurring in the Fair Trade market, making the movement seem akin to conventional trade but with better remuneration (Mendez 2002). The fact that participation in Fair Trade is largely contingent upon product quality further mimics the mainstream market. In effect, many producers, including a large number of the women I interviewed, perceive Fair Trade as an impersonal market niche for specialty products rather than a movement within which they are supposedly partners (Schreck 2002; Taylor 2002).

The significance of Fair Trade criteria, which embody a locally specific and subjective notion of fairness, also somewhat vanishes at the producer level. As shown in Figures 7.8b and c, Fair Trade certification requires compliance with criteria spanning economic, social, and environmental aspects of the commodity's production and trade. Yet, within the Fair Trade system, there exist asymmetries in deciding what is 'fair', to whom it is fair, who decides the alternatives, and who is empowered to certify whom (Jaffee et al. 2004; Moore 2004; Moberg 2005). Well-intentioned international NGOs and consumers impress their supposedly ethically superior Western conception of respectable business ethics upon producers. To the UGPPK and other producer associations participating in the movement (Moberg 2005), however, some Fair Trade guidelines represent a considerable nuisance. Having been designed outside of production areas and without producer consultation, certain criteria or the measures required to achieve them are disjoint from local realities.[155] For instance, to achieve the transparency required for Fair Trade certification, producer associations must maintain extensive bookkeeping. This is problematic in the central-west region of Burkina Faso given the substantial resources required to achieve these goals and the fact that few shea producers are literate.

[155] For a comparable example, see Freidberg (2003) on the inappropriateness of criteria for 'ethical trade'.

Gregor Hargrove, the manager of a Fair Trade cocoa producers' cooperative in Belize, tends to agree (Off 2006). According to Hargrove, the personnel at FLO headquarters in Bonn, Germany, are bureaucrats who are disconnected from the farmers' local conditions.[156]

Extensive documentation of Union activities seeks to favour equitability between producers, but as I witnessed in Léo, the need to maintain elaborate written records in an international language actually excludes all but the few schooled producers from participation in the process. In fact, as was also mentioned in the Toledo example provided above, even literate members of the Union's executive committee would be unable to fulfil FLO's documentation requirements without the help of the NGO supporting the UGPPK, as "no one unfamiliar with the workings of a European bureaucracy could make any sense of the documents" (Off 2006: 293). While I was in Léo, the general manager of the UGPPK consequently spent many late nights trying to complete the reports that would allow the Union to maintain its Fair Trade certification.

As the UGPPK's general manager admitted, much of the information he is expected to transmit to producers, such as pricing structures, is also beyond the grasp of most Union members (A. Tagnan, November 1, 2006). Due to the high level of abstraction involved in the Fair Trade system and its externally-imposed production criteria, the manager of the UGPPK has had to disseminate simplified explanations of production 'rules' to shea producers, who nonetheless forget these after a few months' time. This has also largely been the case in other Fair Trade schemes (Le Mare 2008). As I witnessed in Léo, this predicament has led to a loss or misinterpretation of the movement's nuances even among the few producers aware of the Fair Trade partnership. For instance, these producers (mainly the Union's executive officers) were reticent to admit that children help them produce shea butter since child labour is forbidden in Fair

[156] To quote this Canadian manager of the Toledo Cacao Growers' Association at length, the documentation FLO requires of producer cooperatives appears

> excellent on their desk in the First World and looks like a Frankenstein monster by the time it hits my desk in the Third World. So what I say is that it's becoming a hell of a good deal for First World bureaucrats and it's becoming less of a good deal for producers, and we have to pay for it (cited in Off 2006: 292).

Trade. Yet, this sanction only applies when the child's contribution to production is hazardous or interferes with his or her formal education (FLO 2006).[157]

In light of my observations in the shea butter case, many Fair Trade criteria seem better suited to the needs of Western organizations and consumers who desire 'guilt-free' luxury commodities than to those of producers. The transparency, justice, and proper business ethics these norms are meant to embody are worthy causes, but frequently vanish in their practical translation. As it stands, then, these principles cannot be said to positively influence the sustainability of shea butter projects on the producer end. Unless the notion of Fair Trade as a solidarity movement is more clearly elucidated to butter makers, and unless producers are invited to more fully participate in the movement's conception, its meaning will remain lost at the production node.

7.3.2 NGOs and Third-Party Certifying Agencies

Since the inception of shea projects, shea butter has also taken on new significance within development circles. As of the 1990s, shea butter has come to symbolize the epitome of women-centred sustainable development. NGOs and multilateral organizations such as the United Nations Development Fund for Women (UNIFEM) and the United Nations Development Programme (UNDP) advertise their involvement with female producers and their infamous 'non-timber forest product' using development buzzwords such as 'women in development,' 'empowerment,' 'sustainable livelihoods,' and 'Fair Trade.'[158] Riding out these development tendencies, shea butter projects have commanded substantial development monies.

Hence, the state of the shea sector in West Africa owes much to the continued support of NGOs at local, national, and regional scales. There are two types of NGOs involved in Sissili's Fair Trade shea butter commodity chain: international NGOs with local branches in Burkina Faso that provide support to producers, and third-party certification agencies. The former type of organization intervened in the shea sector in the late 1990s, with the aim of improving the economic and political positions of female shea

[157] Evidently, producers do not unquestioningly accept Fair Trade criteria, but rather fashion them to their advantage. For instance, women's understanding of the child labour requirement does not prevent them from drawing upon their daughters' help, but rather encourages them to be discreet about it.
[158] Reports can be consulted on the UNIFEM and UNDP web pages, such as: www.undp.org/energy/publications/2001/files_2001a/04_Ghana.pdf or www.unglobalcompact.org/docs/news_events/8.1/bun_part1.pdf .

butter producers and reducing rural poverty.[159] In 1997, when Québec's *Centre d'études et de coopération internationale* (CECI)—the leading NGO involved in Sissili's shea projects—began its work in the province, shea processing and sale were carried out informally by individual, geographically dispersed producers. CECI selected what it considered to be the most dynamic of the region's existing women's groups (GVFs), which were unofficially involved in various agricultural activities, to form the Union. These groups are discussed in greater detail in Chapter 8. Suffice it to say here that by 2001, with the help of CECI, these first-level associations (GVFs) situated throughout the provinces of Sissili and Ziro were officially recognized and united into a second-level, Union structure. As opposed to atomized producers, the Union demonstrated the potential to provide large quantities of quality butter to international clients within reasonable delays.

Achieving this goal was a formidable feat, given the constraints to shea butter production and trade discussed in Section 7.2.1. Yet, CECI and numerous other NGOs and donors, which subsequently provided financial and technical support to the UGPPK over the years, succeeded in improving producer operations and reinforcing local capacities.[160] Barely literate women were eventually able to play key roles in the large producer association. Via shea projects, NGOs as well as bilateral and multilateral donors introduced labour-saving technologies to the Union, and established and managed contracts with international buyers.[161] In fact, NGOs working in the context of shea butter projects have acted as an essential liaison between importers, certification agencies, and producers who lack the language, educational, and literacy skills to maintain ties with these international actors. In this respect, the male UGPPK manager—a local Gurunsi community organizer hired by CECI—has been a key figure. Moreover, international

[159] In other regions of Burkina Faso, 'women and shea' projects were initiated as early as 1987 by SNV Netherlands Development Organisation.
[160] These other supporting actors include French organizations *Tech Dev* (Technique et Développement), ISF France (Ingénieurs Sans Frontières), and Planète Urgence; the Canadian international development agency (CIDA), which funded DYFAB (Projet de Dynamisation de la Filière Bioalimentaire); Burkina Faso's Red Cross (La Croix Rouge Burkinabé); and SNV Netherlands Development Organisation, among others. These actors worked together at times, while also competing for limited funds to develop the shea sector (Elias et al. 2006).
[161] For instance, in 2006, a UNDP project introduced multifunctional platforms (PFM – *Plates Formes Multifonctionnelles)* with a mill for shea kernels or other products to a number of villages located throughout southern Burkina Faso.

NGOs have served as guarantors and imbued the UGPPK with credibility in the eyes of international clients. This has proven to be essential, as importers favour working with firmly established, reputed associations due to product quality, quantity, and delivery concerns (Milford 2004). After over a decade of financial and technical support on behalf of these NGOs, the UGPPK finally succeeded in meeting the standards and financial commitments required to enter the certified Fair Trade market in 2006.

The longstanding commitment of the NGOs involved in shea butter projects, as opposed to the characteristically short term nature of development interventions, has contributed to the sustainability of these projects. In a few more years, when development trends—and donor monies—shift, the UGPPK they will leave behind will likely be in a strong position to maintain its market share and deliver economic and other benefits to its constituents. Seen in this light, the sustainability of shea projects depends not on continued NGO intervention, but rather on the ability of shea butter producers to maintain their own successful enterprise upon withdrawal of donor funds and technical support. This will have been facilitated by the relatively holistic approach to the development of the shea butter enterprise promoted by the NGOs involved in the field.

In addition to field-based NGOs, third-party Fair Trade certification agencies have been active in the shea landscape since 2000. Solicited to intervene in the shea sector by field-based NGOs as well as shea butter producers and importers, these certification agencies have devised and monitored a set of criteria by which the Fair Trade producers and importers they certify must abide. Criteria comprise the general Fair Trade standards shown in Figures 7.8b and 7.8c, which include a minimum set commodity price, price premiums, pre-financing, long-term trading partnerships, and more direct relations between producers and importers (FLO 2006). In addition, certifying agencies set and monitor commodity-specific criteria. In the case of shea butter, these product-specific criteria were developed based on information gathered by agency representatives during visits with the UGPPK. Together, four main umbrella organizations—namely the Fairtrade Labelling Organisations International (FLO), the International Federation of Alternative Trade (IFAT), the Network of European World Shops (NEWS!), and the European Fair Trade Association (EFTA)—form FINE, an informal network that harmonizes Fair Trade guidelines and advocacy worldwide. Yet, at

the time of this study, FLO was the only third-party agency certifying Fair Trade shea butter. In July 2006, the UGPPK became the first Union of shea producers to be Fair Trade certified.[162] As is the case for other commodities certified by FLO, products comprising fairly traded shea butter produced by the UGPPK are labelled with the 'Fairtrade' Mark recognized by socially-conscious consumers and depicted in Figure 7.13.

Figure 7.13: 'Fairtrade' Mark
(Source: FLO, Retrieved online April 10, 2010, at: http://www.fairtrade.net/)

Acquiring official Fair Trade certification has enhanced the credibility of the UGPPK and bred the trust of importers and international consumers who seek the reassurance of the Fair Trade seal. Since FLO provides certified associations and importers with market information and a list of actors involved in the Fair Trade network, participation in the movement may, in time, allow the UGPPK to discover additional promising commercial opportunities, and to gain visibility among importers. As the first association of shea butter producers to receive its certification, the UGPPK is particularly well placed to secure growing Fair Trade shea butter markets. As I observed through frequent visits from delegations of other producer associations, the UGPPK also serves as a model for other West African shea butter associations wishing to follow in its footsteps.

NGOs and third-party certifying agencies involved in the Fair Trade movement are additionally active on the consumer front, thousands of miles away from the site of commodity production. In fact, commodities are not the only products that are migrating in the Fair Trade market. Rather, "the production and migration of various forms of *knowledge* within commodity networks is a crucial element to their creation and

[162] In 2010, there are a handful of other Fair Trade certified shea butter producer associations in West Africa.

function" (Goodman 2004: 895, emphasis in original). In Europe and North America, NGOs draw attention to the exploitative conditions of commodity production in the Global South. Through press releases, direct action, and other education campaigns, these actors incite privileged individuals to articulate their consumption politics by placing their money where their values lie (Clarke 2008). As a result, "the reflexive Fair Trade consumer can be *more* reflexive because of the relatively extensive amounts of information provided by labels and network activists" (Goodman 2004: 901, emphasis in original). By facilitating this information flow to consumers, and creating consumer confidence in the movement, NGOs working at both the production and consumption nodes have been critical to the development of the Fair Trade shea butter commodity chain and the sustainability of shea butter projects.

7.3.3 Burkinabè Consumers

In one of the consumption nodes situated along this alternative shea butter commodity chain, Burkinabè consumers seeking the product for culinary purposes represent a small market for UGPPK products. If the meanings involved in the production of shea butter have changed with the advent of shea projects, what of the significance of domestic consumption of UGPPK shea butter? Appreciated for its distinct taste and smell, UGPPK shea butter is reputed to be of superior quality than other locally available shea butters. Further, as opposed to the shea butter pats shown in Figure 7.6, which vendors package in leaves, newspaper or ordinary plastic bags, UGPPK butter is professionally vacuum sealed in a transparent plastic film, making it more attractive to potential buyers (Figure 7.14). One kilogram of this appealing shea butter is sold at Union headquarters for 750 fCFA (CAD$ 1.58), above and beyond the price customarily paid for the product on the local market.

Due to the relatively high price of UGPPK shea butter, well-to-do urban families are the Union's main local clients. Bureaucrats posted in Léo as well as officials and businessmen who frequent the town for work purposes purchase the butter for their wives. Residents of central and northern Burkina Faso have long associated the region of Léo with yam cultivation, but an association between Léo and quality shea butter has also evolved in recent years. Relatives from the capital may thus request shea butter from a

person who is travelling to Léo.[163] Among high-income Burkinabè consumers, UGPPK shea butter presents the opportunity to offer a traditional gift (shea butter) while demonstrating one's status, due to the commodity's quality and price attributes. In this way, a small domestic market for superior quality butter is growing among wealthy urban and town dwellers, who otherwise demonstrate a preference for alternate cooking oils (Hall et al. 1996; Schreckenberg 2004a; 2004b).[164]

Figure 7.14: Professionally Packaged UGPPK Shea Butter (Source: Author 2006)

Over time, this domestic outlet for UGPPK shea butter may play a more decisive role in promoting the sustainability of shea projects, provided its continued growth and ability to absorb an increase in product pricing. In fact, the UGPPK's general manager believes that Fair Trade campaigns should focus on expanding the market for fairly traded goods in the Global South, where domestic demand for traditional commodities such as shea butter already exists (A. Tagnan, November 3, 2006). Certain Fair Trade activists working in other world regions echo this sentiment (Taylor et al. 2005). As it

[163] UGPPK shea butter is also available for purchase in Ouagadougou at CECI's Burkinabè headquarters, but this outlet is poorly known among the capital's residents.

[164] Unlike traditional crafts markets, however, the high-grade shea butter market provides little appeal to the small expatriate community living in the capital, as its members do not have a tendency to consume traditional Burkinabè dishes prepared with this cooking oil. The small quantities of butter they may purchase for cosmetic purposes represent an insignificant proportion of Union sales.

stands, however, the proportion of UGPPK shea butter sold within Burkina Faso represents a minute fraction of the Union's total sales, and it may well be years before a solid domestic market offering attractive—perhaps even Fair Trade—remuneration to Union producers is established.

7.3.4 European Importers and Retailers

In addition to the UGPPK's Burkinabè clients, the Union supplies shea butter to two types of international clients: Fair Trade certified partners and non-Fair Trade certified buyers. Although both client categories purchase butter directly from the Union, certified Fair Trade importers comply with the general criteria listed in Figures 7.8a and 7.8b. Fair Trade partners also respect the product-specific criteria mentioned in Section 7.3.2, which include a minimum set price of 1198 fCFA (CAD$ 2.53) per kilogram of shea butter returned to producers. In contrast, female producers receive between 500 (CAD$ 1.06) and 750 fCFA (CAD$ 1.58) per kilogram of shea butter sold to other international clients. In essence, then, my study participants receive more than twice as much for their product when supplying butter to the Fair Trade market. During the 2005-2006 shea season, the UGPPK supplied 23.6 tonnes of shea butter to its Fair Trade partners and 33.1 tonnes in direct sales to its non-Fair Trade certified international clients. UGPPK sales to both markets have continued to grow since.

Some of the Fair Trade importers working with the UGPPK are also retailers, which contributes to shortening the commodity chain. This is the case for multinational chains '10,000 Villages' and 'Alter Eco', whose entire product range is dedicated to Fair Trade. Other importers sell their Fair Trade commodities among conventionally traded products in retail outlets not specifically dedicated to alternative trade. In such a case, the 'Fairtrade' seal attests to the Fair Trade practices of production and exchange surrounding the commodity.

It is worth noting that not all fairly traded products are officially certified, however. For example, *ANDINES*, a French enterprise working with the *Laafi* women's group of shea producers in south-east Burkina Faso, has long satisfied Fair Trade criteria in its purchase of shea butter. The company advertises its products as Fair Trade, but lacks FLO certification and thus cannot use the FLO seal. This is problematic since consumers are unable to distinguish between its claims and those of competitors that can

deceptively claim to practice Fair Trade. This is the case, for instance, for French firm *L'Occitane*, which is the biggest importer of UGPPK shea butter. *L'Occitane* advertises its sourcing of shea butter as being from a women's cooperative in Burkina Faso. In its stores and on its website, the company maintains that its shea butter products are: "100% from plant-based origin, extracted from wild kernels of Shea tree fruits. Issued from Fair Trade in Burkina Faso (West Africa)" (L'Occitane 2010). Although it does purchase butter directly from the UGPPK, at a price of 750 fCFA (CAD$ 1.58) per kilogram of butter, the company is far from compliant with the Fair Trade pricing standards shown in Table 7.2. As this example illustrates, the integrity (and sustainability) of Fair Trade thus relies on the dissemination of appropriate product information to a discerning consumer base, knowledgeable about the movement, and literate in Fair Trade labels.[165]

7.3.5 International Consumers

Fair Trade shea butter and Fair Trade products in general have garnered special interest support among Western consumers concerned with sustainable development in the Global South. Hence, since the 1980s, numerous companies have projected an image of socially and environmentally responsible production to appeal to new consumer values based on the geography of production, health, and the environment (Cook 1999; Jackson and Taylor 1996). 'Ethical' products have been popularized by companies such as The Body Shop, which stands out for being a multimillion-dollar endeavour dedicated to environmental and social issues. The Body Shop's success, as demonstrated by uninterrupted growth in the company's annual revenue (The Body Shop 2005), suggests that consumers are articulating their consumption politics by partaking in 'responsible' consumerism (Clake 2008). To complete this examination of the alternative shea butter commodity chain, the following section considers the meanings behind the act of consuming Fair Trade shea butter in North America and Europe to explain the growing popularity of this practice.

[165] Reading these labels is complicated by the multitude of certification systems and advertised allegations on 'ethically' traded products. Labels certify adherence with a set of criteria, but do not disclose what these are. In this respect, labels conceal as much as they reveal. For instance, the fact that The Body Shop's shea butter is sourced via a "Community Trade Program" with Northern Ghanaian farmers symbolically appeals to the Fair Trade activist. Yet, what does community trade really mean? It does not actually reveal anything about the butter makers' conditions of production or terms of trade.

For many Western consumers, participation in the Fair Trade movement represents an opportunity to challenge the global political-economic system and its associated ails, albeit without depriving themselves of luxury goods. According to Craig Sams, a leading businessperson in the certified organic sector, consumers "want manufacturers to help them be part of the solution […] and relieve their feelings of despair, pessimism and helplessness over the disappearance of rainforests and indigenous cultures and global warming" (cited in Off 2006: 284). Along the same lines, consumption of Fair Trade products such as shea butter represents a meaningful political effort to promote economic, social, and environmental justice in the Global South through responsible Northern consumption choices. Seen in this light, ethical consumption becomes "a choice made to accept a widened scope of responsibility towards both human and non-human others and to act upon that acceptance through one's identity as a consumer" (Barnett et al. 2005: 30).[166]

Promoting this choice involves 'shortening' the social distance and allowing the links between southern livelihood struggles and conscientious consumption decisions to materialize (Raynolds 2002; Goodman 2004; Franz and Hassler 2010). Activists and importers involved in the movement thus draw upon producer testimonials and images that reveal the conditions of production and generate what Goodman (2004: 896) calls the "political ecological imaginary of Fair Trade." This imaginary

> demonstrates the progressive effects of their act of consumption on the particular community that [produced] what they are [consuming]. It is this imaginary that attempts to rally and energize consumers to be *morally* reflexive…and literally to buy-in to the politics of Fair Trade and alternative development.

This imaginary hinges on a dismantlement of the 'commodity fetish', which veils the exploitative capitalist conditions within which commodities are produced and exchanged (Harvey 1990; Watts 1999; Castree 2001). Through consumer education, Fair Trade thus bridges the spatial and temporal distances separating the acts of production and

[166] The manager of the La Selva coffee cooperative in Mexico sees things somewhat differently. He considers Fair Trade consumption as an attempt to

> get producers to make a series of changes that increasingly will make them look more like the consumers that buy their products. This desire isn't meant negatively. On the contrary, consumers are convinced that they are doing this for the good of the producers since they are the best mirror. The idea could be summed up as 'nice neocolonialsm' (cited in Taylor 2002: 17).

consumption (Barnett et al. 2005).[167] As "urban-illuminati" (Pendergrast 2002), consumers can then act upon an "ethics of care", which goes "beyond the 'here' and 'now' to include the 'there' and 'then' of producers' place-based livelihoods" (Goodman 2004: 903).

As a mode of moral self-expression (Hartwick 2000), buying Fair Trade products is also a form of identity-making (Goodman 2004: 895). Miller (1995, 1998) argues that consumption is an act of self-actualization whereby one affirms his or her agency, as well as one's relationships with oneself and with others. In partaking in Fair Trade, consumers choose to position themselves as 'alternative' to conventional consumers and the neo-liberal economic system they support. Finally, *vis à vis* others, Fair Trade consumption is a performance of one's social distinction, and the act of offering fairly traded goods as gifts can be seen as an opportunity to fulfil social expectations by exhibiting one's charity (Barnett et al. 2005).

The need for a certain level of consumer knowledge as well as financial resources to purchase (generally more expensive) Fair Trade products precludes certain consumers from participating in the movement (Goodman 2004; Barnett et al. 2005). This is reflected in the inequitable consumption patterns for Fair Trade goods along class and gender lines, with educated women in the superior income brackets dominating among the movement's consumers (Loureiro and Lotade 2005). The fact that those are also the most numerous consumers of natural products and cosmetics bodes well for Fair Trade shea butter (Greig 2006). Perhaps the processing of shea butter by female producers additionally appeals to the empathetic female consumer, who can identify with the producer's gender. Whatever the case may be, the cosmetic virtues of Fair Trade shea butter, but also its political ecological imaginary—which points to the natural, the exotic, the traditional, the alternative, and the socially just—persuade well-heeled female consumers to pay as much as 13 Euros (18 $CAD) for 140 grams of fairly traded shea butter.[168] Consumption of this product then symbolically, but also materially bridges

[167] For an alternate perspective, refer to Clarke's (2008) review on political consumption. Clarke argues that the images the Fair Trade movement produces do not reflect the conditions of commodity production, but rather those that appeal to the reflexive consumer likely to purchase Fair Trade products.
[168] ANDINES prices in April 2010, for pure, fairly traded shea butter.

these women with the geographically, economically, and culturally distant worlds of female African producers.

In sum, the political ecological imaginary of Fair Trade shea butter elucidated above contributes to the growing demand and superior remuneration for UGPPK shea butter, and thus to the sustainability of shea butter projects. Yet, in examining this imaginary, two underlying questions about the Fair Trade movement arise: first, how 'fair' is a movement which privileges the participation of better educated, affluent consumers? Then, is the "uncritical acceptance of consumption" truly the most appropriate "core-strategy" to promote development and conservation (Bryant and Goodman 2004: 345)?

7.4 CONCLUSION

This chapter has examined the numerous people and places that shape the "historical-geographical 'career'" (Barnett et al. 2005: 25) of shea butter originating in the province of Sissili. The discussion has shown how current policies and new consumption tendencies, operating at multiple scales, are redesigning commercial shea butter networks. For instance, since 2000, a European Commission directive endorsing the use of shea butter in chocolate has fostered international demand for the product. Moreover, the integration of shea butter into the cosmetics industry and in Fair Trade markets has modified the nodes of the product's international commodity chain, the distribution of rents along these nodes, as well as the meanings imbued in the product as it migrates along the chain.

Although the international sale of shea butter is gaining the attention and support of development agencies, most shea nuts are transformed into butter and consumed within Africa. In Burkina Faso, butter processing occurs artisanally, and making shea butter is integral to the female sphere of activities. The process requires many inputs, including many arduous hours of labour, and the means by which these inputs are acquired, as well as the ensuing gains from shea sales, differ in rural and urban areas. Likewise, local consumption of the resultant shea butter, and its associated symbolism, are differentiated along class lines.

In this chapter, I have outlined the different commodity chains by which shea butter exports occur. These consist of the international conventional shea butter commodity chain and the alternative shea butter commodity chain. In the former chain, shea butter passes through the hands of numerous intermediaries within Africa and in the West, and is primarily consumed unknowingly in the form of chocolate. In contrast, the alternative shea butter commodity chain is substantially shortened as high-quality shea butter is traded directly between shea producer associations and cosmetics and/or Fair Trade companies in Europe and North America. Within this chain configuration, the shea producers' Union participates in certified Fair Trade sales as well as sales to non-Fair Trade certified international clients. To a much smaller extent, the UGPPK also supplies shea butter to the non-Fair Trade certified domestic market. When involved in non-Fair Trade certified sales within Burkina Faso and overseas, butter makers tend to retain smaller returns, which nonetheless commonly supersede those earned on the conventional market.

Unlike its counterparts, the Fair Trade shea butter commodity chain operates according to an alternative set of economic, social, and environmental criteria designed to improve producer livelihoods. Participation in this chain offers the largest economic returns to female producers. The 'Fairtrade' seal, imparted by a third-party certification agency, attests to product compliance with Fair Trade criteria, and allows consumers to distinguish the Fair Trade version of the shea butter commodity chain.

As argued in Section 7.3.1.2, international NGOs have played an important role in integrating producer associations into international commercial circuits, including Fair Trade markets. Fairly traded shea butter is a recent phenomenon whose growth is favoured by Western consumer tendencies towards natural, exotic goods produced according to socially and environmentally-sound practices. The high quality requirements for Fair Trade products have prompted NGOs to disseminate standardized production techniques, which yield a product that satisfies international demands, among producer associations. These standards have altered not only traditional methods of shea butter production, but also the meanings associated with this activity.

This examination of the international conventional and alternative shea butter commodity chains contributes useful insights to my assessment of the sustainability of

shea butter projects in the centre-west region of Burkina Faso. First, such an analysis reveals some of the constraints—such as limited access to water, firewood, labour-saving technology, infrastructure, and so on—women face in the production and trade of shea butter that can hinder project success. Then, this investigation reveals the prospects of new market niches—for natural, exotic cosmetics produced and traded according to socially-sound practices—for providing continued, improved producer remuneration in the shea butter commodity chain. Next, the examination reveals how the configuration of the alternative shea butter commodity chain—including the creation of the Union structure, the inclusion of supporting actors, and the elimination of non-value added transactions—positively affects the capacity of shea producers to satisfy international product standards and participate in Fair Trade markets, and the ability of shea butter projects to provide sustainable benefits for producer livelihoods.

Analysing the meanings imbued in commodities in different nodes of the shea butter commodity chains also yields important insights for this study. It reveals how shea butter is associated with many trends within development circles that have justified the creation of, and dedication of donor monies to, shea butter projects. The longevity of the development trends underpinning these projects has indeed been crucial to the sustainability of shea projects. At the UGPPK member producer node, the pride, professionalism, and security, among other positive sentiments, associated with shea butter production for the Union add to economic considerations in favouring women's continued participation in shea projects. Finally, the political ecological imaginary of Fair Trade shea butter breeds growing interest in the product among reflexive, relatively better-off female consumers concerned with social and environmental equity. The fact that these women are also most likely to consume cosmetics bodes well for the sustained growth of the Fair Trade shea butter market, yet the notoriously fickle nature of the industry must also be recognized.

Although international shea butter sales are expanding, it remains to be seen how long shea butter will tickle the fancy of Western consumers. If and when shea butter cedes its popularity to other fairly traded, natural products, what footprints will its international fame have left at the producer level? Who will have benefited most from its trade? Will women have maintained their monopoly over shea processing and will their

daughters still be producing the valued butter? Will shea butter revenues suffice to send these daughters to school? If so, will these young women forget the age-old methods of butter processing? Some of these questions, as well as others pertaining to the effects of shea butter production and exchange on producer livelihoods, are addressed in Chapter 8.

CHAPTER 8

LOCAL ECONOMIC EFFECTS OF SHEA BUTTER PROJECTS

8.1 INTRODUCTION

In this period of globalization, emerging international markets for primary commodities are offering new economic opportunities for producers in the Global South. For one, the *Union des Groupements des Productrices de Proàuits Karité de la Sissili et du Ziro* (UGPPK), based in the central-west region of Burkina Faso, is poised to seize these emerging prospects. Propped up by non-governmental organizations (NGOs) by way of the shea butter projects described in Chapter 7, the UGPPK is thus progressively drawn into the global economy.

As discussed in previous chapters, the mandate of these shea projects is threefold. First, NGOs help producers *organize* into associations and consolidate an organizational structure enabling them to participate in international sales; second, through capacity-building sessions, projects promote the production of a high *quality* product that meets international standards; and last, they secure overseas *markets* for the product. In the central-west region of Burkina Faso, projects specifically attempt to connect shea butter producers with Fair Trade markets. As a result of these NGO interventions and the socio-economic model they promote, producer communities have undergone important changes.

The aim of this chapter, which addresses the first part of the third objective of this thesis, is to assess the economic effects of these shea butter projects to date in the centre-west region of Burkina Faso. Specifically, I examine two related questions. First, what are the effects (if any) of shea butter projects on the financial capital of female shea producers, their households, and communities in the centre-west region of Burkina Faso? Second, what are the similarities and differences in these effects along the rural-urban continuum in the centre-west region of Burkina Faso? The UGPPK is involved in exporting shea butter to both non-Fair Trade certified and Fair Trade certified international markets. Although the Union's involvement in Fair Trade dates back only to July 2006, I highlight the effects to date of this socio-economic model when these are

apparent. These analyses contribute to my study's global aim of assessing the sustainability of shea butter projects in the centre-west region of Burkina Faso.

This chapter and subsequent Chapter 9 are structured around the sustainable livelihoods framework presented in Section 2.5 of Chapter 2, as part of my conceptual framework. In Chapters 8 and 9, I examine the effects of shea projects on the assets or 'capitals' of shea producers and their households and communities. As noted in Chapter 2, capital assets are the cornerstone of sustainable livelihoods frameworks, as they determine the feasible set of livelihood strategies individuals or households can pursue. These capitals can be accrued or depleted and mobilized in pursuit of specific livelihood outcomes. As well as representing the resources people use to secure their livelihoods, capital assets are the processes and material entities that confer people with the capability to act, and that imbue their lives with meaning (Bebbington 1999). Access to a favourable balance of these assets is required for achieving sustainable livelihoods (Utting 2009).

A primary goal of the NGOs engaged in shea projects is to enhance the financial capital of disenfranchised women who have few opportunities in the way of income generation. This chapter therefore focuses explicitly on the effects of shea butter projects on this type of capital. Project effects on the other forms of capitals—namely social, human, physical, and natural capital—that figure in sustainable livelihoods frameworks are subsequently considered in Chapter 9.

To consider whether shea projects are meeting their aforementioned goal, I begin this chapter by examining the diverse livelihood strategies shea producers pursue in Burkina Faso's province of Sissili (Section 8.2). The discussion sets the stage for an analysis of the individual and household-scale economic effects of shea projects along the rural to urban continuum (8.3). Specifically, in Section 8.3.1 I analyse the annual revenues members earn when selling shea butter through the Union in the international non-Fair Trade certified and Fair Trade certified markets. In Section 8.3.2, I consider the opportunity costs involved in project participation, which temper some of the economic benefits derived from shea projects. Yet, the economic importance of projects ultimately rests in the investments they allow producers to make. Hence, in Section 8.3.3, I consider these investments as well as the ideal investments producers aspire to pursue if shea projects deliver their expected benefits over the medium to long-term. Finally, I discuss

the community-scale economic effects of shea projects in Section 8.4, before providing brief concluding remarks in Section 8.5.

8.2 Livelihood Strategies among Shea Producers

The economic consequences of shea projects must be understood within the context of the livelihood strategies UGPPK members and their households pursue. As described in Chapter 3, West African men and women maintain separate budgets and as such, each adult must secure his or her own income (Udry 1996; Thosen 2002). In this study's three study sites, female and male participants engage in an assortment of activities to make ends meet, with distinct activities occupying different roles in the individual or household's livelihood portfolio at different times (Ellis 1998, 2000; Adger 1999; Whitehead 2002; Shackelton and Shackelton 2003). This is characteristic of the African farming household, which:

> is a diversified and multifaceted economic entity. It pursues numerous agricultural and nonagricultural enterprises and operates within elaborate networks of credit, insurance and contracts. The households include people with competing goals and objectives, cooperating fully on some issues and less so on others (Doss 2001: 2086-2087).

Below, I present an overview of the livelihood strategies of the UGPPK members I interviewed, whereas Figures/texboxes 8.1, 8.2, and 8.3 placed at the end of this section provide insights into the the livelihoods of three Union members—one in Léo, one in Lan, and one in Prata—and their husbands. The three women selected illustrate what 'average' livelihood portfolios can comprise in the three study sites for women from the middle wealth categories established during the wealth ranking exercises described in Chapter 4.

As also reported for other sub-Saharan African countries (Saul 1981; Turrittin 1988; Clark 1994), female participants from Léo, Lan, and Prata earn small revenues mainly in the informal trade of commodities that are derived from their labour. Table 8.1 lists the entire range of products sold by the sum of these women. This table illustrates that the goods women market are chiefly collected non-timber forest products (NTFPs), cultivated in their fields or processed from primary commodities. Trade in the majority of these items involves few barriers to entry, including financial resources. The value of most of these products oscillates throughout the year, depending on their seasonal

availability. Hence, women sell different combinations of goods seasonally to smooth their income and benefit from cyclical price fluctuations. Unless pressing income needs urge women to sell their goods prematurely—as they commonly do—produce is dried, bulked, and marketed when its value increases. For instance, grain is worth twice as much when sold during the hungry period than immediately after the harvest, whereas the value of shea nuts peaks during the dry season. Ideally, shea nuts are thus sold during the dry season to purchase grain, which is then marketed during the rains. As most vendors sell the same basic goods at the same time (when they are in season), and due to the limited purchasing power of local consumers, earnings from these sales remain low.

Table 8.1: Full Range of Women's Income-Generating Activities in the Three Study Sites.

Sale of agricultural and animal products	**Sale of manufactured or imported products**	**Sale of prepared foods and drinks**	**Sale of NTFPs**	**Services**
Cabbage	Alcohol (pastis, *qui-me-pousse*)	Acacia balls	Kapok	African fabric boutiquier
Groundnuts	Cigarettes	Bean cakes	*Néré*	Contractual agricultural labourer
Gumbo	Coffee	*Bissap* (hibiscus) and ginger drinks	Shea nuts	Hairdresser
Maize	Kola nuts	Cereal-based dishes	Tamarind	Literacy training in Gurunsi
Millet	Dried fish	*Dolo* (sorghum beer)		Seamstress
Rice	*Gari* (dried manioc)	Doughnuts		
Smallstock (chickens, fowl, goats, sheep)	Gasoline	Flat cakes		
Sorghum	Gasoil	Groundnut paste		
Sorrel	Groundnut oil	*Koura koura* (groundnut snack)		
Tomatoes	Maggi spice cubes	Porridge		
White beans	Salt	Shea butter		
Yams	Sesame oil			
	Soap			
	Sugar			

In addition to these products, some of the women I interviewed sell manufactured or imported goods within their village. Although West African women do not traditionally trade in these commodities (Turrittin 1988), proximity to the Ghanaian border allows Lan and Prata's residents to purchase commodities in Ghanaian towns, where they benefit from a favourable exchange rate. Female vendors then sell these items for small returns within Burkina Faso. Many households also have members who work in Ghana. Besides providing remittances to their family, they bring home commodities which their mother or father can market in their native village, such as alcohol, *gari* (dried manioc), and gasoline. These examples demonstrate the multi-sited nature of Burkinabè livelihoods even in villages as remote as Prata.

Beyond petty trade, a small proportion of the women I interviewed earn revenues providing agricultural day labour or other services listed in the far-right column of Table 8.1. Interestingly, the shop owner, hairstylist, and women who offer seasonal literacy training classes are all Léo residents and elected officers of the UGPPK's executive committee. They practice the most prestigious jobs, some of which require capabilities acquired through some degree of training, that involve higher barriers to entry. These women concurrently pursue other revenue-generating activities, such as shea butter production and sale. Involvement in the shea Union and Fair Trade markets, which represent new outlets for their production, have prompted changes in producers' livelihood and economic portfolios.

Mamou (18/10/06) is of Gurunsi origin. She is the only wife of Aséni, with whom she has four children. She and her husband labour on commonly cultivated household fields located six kilometres away from their home in Léo. Mamou also cultivates 1.5 hectares of land dedicated to her own-account production. On these personal fields, she grows groundnuts and green beans, primarily for household consumption. While in the field, she collects firewood, shea nuts, and other non-timber forest products such as leaves for use in the home. In her cooking, she supplements these gathered products with produce purchased from the market. During the agricultural season, her farming and domestic duties leave her with little time to pursue other activities.

During the dry season, Mamou grows vegetables, which she waters by hand and sells at the market in Léo. She additionally sells other vegetables, which she acquires from wholesalers, as well as some of the groundnuts grown on her personal fields. While these activities help her make ends meet, her income primarily derives from shea butter sales out of her home, at the weekly market, and to the UGPPK. During the 2005-2006 shea season, she earned 121,082 f CFA ($CAD 255.64) from sales to the Union and this represented the largest part of her personal income.

Aséni (25/10/06) is an indigenous Gurunsi inhabitant in Léo. He is primarily a subsistence farmer, and has six hectares of land entrusted to him. During the 2005-2006 agricultural season, his household harvested 15 cartloads** of manioc, 16 bags** of millet, seven bags of sorghum and six bags of maize. Surplus from this production will be sold on the local market. Moreover, like his wife, Aséni is a horticulturalist. During the dry season, he produces vegetables which his wife will sell for him at the weekly market. In addition to these pursuits, he has taken an interest in animal husbandry and now has two goats, which he hopes will multiply.

Figure/Textbox 8.1: Livelihood insights of Mamou and her husband Aséni, in Léo

** Refer to Notes at the beginning of the dissertation for information on these units of measurement.

Korotimi (08/01/07) is a Moose migrant to the village of Lan. She is the first wife of Igounia, with whom she has seven children. Three of her children, including two girls, attend the local *Madrassa* (Koranic school). She is from a household of subsistence farmers. She contributes her labour to the household's common production, and collects NTFPs such as shea nuts, as well as firewood throughout the day. Korotimi also cultivates groundnuts, green beans, and okra on the less than one hectare of land dedicated to her personal production. She sells what yields from these fields are not consumed within the household, if any, on the local market and in Léo. In addition she prepares and sells *koura koura*, a groundnut paste that is eaten as a snack. She previously also sold shea butter out of her home and at Léo's weekly market, but she now reserves her entire butter production for sale to the UGPPK. During the 2005-2006 season, she earned 59,111 f CFA ($CAD 124.80) from these sales. Shea butter revenues represent her primary means of securing cash income. Nonetheless, she also raises five sheep that can traded for money if need be.

Igounia (12/02/07) migrated to Lan 12 years ago. He has three wives and ten children, and is the head of a household in which there are five productive members. Together, they cultivate five hectares of cooperatively cultivated household fields. During the 2005-2006 agricultural season, they harvested ten bags of maize that will be used mainly for household consumption, and 1.5 tonnes of cotton from which he will retain the revenues. He has been cultivating cotton for five years already, during which time he has accrued substantial debt towards the cotton producers' cooperative. He continues to grow cotton due to the lack of alternative income-generating activities and to his heavy indebtedness. Nonetheless, he has been able to amass two bulls, which he uses to cultivate, as well as ten sheep, and ten chickens. He earns small amounts renting out his bulls to fellow agriculturalists or selling small stock when pressing cash needs arise.

Figure/Textbox 8.2: Livelihood insights of Korotimi and her husband Igounia, in Lan

Ourkia (16/01/07) is the first of Daouda's three Gurunsi wives. She has four children, the youngest of whom is 14 years old. To provide for herself and her family, she labours on the household's cooperatively cultivated fields as well as 0.5 hectares of land dedicated to her personal production. On her personal plots, situated seven kilometres away from the compound, she grows maize and groundnuts. Ensuing yields as well as the NTFPs—including shea nuts—she collects are used in the preparation of household meals during days when she, rather than her co-wives, is responsible for cooking. She sells surplus from her personal fields on the local market. At the time of our interview, Ourkia had stocked 2.5 bags of maize, and 3/4 of a bag of groundnuts, some of which she hoped to sell at a favourable time.

Ourkia also collects shea nuts and makes shea butter for the UGPPK. During the 2005-2006 shea season, she earned 12,000 f CFA (25.33 $CAD) from sales to the Union. At the time of the interview, she had stocked 1.5 bags of shea nuts for sale and butter production. Some weeks, she sells two to three Yoruba plates of shea nuts and/or butter, depending on their respective prices, on the local market. While shea butter sales represent her primary source of revenues, she also sells tomatoes, kola nuts, salt, and Maggi flavouring cubes—all of which she acquires from Ghana—in the village of Prata. Her activities have allowed her to acquire four goats and five hens and chicks, which she can sell when urgent monetary needs arise.

Daouda (21/11/06) descends from Prata's founding Gurunsi lineages. He has three wives and ten children. He is the head of a household that cultivates seven hectares of cooperatively cultivated fields. The 2005-2006 agricultural season was favourable to him, and his harvest consisted of: four cartloads of yams, two cartloads of potatoes, 15 bags of maize, seven bags of millet, five bags of groundnuts, three bags of peas, and two bags of beans. While Daouda is primarily a subsistence farmer, he also stocks and sells the agricultural surplus from his fields on the local market and retains ensuing benefits for his

Figure/Textbox 8.3: Livelihood insights for Ourkia and her husband Daouda, in Prata

8.3 Individual and Household-scale Economic Effects

8.3.1 Producer Earnings

As mentioned above, shea sales figure prominently among female livelihood strategies in the province of Sissili. In fact, 94 per cent of the shea butter producers I interviewed in Léo, 100 per cent in Lan, and 83 per cent in Prata stated that the shea trade represents their primary income-generating activity. Ninety per cent of interviewees were already involved in the shea kernel and/or butter commerce prior to the advent of shea projects, and the vast majority of those participants (93 per cent in Léo, 95 per cent in Lan, and 86 per cent in Prata) believe that their income has risen since joining the UGPPK.

Among Léo's shea producers, this perception is validated when revenue figures from former shea butter sales on the local market are compared with UGPPK revenues from the 2005-2006 and 2006-2007 shea seasons. On average, Léo's shea butter producers reported revenues of $CAD 222.43 per year from local shea sales prior to Union membership.[169] Yet, as shown in Tables 8.2b and 8.2c and in Figure 8.4, which cite *gross* revenues from shea butter sales, producers earned $CAD 317.7 annually, on average, through sales to the UGPPK. According to the records held at Union headquarters, the women I interviewed in Léo provided an average of 245 kilograms of butter in 2005-2006 from which they earned 145,779 f CFA ($CAD 307.8), whereas figures totalled 194 kilos and 155,146 f CFA ($CAD 327.56) in 2006-2007.[170]

Lan's producers earned markedly less than their urban counterparts, with an average of $CAD 100.0 per year for sales to the UGPPK between 2005 and 2007. As shown in Tables 8.2a and 8.2c, average annual revenue data was $CAD 112.1 for 99 kilos of butter and $CAD 88.00 for 71 kilograms of butter in 2005-2006 and 2006-2007, respectively. In comparison, Figure 8.4 shows that these women reportedly earned as much as 46,618 f CFA ($CAD 98.43) per year from local shea butter sales prior to UGPPK membership; a sum roughly equivalent to what they now earn as part of the Union.

[169] This number is calculated as follows: average quantity of shea butter sold on the local market per week multiplied by the average price per kilogram and the approximate number of weeks of sales per year. It should be noted, however, that producers experienced difficulty recalling some of these amounts.
[170] The UGPPK only began keeping records of its members' earnings during the 2005-2006 shea campaign.

Table 8.2a: Average Shea Butter Production (Kg) per UGPPK Member, All Sites

		All trade				Fair Trade				% Fair Trade/all trade on per mass basis		
	n	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Both years
Léo	32	245	194	439	219.5	53	70	123	61.5	22	36	28
Lan	21	99	71	170	85	9	0	9	4.5	9	0	5
Prata	21	18	30	48	24	0	0	0	0	0	0	0
Mean	--	145	112	257	128.5	24	30	54	27	17	27	21

Table 8.2b: Average Remuneration (Gross Revenues) per UGPPK Member from Shea Butter Sales to the Union (fCFA), All Sites

		All trade				Fair Trade				% Fair Trade/ all trade on basis of remuneration		
	n	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Both years
Léo	32	145778	155146	300924	150462	64303	83697	148000	74000	44	54	49
Lan	21	53082	41683	94765	47382	11259	0	11259	5629	21	0	12
Prata	21	9125	15190	24315	12157	0	0	0	0	0	0	0
Mean	--	84154	83229	167384	83692	29412	34962	64374	32187	35	42	38

Table 8.2c: Average Remuneration (Gross Revenues) per UGPPK Member from Shea Butter Sales to the Union (SCAD), All Sites

		All trade				Fair Trade				% Fair Trade/ all trade on basis of remuneration		
	n	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Total	Mean	2005-2006	2006-2007	Both years
Léo	32	307.79	327.56	635.35	317.68	135.77	176.71	312.48	156.24	44	54	49
Lan	21	112.07	88.01	200.08	100.04	23.77	0	23.77	11.89	21	0	12
Prata	21	19.27	32.07	51.34	25.67	0	0	0	0	0	0	0
Mean	--	177.68	175.72	353.40	176.70	62.10	73.82	135.92	67.96	35	42	38

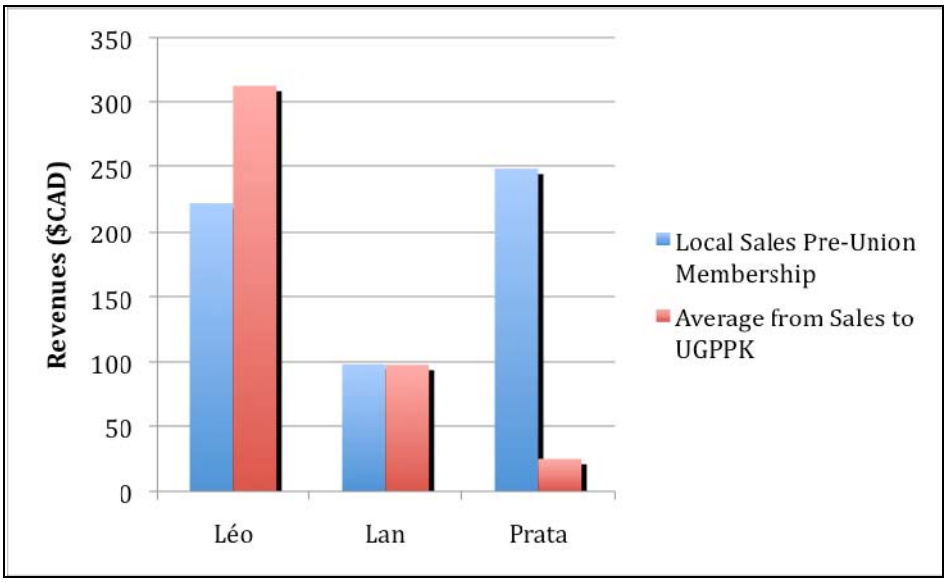


Figure 8.4: Comparison of Gross Annual Revenues per Producer from Shea Butter Sales on the Local Market Prior to Union Membership and from Sales to the UGPPK, All Sites

Figures for Prata's UGPPK members are less promising still. UGPPK records indicate that participants from Prata earned approximately 9,125 f CFA ($CAD 19.27) in 2005-2006 and 15,190 f CFA ($CAD 32.07) in 2006-2007 per producer, for a two-year average of 12,158 f CFA ($CAD 25.67). These revenues stemmed from 18 and 30 kilograms of shea butter supplied to the Union over consecutive years (Table 8.2). In contrast, these participants reported previously earning as much as 117,772 f CFA ($CAD 248.66) per year when selling butter locally, hence reflecting a difference of $CAD 223 in annual revenues. Although this is likely an overestimation (I explain why below), it does suggest that women from Prata who sell butter exclusively to the UGPPK now earn substantially less through shea butter sales than they did prior to Union membership.

Although the absolute value of these returns is meagre, it must be understood in relation to the average income per capita in Burkina Faso. Based on the United Nations' Human Development Report, Burkina Faso's GDP per capita in 2008 was $US 391 or $CAD 399 (Table 3.1). In practice, rural women, who are overrepresent among the country's poor, likely earned less than that on average in the given year. The $CAD 318, $CAD 100, and $CAD 26 earned annually by Union members in Léo, Lan, and Prata

between 2005 and 2007 thus appears to provide a significant contribution to these women's income portfolios.[171]

It is also revealing to compare Union member income data to the benchmark for poverty in Burkina Faso, which was established at 82,672 fCFA (CAD$ 175.55) in 2003 (Ministère de l'Économie et du Développement 2005: 17). This amount is equivalent to 226.50 fCFA or CAD$ 0.48 per person per day, or less than half of the US$1 per person per day figure used in many countries. Notwithstanding this low benchmark, 41 per cent of the population of Burkina Faso's centre-west region, where my study sites are located, lived below the poverty line in 2003 (ibid 2005: 17). Seen from this perspective, figures for the average annual remuneration of UGPPK members appear more promising, and the signficance of this income in helping producers remain above the poverty line becomes clearer.

Income differences among town-based, peri-urban, and rural producers reflect the distinct conditions of production in rural and town areas, as well as an order-allocation system that favours urban producers. As demonstrated in Chapter 7, it is easier to produce shea butter in Léo than in rural areas, where inadequate access to water and an absence of labour-saving technology limit women's production capacity. Poorer rural women also have difficulty financing shea nut purchases to fulfil large UGPPK orders. Hence, they produce smaller amounts of shea butter for sale through the Union on non-Fair Trade certified markets, and may come short of meeting the production quotas they agreed upon with the Union. This has repercussions when Fair Trade orders are allocated.

The UGPPK distributes Fair Trade orders according to a scoring system based on the number of participating producers, their seniority, and dynamism. The number of *Groupements Villageois Féminins* (GVFs) partaking in orders as well as the number of

[171] Researchers working in the south-central region of Burkina Faso that borders the centre-west region studied in this dissertation calculated that shea products contribute 21 per cent of *household* income derived from environmental products (both timber and non-timber forest products (NTFPs)) (Poverty Environment Network 2010: online). Distinguishing between total income, which includes production for household consumption and sale, and cash income, they found that shea derivatives were the second most economically important wild products (after timber), accounting for 21 per cent of total household income derived from environmental products. Yet, shea derivatives were the most important source of cash income in the survey area, as the timber collected was primarily consumed within the household whereas 66 per cent of the shea fruit and nuts gathered were sold.

producers per GVF account for 60 per cent of the score.[172] The remaining 40 per cent of the assessment is based on the participation rate of each GVF in prior UGPPK orders, as well as the quantity and quality of the butter delivered within given deadlines. According to Abou Tagnan, the general manager of the UGPPK, the first GVFs to have joined the Union, as well as those that have fulfilled larger shares of non-Fair Trade certified orders, are apportioned a greater quota of the Fair Trade orders (A. Tagnan, February 16, 2007). Due to their lesser capacity to fulfil non-Fair Trade certified trade contracts, most rural GVFs have so-far been excluded from the smaller but more remunerative Fair Trade orders. Thus, in addition to supplying smaller quantities of butter to the UGPPK, rural shea producers also earn less on average per kilogram of butter sold to the Union. Whereas in Léo average remuneration for butter supplied to the UGPPK reached 687 fCFA ($CAD 1.45) per kilogram over the two years examined, in Lan one kilogram was worth only 556 fCFA ($CAD 1.17), and in Prata a mere 500 fCFA ($CAD 1.05). Considering that, as detailed in Table 7.1 of Chapter 7, as many as ten hours of labour are required to produce one kilogram of butter, excluding the kernel preparation steps, returns on women's labour do not exceed 69 fCFA ($CAD 0.145) per hour, in the best case scenario.

The inequitable inter-regional distribution of Fair Trade orders is evident in Table 8.2. Over the two shea seasons spanning 2005 to 2007, Léo's UGPPK members earned an average sum of $CAD 312.5 supplying 123 kilograms of shea butter to Fair Trade markets. During this same period, Lan's Fair Trade orders totalled merely $CAD 23.8 on average for nine kilograms of shea butter sold per producer. All the while, for reasons discussed shortly, Prata's UGPPK members remained completely excluded from this market. As shown in Figure 8.5a, town-based members sold 28 per cent of their butter per year, on average, through Fair Trade markets between 2005 and 2007. Revenues from these sales represented just under half of the average annual revenues Léo's members

[172] As discussed in Chapters 4 and 7, *Groupements villageois féminins* (GVFs) are female village work groups. These first-level associations unite to form the UGPPK, a second-level organization. Given the order distribution criteria, some GVFs have deceivingly added women who do not participate in UGPPK orders to their roster. This allows the work group to capture a greater share of shea butter orders. The larger quota allotted to the GVF is then distributed among the actual number of women producing shea butter for the GVF. The women whose names deceptively appear on the GVF roster attend butter collection sessions with the UGPPK's executive officers to hold up appearances. Yet, the butter they deliver to the Union is produced by the GVF's actual members, who retain associated profits (A. Tagnan, February 18, 2007).

earned from shea sales to the Union (Figure 8.5b). In Lan, during the same period, figures were substantially lower. On a per mass basis, Fair Trade shea sales represented only five per cent of the butter sold annually to the Union, and accounted for 12 per cent of total member remuneration. The fact that Prata (and other surrounding villages) remained excluded from Fair Trade markets suggests that this form of trade is not reaching the most rural, and frequently most disadvantaged, shea producers of the Union. In defence of Fair Trade, the 'elite' shea butter producers who participated in this study are also very poor and stand to gain considerably from this trade model.

The realization that the Fair Trade system bypasses the most marginal producers is nothing new (Henderson 2008; Sidwell 2008). Producers with greater assets and skills are more capable of satisfying the demands of a specialty niche market and the requirements of third-party certifying agencies (Raynolds et al. 2004; Taylor et al. 2005).[173] For this reason, the general manager of a Mexican coffee cooperative that supplies the Fair Trade market claims that, "in its current form, Fair Trade is having its impact on an elite group of producers […]. The Fair Trade market should have tried to incorporate also the dispossessed into the system" (cited in Taylor 2002: 25). What differs in the present case, however, is that, as UGPPK members, Prata's producers *are* certified to supply shea butter to the Fair Trade market, but remain excluded from this market niche due to their association's internal policies. This observation, which has not previously been reported in the literature, suggests the need to pay close attention to distributional and equity issues occurring *within* the associations participating in Fair Trade, both by the management of second-level producer associations and by third-party certifying and monitoring agencies. Otherwise, the inequitable distribution of the benefits of Fair Trade among member producers can not only signal lost prospects for marginal producers, but also foster resentment among Union members, and in so doing jeopardize the integrity of the Union and the sustainability of shea projects.

[173] For background on third-party certifying agencies and Fair Trade criteria, refer back to Chapter 7, Section 7.3.2. Of relevance to the present discussion, FLO and other third-party agencies certify only firmly established, democratic and transparent producer associations. FLO does not initiate the formation of new cooperatives nor does it assist weak cooperatives. The most marginalized producers frequently lack the relevant information and capabilities to reach FLO-defined measures of cooperative success (Barrientos 2000). The intervention of peripheral NGOs has been key for developing and consolidating associations that have gone on to sell fair trade products (Milford 2004). Yet NGOs cannot reach all producers, and frequently also favor supporting well-established cooperatives (Lyon 2002; Taylor 2002).

Figure 8.5a: Mean Annual Mass of Shea Butter Produced by UGPPK Members and Sold on non-Fair Trade Certified and Fair Trade Certified Markets between 2005 and 2007, All Sites

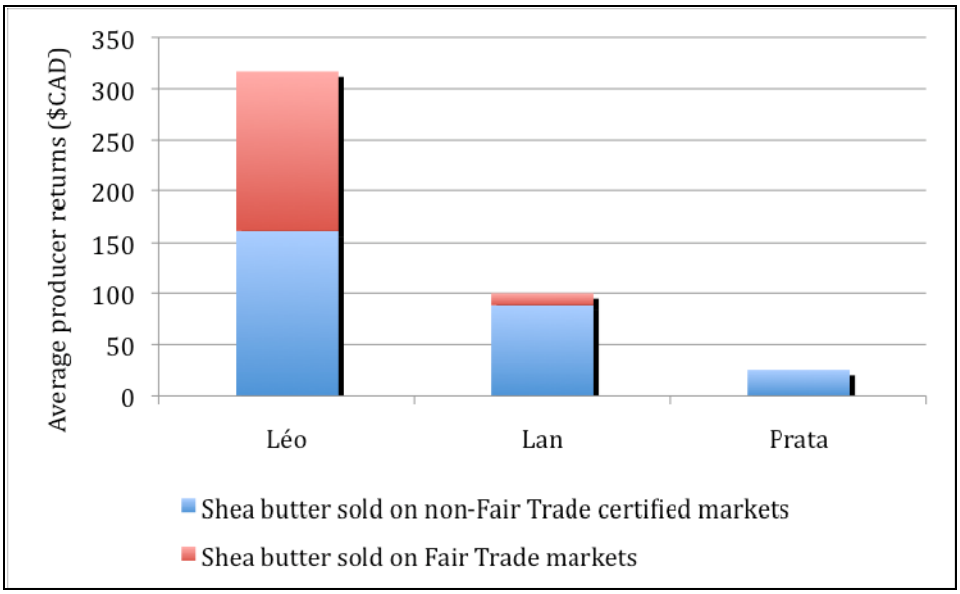


Figure 8.5b: Mean Annual Producer Revenues for Shea Butter Sold through the UGPPK on non-Fair Trade Certified and Fair Trade Certified Markets between 2005 and 2007, All Sites

A direct benefit of Fair Trade is the pricing structure it offers participating producers. Indeed, to market their product under the Fair Trade label, importers must pay producers a price equal to or above a minimum set price. Chapter 7 details how, with

respect to shea butter, this sum is equivalent to 1198 fCFA ($CAD 2.53) per kilogram. Producer earnings reported in Table 8.2 under the Fair Trade banner reflect this higher remuneration. The significance of this floor-price must be understood in light of the extremely volatile and notoriously low export prices for tropical commodities in the current global economic climate (Smith 2009). Shea butter has only recently entered the Fair Trade market, but the medium-term economic importance of this trade model appears promising when considering the fate of other fairly traded tropical commodities. For instance, among coffee and banana producers, the floor-price guaranteed in Fair Trade sales has made the difference between subsistence and ruin during market collapses. Since 1990, conventional coffee prices have been lower than the Fair Trade minimum price of $US 1.26 ($CAD 1.28) in nearly all years, and have dropped as low as $US 0.45 ($CAD 0.46) per pound (International Coffee Organization (ICO) Statistics, 2005). As a result, numerous coffee farmers supplying conventional markets have changed crops or abandoned their fields and migrated to urban centres in search of employment. Salvadorian coffee growers have reported that Fair Trade markets are the primary factor allowing them to make ends meet (Mendez 2002), whereas Nicaraguan growers were up to four times less likely to abandon their coffee fields when selling to Fair Trade rather than conventional markets (Raynolds 2002b; Utting-Chamorro 2005). In fact, authors working in Latin America have recorded a 200 to 450 per cent increase in the remuneration of coffee growers who participate in Fair Trade as compared to conventional market trade (Raynolds 2002a; Taylor 2002; Utting 2009), whereas Dominican banana growers increased their returns by 40 to 80 per cent upon entering the Fair Trade market (Murray and Raynolds 2000). In the shea butter case, this minimum set price favours the sustainability of shea butter projects by inciting continued producer participation in the Union.

Despite the economic promise of Fair Trade for Burkina Faso's shea producers, however, Figures 8.5a and 8.5b remind us that these sales represent the smaller portion of the shea butter marketed by the UGPPK. Although Fair Trade allows producers to earn above-market prices for their product, opportunities within this commercial niche remain limited due to the restricted scope of the market. In fact, Fair Trade markets generally suffer from oversupply (Raynolds 2002a; Jaffee et al. 2004; Sick 2008), such that

worldwide, producer associations certified by the umbrella group FLO continue to sell a large portion of their goods in conventional markets (Rayolds 2002a; Taylor et al. 2005; Sick 2008). For UGPPK members and other producers, Fair Trade shea sales thus represent only one facet of an income diversification strategy.

Due to the limited scope of Fair Trade outlets, FLO encourages the producer associations it registers to concurrently enter the more rapidly growing, and high return, organic market (Raynolds 2000; Mendez 2002; Raynolds 2002a; Taylor 2002). The UGPPK has heeded this call and acquired its organic certification on December 7, 2007. By reducing the UGPPK's reliance on a single fluctuating market outlet, this diversification in the markets the Union supplies favours the sustainability of shea butter projects.

Returning to the economic data presented in Table 8.2 and Figure 8.5b, I noted earlier that the figures given refer to gross sales revenues. To determine net producer returns from UGPPK activities, production costs must be deducted from these figures. This exercise has been attempted in Section 7.3.1.2 of Chapter 7, but warrants a fuller examination here. As discussed in Section 7.3.1.1, production costs tend to be lower in rural areas than in Léo, where financial and physical capital substitute for some of the labour involved in the process. If no inputs are purchased, as is sometimes the case in rural areas, producers retain the entire value of shea sales. When producing large quantities of butter, however, butter makers frequently purchase some or all production inputs. In principle, certified Fair Trade importers are required to pre-finance producer associations at least half of their order's value to facilitate the purchase of these inputs. In practice, however, the money advanced to the UGPPK is used to cover transportation costs to the product's international destination. Clients settle the outstanding balance, from which the producers' remuneration is drawn, once their order has been safely delivered (A. Tagnan, February 3, 2007). Butter makers may therefore have to liquidate stocked produce, use other savings or secure credit arrangements with acquaintances and moneylenders to acquire production inputs.

As described in Chapter 7, the use and costs of inputs vary annually, seasonally, regionally, and among producers, such that, at best, a window of net returns can be established. If producers purchase shea nuts, and if this occurs during the shea season,

production of one kilogram of butter requires approximately 120 fCFA ($CAD 0.25) worth of shea nuts.[174] During the dry season, the cost of shea nuts can reach 450 fCFA ($CAD 0.95) per Yoruba, such that 540 fCFA ($CAD 1.14) of nuts are required to produce one kilogram of butter. For the purpose of this calculation, I retain an average cost of 330 fCFA ($CAD 0.70) for the shea nuts used in processing one kilogram of shea butter. In Léo, an additional 100 fCFA ($CAD 0.21) per kilogram are spent for use of water and Union machinery, and 17 fCFA ($CAD 0.04) are sometimes disbursed to purchase firewood.[175] In total, then, producers may spend as much as 447 fCFA ($CAD 0.94) to purchase shea nuts, water and firewood, and to use machinery for the production of a single kilogram of shea butter. Between 0 and 447 fCFA per kilogram should thus be deducted from the gross revenue data discussed above. If a mid-point average of 223.5 fCFA ($CAD 0.47) per kilogram is accepted and subtracted from these figures, producers stand to gain net returns of 276.5 fCFA ($CAD 0.58), 332.5 fCFA ($CAD 0.70), and 463.5 fCFA ($CAD 0.98) per kilogram of butter in rural, peri-urban, and town areas, respectively. As shown in Figure 8.6, over the two shea seasons examined, producers would thus have earned an average annual net benefit of 101,292 fCFA ($CAD 213.89) in Léo, 28,385 fCFA ($CAD 59.89) in Lan, and 6,794 fCFA ($CAD 14.37) in Prata. Yet, the fact that fewer monetary inputs are drawn upon in rural than urban areas somewhat reduces regional differences.

[174] This is based on the calculation that during the wet season, shea nuts can be acquired for 100 f CFA ($CAD 0.21) or so per Yoruba. One Yoruba contains 2.5 kilos of nuts, and three kilograms of nuts are required to produce one kilo of butter.
[175] The UGPPK deducts the 100 f CFA ($CAD 0.21) per kilogram from the pay of members who use the Union's common machinery.

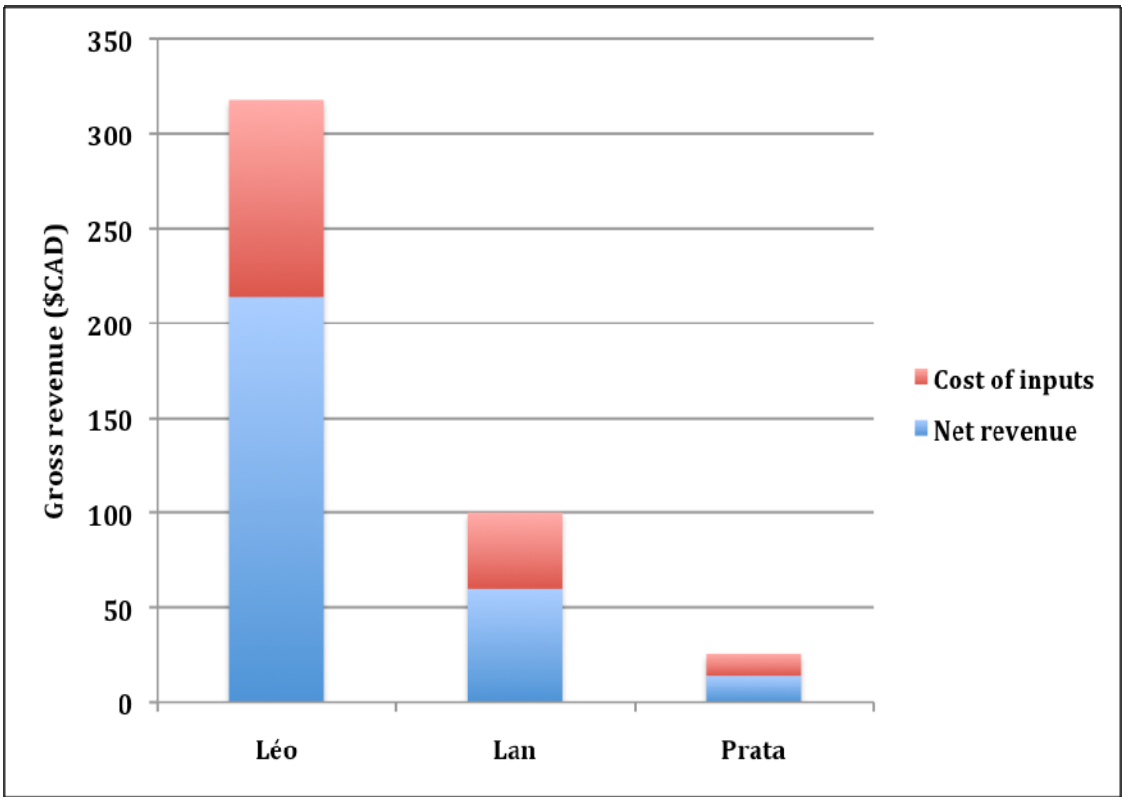


Figure 8.6: Approximate Breakdown of Gross Annual Revenues per Producer from Shea Butter Sales to the UGPPK in the Three Study Sites

In light of the average costs involved in shea butter production, UGPPK members thus retain meagre returns from product sales. The net return of approximately 276.5 fCFA ($CAD 0.58) per kilogram earned when selling shea butter at 500 fCFA ($CAD 1.06) per kilogram to the Union works out to approximately 27.6 fCFA ($CAD 0.06) an hour, given the ten hours of work required to produce the butter. In contrast, when selling to the Fair Trade market, net returns amount to 974.5 fCFA ($CAD 2.06) of the 1198 fCFA ($CAD 2.53) producers receive per kilogram of butter sold to the UGPPK, which represents approximately 97.45 fCFA ($CAD 0.21) per hour of shea processing labour.

As a comparative measure, the standard local daily wage rate for contractual female agricultural work—which is essentially the only source of wage labour available to rural women in the study sites (Table 8.1)—is 600 fCFA ($CAD 1.27) per day for five hours of field work, or 120 fCFA ($CAD 0.25) per hour.[176] Hence, even when selling to

[176] The *salaire minimum agricole* (SMAG) or minimum wage for agricultural work is officially 177 fCFA ($CAD 0.37) per hour in Burkina Faso. In practice, however, men receive a daily wage of 1000 fCFA

the Fair Trade market, shea butter producers earn smaller returns to labour than when working as agricultural day labourers. It is important to note, however, that the opportunity to work for monetary gain in someone else's field is rare, especially for women, whose services are sought only during the harvest.[177] Thus, despite the lower returns to labour associated with the activity, female producers pursue shea processing and sale to the Union partly due to the limited alternative opportunities for wage employment.

Interestingly, as previously demonstrated, producers in Lan and Prata may also actually earn less through shea sales to the UGPPK than they previously did, when selling butter exclusively on the local market. How is it, then, that these women believe that they are economically better off since joining the Union? Based on interview data, I suggest one primary and three secondary reasons to explain this perception. Primarily, producers report that the most significant economic benefit of shea projects is the rare opportunity they afford to generate a lump sum of money, as opposed to the small amounts earned periodically from local sales. The importance of this is discussed in Section 8.2.4 on investments, but briefly put lump sums allow women to save and invest their money productively rather than spending it on immediate needs. Of the secondary reasons, first, a minority (37 per cent overall) of the women interviewed who now sell their butter to the UGPPK also continue to sell butter on the local market. Since UGPPK orders are periodic and limited, and in a context with few alternative income-generating opportunities, some members market lesser quality butter locally when not tied up in production for the Union. Half of the women in Prata, 27 per cent in Léo, and eight per cent in Lan reported this practice. In this context, UGPPK income supplements previous, locally generated shea revenues without supplanting these. Second, when marketing their butter locally, producers frequently sell their product to acquaintances. As a result, traders feel compelled to supply their butter on credit if requested to do so. Unfortunately, many buyers then fail to reimburse producers for their advance (Nassiratou, 16/01/07), and producers have nowhere to turn to resolve these problems of outstanding debt

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($CAD 2.11) whereas women are paid 600 fCFA ($CAD 1.27) per day (9 am to 2 pm) of field work. Employers are also expected to feed their hired field labourers at lunchtime (A. Tagnan, June 24, 2010).

[177] What is more, employers generally hire women's groups rather than individual women when seeking help with their harvest. These groups receive a nominal sum, which is often kept in the groups's coffers rather than being subdivided among members.

(Abibata, 22/10/06). In contrast, although payments may be tardy when selling to the UGPPK, members are assured that they will eventually receive their money in full. Finally, calculations based on year-round local shea sales overestimate the sums actually returned to producers. There are weeks during which women cannot sell their butter for personal reasons, or when shea nuts become difficult to find. These blackout periods have not been accounted for in the revenue data provided for local butter sales since women found them overly difficult to estimate. The full economic significance of participation in the UGPPK, however, should be considered in light of the opportunity costs of Union membership, and of the investments Union revenues allow members to make.

8.3.2 Opportunity Costs

Although revenues from sales to the UGPPK can supersede those earned during sales on the local market, participation in the Union entails greater obligations on behalf of producers than when selling butter informally. First, the time commitments involved in maintaining UGPPK membership can be substantial. UGPPK producers must partake in the associative life of their GVF, and via three elected representatives from each GVF, of their Union. This carries benefits for producers in terms of solidarity building and knowledge sharing among members, yet it also includes drawbacks. As I observed during my fieldwork, GVF meetings held to distribute orders, convey information from UGPPK headquarters, and collect butter may occur at inconvenient times and places, particularly during the busy agricultural season. For example, on November 26, 2006, during the harvest period, Prata's 110 Union members assembled at seven a.m. with their butter. UGPPK officers and NGO personnel proceeded to collect and weigh their shea butter until five p.m., at which point producers were allowed to leave. In neighbouring villages, over one hundred producers waited together all day to have their butter collected, only to be told to return the following day due to delays in collection activities. Producers had walked six kilometres (one way), head-loading as many as 40 kilos of butter, and to their and their husbands' discontent, had lost an entire day of field work.

Yet, those dedicating the greatest amount of time to the UGPPK are the Union's executive officers. In Léo, these elected officials—all of whom are volunteers and receive no direct compensation for their services—spend long days, every day, at Union

headquarters.[178] During certain periods, they barely even return to their homestead. For instance, when order deadlines approached in mid-November 2006, for several days the president of the UGPPK arrived at Union headquarters at four a.m. and remained there until midnight supervising production activities. Elected officers additionally dedicate their time to meeting with clients and other visitors, holding general Union assemblies and special meetings, and acting as resource persons for fellow producers. Further, participation in Fair Trade markets requires them to stay abreast of market requirements, produce reports, and/or annually host inspectors from certifying agencies (Taylor 2002). These activities offer elected officers satisfaction and other non-monetary benefits (see Sections 8.3 and 8.4), but they also deter them from pursuing other revenue-generating opportunities and represent a heavy responsibility.

Membership in the Union's constituent GVFs additionally includes dues, which the poorest women frequently cannot afford. As Union members from different GVFs explained to me, each GVF sets its own dues.[179] One quarter of the non-Union member shea butter vendors I interviewed admitted that these fees act as an exclusionary force dissuading many shea butter vendors from joining the Union.

Next, there exists a trade-off between processing shea butter for the UGPPK and the demand for female labour in competing tasks. Although other income-generating activities also carry this opportunity cost, the particularity of shea butter production for the Union is the timing and size of orders to fulfil. When processing butter for the local market, butter makers can intersperse production activities with other duties, and can refrain from producing butter during a given period if need be. This is not the case when producing for the UGPPK, with which members establish a contract. When UGPPK orders are placed, production deadlines and quantities are dictated by the client and upstream by the Union. Although UGPPK orders transpire fewer than five or so times

[178] In contrast, Taylor (2002) reports that in Latin American Fair Trade coffee cooperatives elected officers are reimbursed for direct expenses and receive a modest honorarium. He adds, however, that their salary is rarely sufficient to compensate for extended absences from the homestead and from other productive activities.

[179] These range from 500 fCFA (CAD$ 1.06) annually with a 1000 fCFA (CAD$ 2.11) subscription fee in Poko's (05/02/07) GVF, to weekly contributions of 100 fCFA (CAD$ 2.11) in Maimata's (17/10/06) GVF. Other GVFs, such as Safi's (01/02/07), request elevated initiation fees of 5000 fCFA (CAD$ 10.56), in addition to weekly subscriptions of 200 fCFA (CAD$ 0.42), and compulsory contributions of 1000 fCFA (CAD$ 2.11) following each UGPPK order.

during the year, the relatively large quantities of butter allocated to each producer require substantial time commitments at one specific time from her. As a result, UGPPK members have to cast aside other productive activities such as farming and trading, as well as reproductive duties such as cooking and housekeeping to fulfil their orders.

In the interviews I conducted in Léo, Lan, and Prata, producers repeatedly criticized the timing of shea butter production for export purposes. Deadlines are frequently short and often coincide with the peak of the agricultural season or with periods of prohibitively high shea nut prices. This is particularly problematic in rural areas, where access to labour-saving technology is limited. Producers have more time to process shea butter during the dry season, but heavy work burdens are ushered in with the rains. At this time, agricultural duties constrain women's labour availability for shea nut, firewood, and water collection as well as nut processing.

In general, Burkinabè women provide significant labour for their household's farming activities (SIDA 2004). In the province of Sissili, however, female agricultural burdens have markedly increased with the recent spread of cotton cultivation. As discussed in Chapter 3, cotton cultivation is technically the purview of male agriculturalists who market their product via grower cooperatives and retain the benefits from ensuing sales.[180] Nonetheless, female labour is integral to production activities. Each cotton pod must be plucked by hand; a task which is facilitated by the smaller fingers of women and children. Due to the rapid expansion of this cash crop in the central-west region of Burkina Faso, the cotton harvest has considerably prolonged the agricultural period. Rather than completing the harvest in November, as was formerly the case, many households in Prata were still reaping their cotton and maize by January 2007. This two-month extension of the harvest period has repercussions on shea butter production, as female agriculturalists are left with even less time to process shea butter.

[180] The commodity is then sold to, and exported by, a state marketing board: the *Union Nationale des Producteurs de Coton du Burkina* (UNPCB). According to Halinou Diasso (February 16, 2007), a representative of the UNPCB, the cotton sector is the only well organized commodity chain in Burkina Faso. As noted by Diasso, as well as by Gray and Kevane (2001) and by Gray (2008), participation in the cotton market is the only way agriculturalists gain access to credit and agricultural inputs, such as fertilizers and pesticides. Consequently, and as a result of national reforms promoting the sector, the quantity of cotton cultivated in Burkina Faso increased threefold between the early 1990s and 2009 (Kaminsky et al. 2009). Cotton cultivation necessitates many inputs, including fertilizers, pesticides, and significant amounts of labour.

Although it is difficult to assign a monetary value to the cost of participating in shea projects, the producers I interviewed recounted some of the agricultural mishaps they faced during periods of shea production for the Union. As some women could not attend to their crops at that time, they lost ripe groundnuts and rice, which rotted in their fields and paddies. As noted by Alimata (17/01/07), whom we first met at the beginning of this dissertation, mature beans, which stood unguarded in her fields were consumed by cattle. Another producer, Malika (17/01/07), reported that her maize was ravaged by field fires. As one of Léo's male participants (Julien, 20/10/06) stated, "shea contracts can bring you problems because you risk running out of food if you leave your fieldwork to produce shea butter." These examples illustrate the significant trade-off a diversion of labour from subsistence to export production can entail (Dolan 2001). In unfortunate instances, shea producers have even had to spend their shea butter revenues to purchase food, which they had lost in their fields while producing butter in the first place. Although women who can mobilize labour face smaller opportunity costs to participation in UGPPK activities, all female participants agreed that the best time to produce butter for the Union is during the dry season, when they face fewer agricultural duties.

In light of the "extraordinarily high labour demand of butter extraction", Chalfin (2004: 43) states with respect to the Ghanaian shea trade that "a woman's ability to concentrate labour is the primary determinant of her potential performance in the butter market." Given their significant labour commitments during the agricultural period, the producers I interviewed rely upon different types of arrangements to fulfil their contracts with the Union. Some producers explained that they rarely suspend work on commonly cultivated household fields, as this can irritate their husbands, who would see their labour force diminished. Instead, 16 per cent of female participants mentioned that they extend their workday and "juggle" extra tasks into their routines.[181] When possible, they also draw upon the labour of children and particularly unmarried daughters or daughters-in-law to help them fulfil their duties.[182] This may occur with, or more generally without

[181] As is, rural women work such long days during this period that they frequently sleep for as few as five hours a night, despite the fact that their work is physically exhausting.

[182] One producer even explained that her children collect shea nuts on their own initiative because they want their mother to buy them clothes for religious celebrations (Abassiri, 09/01/07). Among the Muslim Gurunsi of Léo and surrounding areas, parents (generally the male head of the household) traditionally

official remuneration for their juniors. Nonetheless, helpers are often given a "little something" in kind or in cash to entice them to work (Fatimata, 15/11/06). Help may also come in the form of labour exchanges. For instance, an older UGPPK member explained that she cultivates the groundnuts of her daughters-in-law while they fulfil the more physically demanding task of shea butter production for the Union in her name (Malika, 17/01/07). Next, women may forego work on their personal fields to process shea butter. This has implications for family nutrition and auto-subsistence, however, as crops derived from these fields are used as condiments and to supplement crops from commonly farmed household fields (Brondex 1999; Pierre-Louis et al. 2007). In addition to providing an essential source of dietary nutrients, women's personal production is sold on the local market and returns from these sales are largely used to purchase food for the household. The lost economic and use values of women's personal production thus represent a significant opportunity cost to butter processing. Finally, only one relatively wealthy producer from Léo hired a labourer to replace her in her husbands' fields while she produced shea butter, but such a financial commitment also factors into the costs involved in shea production.

The labour constraints shea butter producers face during the agricultural season are sufficiently large to dissuade some producers from joining the Union, lest they should have to produce large quantities of shea butter at that time. In fact, 20 per cent of the non-member shea producers I interviewed in Léo (n=20) explained that they prefer not to join the Union for fear of failing to satisfy UGPPK quotas. They may produce equally large amounts of butter throughout the year for sale on the local market, but in lesser quantities at a time.

The research participants I interviewed repeatedly complained about a fourth opportunity cost to participation in UGPPK activities: delayed producer remuneration following butter delivery. Whereas shea vendors are immediately remunerated when selling butter locally, they may wait three to six months to receive payment upon butter delivery to the Union. Butter delivered to the Union must be weighed, re-filtered, and packaged before being transported to ports in neighbouring countries or to the airport in

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purchase clothes for their children, if they can afford it, to celebrate Islamic holidays of Ramadan (at its end) and Tabaski.

Ouagadougou for shipment to Europe or North America. Importers then pay the UGPPK only upon reception of their merchandise, once the product has been reweighed and internal accounting procedures have been completed. The UGPPK then promptly settles its accounts with each GVF, yet the entire process takes weeks.

Delayed payments are highly problematic for members who acquire kernels on credit or receive loans for their purchase. Moreover, during this time, producers are extremely financially vulnerable and may have to obtain more loans to make ends meet since their savings—in terms of stocked shea nuts and money spent on shea butter production—are tied up in the UGPPK system. A morbid example illustrates this fact: during the 2005-2006 shea season, two producers passed away prior to receiving due remuneration for their butter. One of the producers was waiting for UGPPK revenues to purchase medicine to treat the illness that finally took her life. Having used all her shea kernels and other savings to produce shea butter for the Union, she was in a highly precarious economic position when she fell ill (Fanta, January 21, 2007).

In light of these delayed payments, one member confided in me that many women are tempted to wholly abandon UGPPK activities (Fatimata, 15/11/06). Others sell part of their product for lower prices on the local market for faster returns. As discussed in Section 8.2.1 and in the following section, delayed payments also cause women to lose the gains they could have made by investing their money at strategic times in other income-generating activities. This is a double loss for producers who sell stocked produce sometimes for low prices to acquire shea kernels for Union orders, and repurchase these produce when their price increases upon receiving UGPPK payment. Clearly, these considerations can hinder the sustainability of shea butter projects. Despite the opportunity costs projects entail, however, women welcome the opportunity to supply butter to the Union due to the investments that UGPPK income allows them to make.

8.3.3 Investments

The Union members I interviewed explained that they spend the financial capital they earn through the UGPPK differently than that which stems from shea sales on the local market. This is due to the larger sums of money received at once when selling to the Union than through weekly sales. Income obtained through local sales is spent on pressing necessities, such as condiments, soap, children's clothing, and shea nut

purchases (or debt reimbursement for shea kernels). Binta (17/10/06) from Léo states that these small sums are spent "little by little and I have nothing left when leaving the market, nothing to bring home. Even my working capital is spent." Indeed, this spending pattern resembles a form of barter, as producers immediately disburse the money from butter sales to acquire a range of commodities of the same total worth—sometimes from the very women who purchased their butter. As noted by female interviewees, any surplus cash is then spent on medicine, school supplies, petroleum for lighting, or personal clothing.

Unlike small, regular revenues, UGPPK remuneration—which occasionally reaches the equivalent of $CAD 40 or more at once—can be saved or invested in larger items, such as livestock, bicycles, school fees or trade activities that provide continued returns. Access to lump sums of money is all the more important in regions where low interest credit is difficult to acquire. Because of these lump sums, 43 per cent of UGPPK members in Prata, 76 per cent in Lan, and 82 per cent in Léo report making new investments since joining the Union. Table 8.3 lists the investments members are making with their UGPPK income, as well as the number of women making these investments in each study site. Data for Lan and Prata are organized according to the wealth categories of participating producers.[183] Female interviewees reported that these investments are a primary factor inciting them to participate in shea projects, and thus a force contributing to the sustainability of shea projects.

[183] As explained in Chapter 4, the wealth categories of Léo's UGPPK members could not be assessed due to methodological limitations encountered during wealth rankings exercises.

Table 8.3: Investments Made by UGPPK Members with Shea Income

	LEO (n=33)	LAN (n=21)			PRATA (n=24)			TOTAL (n=78)	Per cent of responses
		Low wealth	Medium wealth	High wealth	Low wealth	Medium wealth	High wealth		
Basic necessities								64	**34.0**
Clothing for children	10		2			4		16	8.5
Clothing for husband	1							1	0.5
Clothing for woman	10		2			2		14	7.4
Food	16	1	6	1	1	2		27	14.4
Soap			1			1		2	1.1
Water, wood	3			1				4	2.1
Income-generating activities								31	**16.5**
Boutique	1							1	0.5
Garden fence	1							1	0.5
Grain and dried foods speculation		1	1		1	2		5	2.7
Prepared foods	1				2			3	1.6
Sewing machine						1		1	0.5
Shea nuts**	7		4	1	2	4	2	20	10.6
Consumer durables								23	**12.2**
Bicycle	5		3	2			1	11	5.9
Household goods (pots, basins**, canaries, stools)	7		1		1	2		11	5.9
Water-bin on wheels	1							1	0.5
Gifts or loans	18					1	1	20	**10.6**
Savings								17	**9.0**
Animal husbandry	2	2	8	1		1		14	7.4
Monetary (cash, bank or communal fund)	1					2		3	1.6
Scholastic expenses	12		1	1				14	**7.4**
Agricultural assets and services								11	**5.9**
Cattle rental, donkey	1		1					2	1.1
Contractual labour	1							1	0.5
Fertilizer	1		2			1		4	2.1
Plow (rental/purchase)	2							2	1.1
Seeds	2							2	1.1
Other								8	**4.3**
Medicine	3	1				2		6	3.2
Milling fees**			2					2	1.1
Total responses	106	5	34	7	7	25	4	188	**100.0**

** Items used partly to specialize/reinvest in the shea trade

N.B. Percentages refer to the frequency of responses per category per site over the total number of responses in each locality multiplied by 100. There was no limit to the amount of responses a woman could contribute. Some women's answers thus appear under more than one heading.

Women's investments are interrelated and follow a guiding strategy. As also noted by Guérin (2006; 2008) during her research on women's informal financial practices in Senegal, shea producers rarely maintain cash savings. Rather, when they acquire sums that do not require immediate spending, they favour locking them into communal savings funds or commodities that can be liquidated when cash needs arise. This practice, which is frequent among women in Burkina Faso and other sub-Saharan African countries (Pochettino 1995; Thomas 1988), is logical in light of the community obligations individuals face in the Global South (Sen 1985). As discussed in Section 3.3.3 of this thesis, to the greatest extent possible, individuals are expected to support their kin, no matter how distantly related. Social networks fill the role of safety nets in a context where little State assistance is available. Yet, as Guérin (2006: 554) remarks, in the short-term, the financial responsibilities associated with these obligations "[intensify] uncertainty because one can be importuned at any time by the community." In other words, "saving is difficult in a context where the financial demands of a community and family obligations are high" (Guérin 2006: 557). Cash is short while a person and his or her community's needs and wants are large. Locking money away in funds or investing in material goods limits the ease with which women can be called upon to access their money and helps them curtail their spending on immediate demands.

The timing of revenues and disbursements is also critical to women's investment strategies. The acquisition and sale of certain assets at favourable times allow individuals to smooth consumption and, in the best case scenario, turn a profit throughout the year. For example, groundnuts are sold to purchase shea nuts, which are processed and sold as butter. Revenues from shea butter sales are then invested in the purchase of groundnut seeds. Due to the precariousness of producers' finances, even minor unforeseen events requiring economic resources can upset this investment balance. If nothing else, the meagre sums returned for their labour in UGPPK activities help impoverished producers remain on the positive side of this balance.

As depicted in Table 8.3 and Figure 8.7, Union members primarily invest their shea revenues in basic necessities, income-generating activities, consumer durables, gifts or loans, various forms of savings, scholastic expenses, and agricultural assets and services. Above all, women spend their shea income on foods that fall within the realm of

female financial responsibilities, such as condiments (Saul 1989). In the gendered household economy, women are also responsible for equipping their kitchens. In Léo and Prata, female producers consequently use their shea revenues to purchase cooking and serving pots, and other household goods. Participants commented that these pots would be bequeathed to their daughters as an heirloom or bestowed as a trousseau upon their daughters' marriage. Some producers have also invested in labour-saving technologies and services, such as a water bin on wheels to facilitate water collection, or milling fees (listed under 'other' investments) to avoid manually pounding grain. Others have purchased bicycles to reduce the duration and physical demands of travel, and in so doing, facilitate participation in different forms of trade.

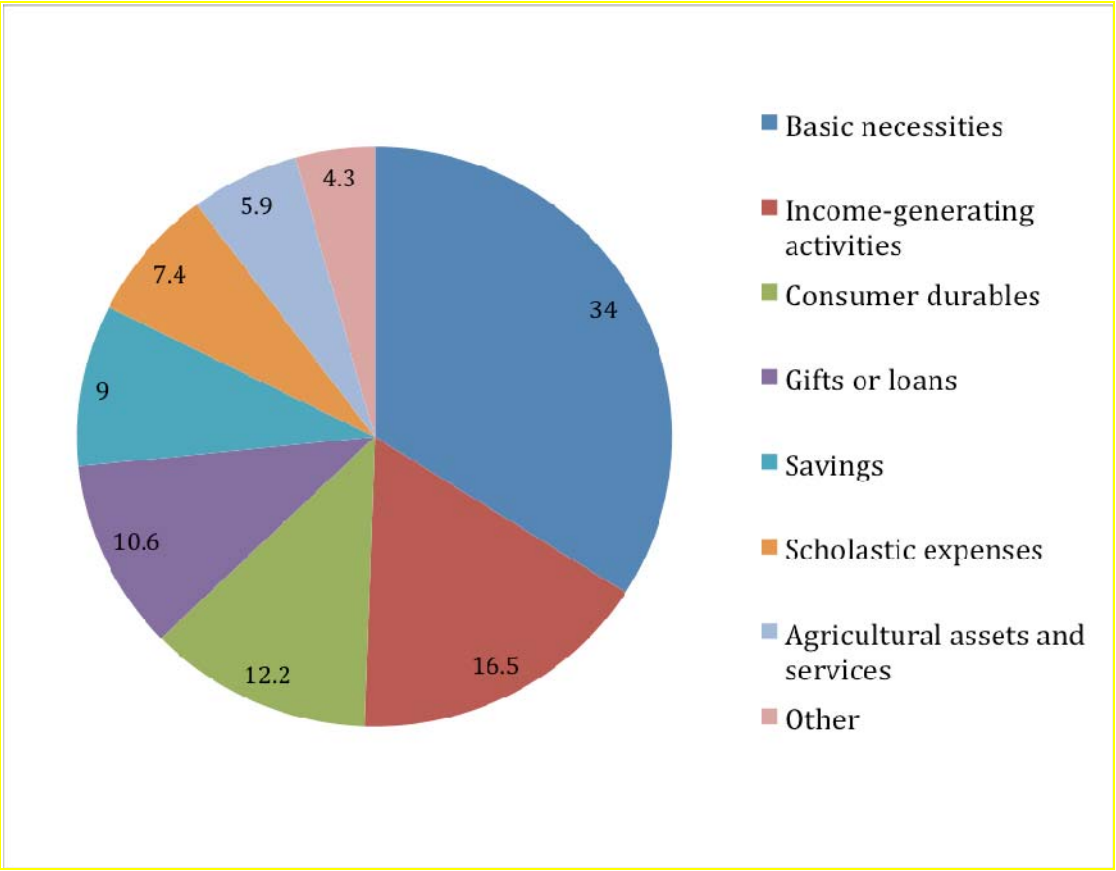

Figure 8.7: Types of Investments Made by UGPPK Members, All Sites

In terms of income-generating activities, women from all wealth categories in the three study areas use their shea revenues to specialize in the shea trade. UGPPK members purchase shea kernels primarily for use in their shea butter production for the Union. Yet,

some women also participate in the shea nut trade. Moreover, as easily convertible assets that can be promptly liquidated to solve financial problems, shea nuts are a valued form of savings that are comparatively less subject to depletion by husband and kin than monetary savings (Chalfin 2004).[184] Some of the basins (listed in Table 8.3 as 'household goods' in the category of 'consumer durables') women purchase are also used for making shea butter. They demonstrate further specialization in the shea butter trade, and presumably women's commitment to the shea projects in which they practice this activity.

Revenues from shea sales additionally allow butter producers to diversify into, or strengthen their claim in, other revenue-generating activities.[185] Table 8.3 illustrates that producers use their UGPPK income to purchase ingredients for the preparation of foods for sale. Purchased millet is transformed and sold as porridge, sorghum is brewed into *dolo* (a local beer), and maize, millet, and sorghum are prepared as *tô*, the national staple. In turn, beans serve to make bean cakes, which are marketed by the roadside or at local markets. A separate category in Table 8.3, 'grain and dried foods speculation', refers to the cereals and dried legumes producers purchase for subsequent sale, without transforming these. As is the case for shea nuts, stocking grain, which is easily sold for cash, represents a way women increase their asset base. The timing of shea revenues is important for successful entry into this trade. If producers receive Union remuneration when grain prices are low, they can invest their money in cereal stocks more productively than if payments are made once grain prices have risen. Beyond from these investments, one producer from Léo purchased a garden fence to launch herself into horticulture. In Prata, Lan, and particularly Léo, UGPPK members are additionally spending their UGPPK income on improving the means of their personal agricultural activities, from which they retain the ensuing revenues. Some interviewees purchased inputs such as fertilizer or rented donkeys, cattle, and ploughs to enhance yields in their personal fields. Two other producers purchased groundnut seeds for sowing in their personal plots.

[184] For practical purposes, shea nuts are listed under the "income-generating activity" category rather than as "savings" in Table 8.3. Yet, categories are by no means mutually exclusive: shea nuts, as well as stored grain, actually serve both purposes.

[185] Similarly, numerous authors have underscored the role of Fair Trade in helping coffee growers worldwide diversify their livelihood portfolios by providing them with a stable income and the skills necessary to branch out into new income-generating activities (Bechetti and Constantino 2008; Le Mare 2008; Smith 2009a).

These examples illustrate the synergies that exist between producers' diverse livelihood strategies. Revenues from shea sales allow producers to pursue complementary remunerative activities, and in some cases to seize new opportunities (Reardon 1997; Ellis 1998; Barrett et al. 2001; Start and Johnson 2004). This form of diversification can help producers smooth consumption, mitigate risks, acquire safety nets, and resist or cope with shocks and stresses (refer back to Section 2.5.2.2, Chapter 2) (Ellis 1998; Moser 1998; Bacon 2005).

Five additional patterns warrant mention here. First, 10 per cent of the UGPPK members I interviewed (n=78) reported giving part of their earnings to family members. In nearly all cases, beneficiaries are the husbands of participating producers. Shea butter makers claimed to give between 500 fCFA ($CAD 1.06) (one per cent) (Rakiata, 16/10/06) and 5000 fCFA (seven to 30 per cent) ($CAD 10.56) (Madina, 15/10/06; Assétou, 27/10/06) to their spouse upon receiving payment from the Union. Exceptionally, one producer gave her husband as much as 20,000 fCFA ($CAD 42.23) to allow *him* to pay their children's school fees, which are theoretically a male responsibility (Kadiga, 15/10/06). By and large, women give their husbands money to appease and thank them for supporting their Union activities in the ways described in Section 9.2.1.1. In Léo, such gifts also encourage men to allow their wives to spend time at Union headquarters (Madina, 15/10/06). A couple of women reported giving money to their husbands for their kola nuts purchases (Rakiata, 16/10/06; Azéra, 19/01/07), but most stated that donations are meant to help their husbands—who are also very poor—to get by. Some UGPPK members maintained that this form of intra-conjugal help is reciprocal. "We help each other," they asserted (Kadia, 09/01/07; Samiratou, 09/01/07; Fatimata, 15/11/06; Marguerite, 19/01/07). Husbands who receive a portion of their wives' shea earnings apparently reciprocate the gesture when receiving payment from cotton sales or other activities.

Yet, not all women share their revenues with their husband. As an alternative strategy, some women prefer to directly assume some traditionally male financial responsibilities (Binta, 17/10/06; Pugsa, 16/10/06). Others provide their husband with gifts in kind, such as clothing or medicine, instead of money (Ayi, 25/10/06; Salamata, 19/01/07). In Prata, three shea producers mentioned lending, rather than giving, money to

their spouse. Finally, some women do not share any of their earnings with their husband. They claim that since they already pay for everything, they see no reason to give their husband any money (Pugsa, 16/10/06).

Female spending patterns beg the question of who ultimately benefits from shea projects. When producers assume expenses which were formerly their husband's purview—assuming that male spouses were capable of satisfying these financial obligations in the first place—men become the actual beneficiaries of the labour involved in these projects. In this respect, male spouses profit from an indirect appropriation of their wives' labour via decreases in their own (male) financial responsibilities. If such a tendency is maintained, it could discourage women's participation in shea butter projects.

The second pattern of interest concerns investments in animal husbandry, which are more prevalent in Lan than in Léo and Prata. This is primarily due to the cultural differences between the Gurunsi and the Moose. The UGPPK producers I interviewed in Lan are migrants of Moose descent. In contrast, participants in Léo and Prata are predominantly from the Gurunsi ethnic group indigenous to the area. Whereas the Moose have long been involved in raising smallstock (sheep, goats) and poultry (chickens, guinea fowl), this is not the case for the Gurunsi. Léo's residents also have difficulty maintaining animal stocks because of animal theft, which is increasingly problematic in Burkina Faso's urban areas. For those who are able to maintain their stocks against thievery and disease, pursuing animal husbandry is an investment of choice. Healthy animals reproduce, thereby providing interest to their owner, and they can be sold in times of need to generate a lump sum.

The third pattern worth noting is that many shea producers are dedicated to providing their children with a formal education. These women explained that they want to provide their children with the opportunities they themselves did not have. Gurunsi and Moose participants agreed that although payment of school fees is theoretically a male responsibility, women frequently contribute to this expense since male spouses could not otherwise afford to send their children to school (Madina, 15/10/06). Table 8.3 shows that seven per cent female interviewees use their UGPPK revenues to pay for their children's education. Whereas 18 per cent of female participants claimed to be the sole purveyors of their children's school-related expenses, men paid the whole of these fees in nearly half

the households, and spouses shared this expense 35 per cent of the time. The mothers I interviewed also purchased their children's school supplies and uniforms, when required. Women's ability to settle their children's school expenses with UGPPK revenues depends on the timing of Union remuneration. When they do not have the requisite amount to pay these fees in September, at the beginning of the academic year, they must sell some of their assets or withdraw their children from the education system. This example points to the "gap-filling role of income from indigenous fruit [such as shea], the timing of which is often more important than its absolute value" (Schreckenberg et al. 2006: 43).

A fourth interesting observation is the lack of obvious differences among the spending patterns of producers in Lan and Prata's three different wealth categories (see Table 8.3). This may owe to the fact that, despite evidence of some socio-economic differentiation among producers, women in all categories remain poor and struggle to make ends meet. Some simply succeed a little bit better than others. Overall, they spend the greatest proportion of their shea revenues on basic necessities. In Lan and Prata, participants from the three wealth categories lead similar agricultural lifestyles and live in comparable contexts, although Lan's residents have superior access to Léo's markets and amenities. In both villages, women of all wealth classes partake in shea projects, as these provide one of the only ways of maintaining or developing their asset base. In contrast, there is a greater range of socio-economic differentiation in Léo, as small- and large-scale agriculturalists co-reside with small- and large-scale entrepreneurs and bureaucrats. In that context, only the town's relatively poorer women are involved in shea projects.[186] As one of Léo's producers remarked, Léo's higher class women would not choose to partake in the back-breaking activity of shea butter production (Kadia, 09/01/07). Moreover, their husbands would not favour their participation in this lower-class endeavour. That being said, Léo's shea butter makers are generally relatively better off economically than their rural counterparts. Moreover, despite being agriculturalists, they have access to urban comforts and amenities not shared by rural producers.

[186] One exception is among the elected officers of the UGPPK, who are somewhat educated and relatively well-to-do as compared to their fellow members.

This leads us to the final pattern of interest here: rather than notable differences occurring along class lines, distinct investment patterns have emerged between urban and rural regions. Table 8.3 suggests that Léo's members are making more diverse investments than their rural counterparts, and many factors explain this occurrence. First, as discussed in Section 8.2.2.1, urban producers have earned vastly superior incomes from sales to the UGPPK, and therefore have greater sums to spend. Then, easy access to a bustling market in Léo offers a greater range of products for purchase, and facilitates involvement and investment in other income-generating activities. Women's values in towns also differ from those of village residents. For instance, there are social pressures to dress appropriately to meaningfully participate in urban society. These pressures are not shared by rural agriculturalists. Moreover, urbanites show a greater commitment to their children's schooling than rural dwellers. Table 8.3 demonstrates that the use of shea revenues to pay for children's education follows a declining pattern across the urban-rural continuum. Indeed, 57 per cent of the women I interviewed in Léo send their children to school, as compared to 45 per cent of participants in Lan, and merely 26 per cent in Prata. These figures reflect the general pattern within Burkina Faso, whereby 75 per cent of primary school-age children attend school in urban areas but as few as 26 per cent do so in rural villages (UNESCO 2004). Lastly, regional differences arise with respect to food purchases. Over half of the UGPPK members I interviewed in Léo spend a portion of their shea income on foodstuffs. This practice is shared by just over one third of Lan residents and 12 per cent of Prata's UGPPK members. Inter-regional discrepancies in these investments partly owe to the fact that Lan and particularly Prata's residents grow a larger proportion of their food than their urban counterparts. These peri-urban and rural dwellers tend to have less disposable income to spend on food, a smaller variety of ingredients available for purchase, more difficult access to markets, and on the whole, a lifestyle more thoroughly linked to agriculture and subsistence. The distinct inter-regional patterns described above also characterize the long-term investments women hope to make with prospective shea revenues.

Indeed, beyond the investments women have pursued to date with their shea income, UGPPK members have a long-term vision of the assets they hope to acquire through continued participation in the Union. These ideal investments are listed in Table

8.4 and depicted in Figure 8.8. Whether or not these are realized with time remains to be seen, yet a few points warrant mention here. First, the relatively large number of producers from Prata (15 out of 23 female interviewees) who intend to deposit their money at the bank are following the lead of one dynamic, formally educated resident who has convinced them of the benefits of official savings. This young woman acquired her knowledge of the banking system years ago, when she lived in the city of Ouahigouya, north-west Burkina Faso. She explained to me that the advantage of the formal banking system is the complicated process of withdrawing money from the bank. The branch is located 13 kilometres away from the village and is open at irregular hours. Consequently, money tends to remain there longer than it would at home, where it is spent as soon as women's personal or other people's monetary needs arise. A similar observation has been made in rural Mali, where a Bambara woman who participates in a rotating credit association stated: "If a person doesn't save (control) money, he/she will eat it" (Turritin 1988: 596). Prata's charismatic producer adds that when her money is locked away, she has to find other ways to make ends meet. Moreover, she can more easily refuse requests from fellow villagers or relatives for money (Fatimata, 15/11/06). After explaining banking procedures to fellow female villagers, this young leader travels to the bank with interested parties to help them open an account. In this way, this single seed of grassroots change is transforming the investment strategies of Prata's residents.

It is also interesting to note again, in Table 8.4, the differential interest in animal husbandry across the study sites. As previously mentioned, this partly owes to the fact that Lan's participants are of Moose origin and have longstanding experience with animal husbandry, whereas the Gurunsi typically do not. In general, a greater number of rural producers with whom I spoke hope to invest in animal rearing, perhaps because access to grazing lands and protection from thieves are more readily found in rural than urban areas. Female participants further commented that in the long-term, they hope their savings in the form of cash or animals can be bequeathed to their children as a heritage.

Table 8.4: Investments Members Aspire to Make with Prospective UGPPK Income.

	LEO (n=33)	LAN (n=21)			PRATA (n=24)			TOTAL (n=78)	Per cent of responses
		Low wealth	Medium wealth	High wealth	Low wealth	Medium wealth	High wealth		
Savings								28	**27.2**
Animal husbandry	1		3	1	1	1		7	6.8
Monetary (bank, cash)	1		2	1	4	11	2	21	20.4
Means of transport								23	**22.3**
Bicycle	10		2			1		13	12.6
Donkey and cart	7							7	6.8
Motorcycle	2						1	3	2.9
Basic necessities								13	**12.6**
Clothing for children	4		1			1		6	5.8
Clothing for husband	1							1	1.0
Clothing for woman	3		2					5	4.9
Food			1					1	1.0
Income-generating activities								10	**9.7**
Grain and dried foods speculation (millet, groundnuts, beans)		1	2			1		4	3.9
Sewing machine	1							1	1.0
Shea kernels	1	1	2			1		5	4.9
Community services								8	**7.8**
Animal husbandry park				1				1	1.0
Maternity			3					3	2.9
School			3					3	2.9
Water pump			1					1	1.0
Purchase of land/ house construction	6	1	1					8	**7.8**
Scholastic expenses	6	1						7	**6.8**
Agricultural assets and services								4	**3.9**
Cattle and plow		1	1			1		3	2.9
Contractual labour			1					1	1.0
Other								17	**2.0**
Donations or loans to family						1		1	1.0
Provide for children		1						1	1.0
Total responses	43	6	25	3	5	18	3	103	**100.0**

N.B. Percentages refer to the frequency of responses per category per site over the total number of responses in each locality multiplied by 100. There was no limit to the amount of responses a woman could contribute. Some women's answers thus appear under more than one heading.

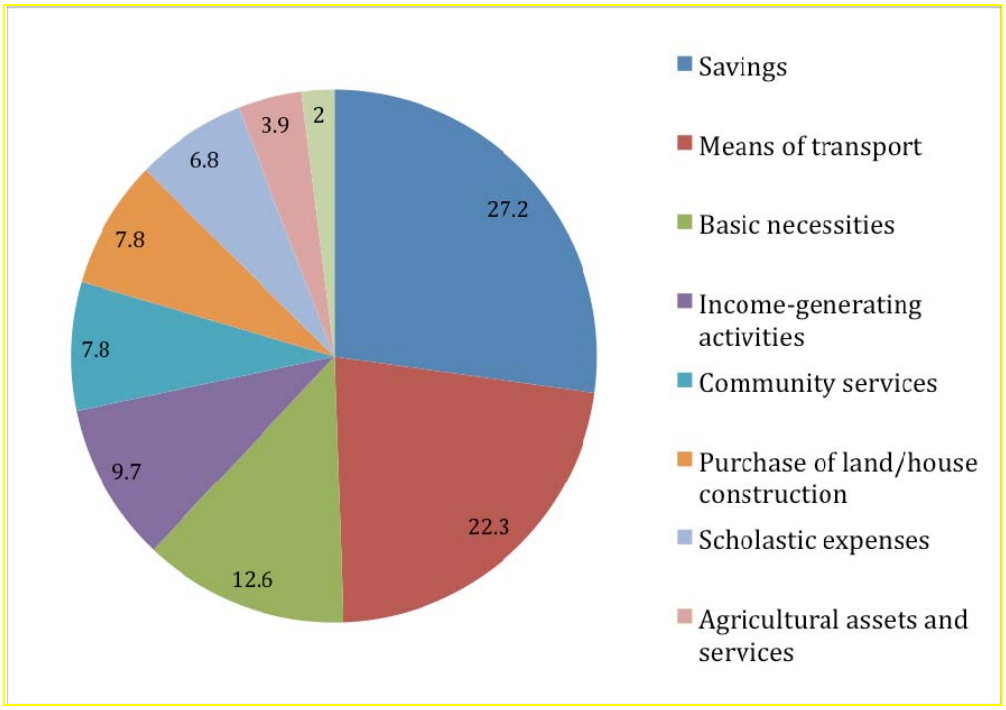

Figure 8.8: Types of Investments Members Aspire to Make with Prospective UGPPK Income.

Finally, two points demonstrate the changing nature of the central-west region of Burkina Faso. First, two of the women I interviewed aspired to send their children not only to elementary school, but also to high school (Abassiri, 09/01/07) and university (Timpoko, 19/10/06). This eventuality promises to have consequences on the local economic, social, and physical shea landscape in the medium to long-term. Second, women in Léo and Lan expressed a desire to, one day, invest their UGPPK income in the purchase of land and the construction of a 'proper' house with a tin, rather than thatch, roof. This is interesting given that house construction and maintenance are traditionally male responsibilities. In polygamous households, the male head of the household is expected to build each of his wives her own house within a common compound. However, these houses are frequently dilapidated and many collapse during the rains. In a context of generalized poverty, shea producers are therefore willing to assume male responsibilities with their limited income to ensure their own comfort and safety. This example additionally reflects the monetarization and formalization of land titles in towns such as Léo, where residents increasingly require deeds to guarantee land tenure. Within

this rapidly changing environment, shea projects have affected the financial capital not only of participating producers and their households, but also of the larger community. It is to these community-scale economic effects that we now turn.

8.4 COMMUNITY-SCALE ECONOMIC EFFECTS

In Léo and surrounding areas, the economic effects of shea projects on participating communities stem from the changes projects have prompted in the local shea market, as well as the investments UGPPK members are making with their shea income. Prior to the advent of the UGPPK, Sissili's shea vendors marketed their butter exclusively out of their homes and in marketplaces. The large number of shea butter vendors at Léo's weekly market attracted wholesalers from Ouagadougou, Ouahigouya, and other Burkinabè cities. Since the UGPPK began securing international contracts in 2004, however, many of Léo's shea producers have preferred to sell their butter to the Union than at the market. As the local market supply of shea butter has shrunk, urban businessmen have abandoned their trips to Léo in search of the product (Katia, 03/02/2007). This is also the case in Bieha (Fatimata, 22/01/07). As mentioned in Chapter 3, Section 3.9.3, Bieha is a village located 40 kilometres east of Léo and 13 kilometres west of Prata. Situated along a dirt road that connects Léo to Ghana, Bieha is a rural trade hub for agriculturalists from peripheral villages, including Prata. Shea nuts and butter formerly figured prominently among traded commodities. Since the creation of the UGPPK, however, Union members from Prata and neighbouring villages have been capturing the lion's share of shea kernels available for local purchase before they reach Bieha's weekly market. Producers acquire these kernels from relatives in their natal village via trade networks that operate along kinship lines.[187] Union members then sell the butter they produce to the UGPPK rather than in Bieha, thereby decreasing the appeal of this marketplace for urban shea kernel vendors and butter wholesalers.

As a result, non-member shea butter vendors believe that the local market has lost its promise. The experienced vendors I interviewed remarked that their shea butter no longer sells like it used to. Sales are slow and kernels are expensive due to high demand

[187] As discussed in Chapter 3, most Burkinabè ethnic groups are patrilocal, meaning that women move to their husband's village upon marriage (Ekejiuba 1995; Vinel 2000).

from UGPPK members and the international community (Téni, 31/01/2006).[188] Unlike kernel merchants, who benefit from this increased demand for their product, shea butter vendors concur that there is no more money to be earned in their trade (Daphnée, 10/02/07; Téni, 31/01/2006). "The Union has stolen the market," remarks one non-member producer who nonetheless continues to travel 20 kilometres to sell her product at Léo's weekly market (Djamila, 06/02/2007). Whereas she used to sell butter derived from 10 Yoruba plates of kernels every Saturday, she now frequently returns home with unsold pats. In her study of Senegalese market women, Guérin (2006: 554) sums up the gravity of such a situation when she states that "[n]othing is worse for a vendor than to return from the market without having sold everything." With the exception of one non-member producer who claims that her business has improved due to reduced competition from other butter vendors (Folashadé, 06/02/2007), the 19 other non-member producers I interviewed remain in the business, even with such a grim outlook, for a lack of alternative economic options. Moreover, they justify their practice by explaining that they "were born into it. We do it to avoid crossing our arms and waiting," says one butter-maker (Daphnée, 10/02/07). Indeed, being a shea butter producer is a way of life, transmitted from mother to daughter. As part of a livelihood style and constitutive of identity, women are reluctant to abandon the activity. A similar observation has been made among FulBe pastoralists in Mali, who cling to historically rooted migratory patterns that reflect a cultural repertoire which defines them as a people (Bruijn and van Dijk 2003: 305).[189] Despite the association between their practice and identity, however, some shea producers have become discouraged and renounced the local shea trade (Daphnée, 10/02/07). They now attempt to earn an income selling cabbage, tomatoes, yogurt and other food products instead.

According to a focus group of female participants in Lan (01/02/07), vendors from Léo and surrounding areas have additionally been affected by changes in the quality of shea butter sold on the local market. NGO workshops have taught Union members to

[188] In fact, when the UGPPK receives an order, the local price of shea nuts increases. In October 2006, shea nuts cost 250 fCFA ($CAD 0.53) per Yoruba in the Prata area. Immediately after the UGPPK allocated its order to member producers, shea nut prices rose to 350 fCFA ($CAD 0.74) per Yoruba. Prices dropped back to 275-300 fCFA ($CAD 0.58-0.63) in the post-order period (N. Diasso, January 16, 2007).
[189] This idea of livelihood style draws upon Bourdieu's (1979) concept of *habitus*. *Habitus* refers to the habits, character, way of thinking, and dispositions people acquire through the process of socialization. According to Bourdieu, these are primarily formed along the lines of social class.

produce the high quality butter sought by international clients. The processing techniques promoted require additional labour, water, and firewood, and result in a butter that is more difficult to mould into pats, which is the traditional form of shea butter sold in and around Léo (Fatimata, 15/11/06). Consequently, UGPPK members who also continue to sell butter at the market do not employ all of these methods when producing for local sales. They do, however, apply some of the techniques promoted, and consequently supply a butter of superior quality than was previously available locally. Eager to produce a competitive product, nearly half of the non-member producers I interviewed have also adopted improved processing techniques, which they learned from their UGPPK counterparts. As a result, they believe that their shea butter has become more attractive to clients. In this way, the social capital of these vendors has allowed them to acquire a know-how that translates into enhanced economic benefits. In contrast, three marketplace shea butter vendors who maintain traditional production techniques claimed not to have noticed changes in butter quality over the years. Yet, anecdotal evidence (Mamou, 18/10/06) as well as personal observations suggest that quality butter does sells more readily, even on the local market. Producers with superior quality butter thus have a competitive edge over other shea vendors, who are losing their market shares.

Shea butter projects are also affecting the economic opportunities of other actors involved in the local shea market. The purchase and transformation of shea kernels by Union producers and the direct trade of the resultant butter with international clients reduces the number of non-value added transactions along the shea butter commodity chain. In so doing, the commercial model shea projects signals negative economic prospects for intermediary vendors who trade in shea kernels or butter. This aspect, which is frequently overlooked when examining the local socio-economic consequences of Fair Trade more generally, is of utmost importance, as many of these small-scale intermediary shea vendors and their households are also very poor.

Community-level economic effects of shea projects also derive from the social premium producers receive as part of the Fair Trade pricing structure. In addition to the floor-price guaranteed during Fair Trade sales, importers participating in this trade model must provide producers with a social premium earmarked for community development projects (see Chapter 7). At an established rate of 121 fCFA ($CAD 0.26) per kilogram

of butter, this reinvestment premium totalled 1,331,000 fCFA ($CAD 2,810.17) in 2006-2007 for 11 tonnes of fairly traded shea butter. As demonstrated in Section 9.3.2 of the following chapter, this investment in local development is affecting the human capital of participating communities.

Finally, the greater local availability of financial capital as a result of shea projects creates spill-over effects within the community (Barrett et al. 2001). Hired Burkinabè NGO personnel working on shea projects as well as UGPPK members are supporting local enterprises by investing in contractual labour, agricultural equipment rentals, and income-generating activities that offer employment opportunities or services to fellow villagers. In the long-term, continued investments of this sort can significantly affect the overall stock of financial capital, but also of social, human, physical, and natural capital in the central-west region of Burkina Faso. We turn to these other types of capitals in Chapter 9, following brief concluding remarks below.

8.5 CONCLUSION

Given that a primary goal of shea butter projects is to deliver economic benefits to their participants, in this chapter I have examined the effects these projects have had to date on the financial capital of individual shea producers as well as their households and communities. Significant findings from my analyses are that, first, shea butter producers are not necessarily earning higher incomes since the advent of shea projects and the creation of the UGPPK. While Léo's urban producers are benefitting from superior earnings, revenues for Lan's peri-urban producers are approximately commensurate with what they were prior to Union membership, while Prata's rural producers are earning less via shea butter sales to the Union than they were when selling their shea butter on the local market before joining the Union. This inequitable inter-regional distribution of revenues party owes to the greater capacity of town-based members to produce large quantities of butter at once during Union orders, and to the participation of Léo's producers in the Fair Trade certified market. In contrast, Lan's producers have participated considerably less in this significantly more remunerative market, while Prata's producers have remained completely excluded from Fair Trade sales.

A second important finding is that despite these inequities in shea earnings along the urban-rural continuum, shea butter producers from the three study sites appreciate the Union due to the rare opportunity it affords them to earn lump sums of money. Access to these lump sums, coupled with the higher incomes Union members have earned in the case of town-based producers, have allowed producers to acquire savings and diversify or strengthen their claims in other livelihood activities. Producers have also specialized in the shea butter trade, which presupposes their commitment to the shea butter projects within which they practice this activity.

Third, although shea sales to the UGPPK have permitted women to make desirable investments, participation in shea butter projects also entails opportunity costs that must be factored into the analysis of project sustainability. These costs include the significant time commitments involved in Union participation, a diversion of female labour from subsistence crop cultivation to shea butter production, and delayed payments to UGPPK members upon butter delivery to the Union. In some cases, these costs have been significant enough to deter non-Union member shea butter producers from joining the Union, and to make certain Union members want to abandon their UGPPK activities.

Finally, within the larger community, the creation of the UGPPK in the context of shea projects has rendered the livelihoods of non-Union shea butter vendors increasingly precarious. These women are facing fewer prospects within a changing shea market, which has decreased the promise of their time-honoured economic niche. Nonetheless, shea projects have also had positive effects at the community level. These effects, which relate to the social, human, physical and natural capital of participating producers and their communities, are explored in Chapter 9.

CHAPTER 9

LOCAL SOCIO-POLITICAL AND ECOLOGICAL EFFECTS OF SHEA BUTTER PROJECTS

9.1 INTRODUCTION

This chapter examines the second part of the third objective of my study, specifically, the socio-political, physical, and ecological effects of shea butter projects to date in the centre-west region of Burkina Faso. In pursuit of this objective, the questions I address are fourfold. First, what are the effects (if any) of these projects on the social and human capital of female shea butter producers, their households, and communities in the centre-west region of Burkina Faso? Second, what are the physical capital effects (if any) of shea butter projects on participant communities in the centre-west region of Burkina Faso? Third, what are the ecological effects (if any) of shea butter projects in the centre-west region of Burkina Faso? And finally, what are the similarities and differences in the social, human development, and physical effects of these projects along the rural-urban continuum in the centre-west region of Burkina Faso? In answering these questions, I specifically highlight gender-specific perceptions of project effects based on information gathered from female shea butter producers and their spouses. When relevant, I additionally underscore inter-ethnic differences in project effects, and relate these effects to the wealth status of UGPPK members. Further, I emphasize the consequences the Union's recent integration into Fair Trade certified markets has had to date, when applicable. Finally, throughout the chapter, I discuss how these findings contribute to my overarching aim of assessing the sustainability of shea butter projects in the centre-west region of Burkina Faso.

This chapter is the second of two chapters structured around the sustainable livelihoods framework. In Section 2.5 of Chapter 2 I explained how such a framework generally focuses on five types of capitals that comprise the 'asset pentagon' (Carney 1998; Bebbington 1999; DFID 1999; Helmore and Singh 2001; Toner 2003). In Chapter 8, I analysed the effects of shea butter projects on the financial capital of shea producers and their households and communities. In what follows, to address the four questions enumerated above, I sequentially examine the effects of shea projects on each of the four

other capitals comprising the asset pentagon, at the individual producer, household, and community scales. Specifically, I analyse the social capital (Section 9.2), human capital (9.3), physical capital (9.4), and natural capital (9.5) effects of shea projects in the centre-west region of Burkina Faso. In conclusion (9.6), I explore the ways shea projects also affect the interactions and synergies among these capitals, including financial capital discussed in Chapter 8. I provide an overall assessment of the consequences of shea projects, and consider some of the livelihood outcomes these projects generate. As demonstrated throughout this chapter and argued in its concluding section, the sustainable livelihoods approach allows for a comprehensive analysis of the effects and sustainability prospects of shea butter projects in Burkina Faso's province of Sissili.

9.2 Social Capital and Other Social Effects

As detailed in Chapter 2, social capital pertains to the set of social relations and networks a person or household entertains. In addition to potentially enriching people's emotional lives, these relations have a functional value; they can facilitate access to resources, opportunities, and institutions upon which livelihoods are based (Berry 1989; Serageldin and Steer 1994; Woolcock 1998; Bebbington 1999, 2002; Perreault 2003; de Haan and Zoomers 2005). In this study, the social capital effects of shea projects and Fair Trade partly result from the economic changes occurring in producers' lives and households. Section 9.2.1 demonstrates that these consequences are perceived at the intra-conjugal level by both female butter makers (9.2.1.1.) and their husbands (9.2.1.2). The association of female butter makers into women's groups or GVFs, and the alliance of these village work groups into the UGPPK structure, also affect the local stock of social capital. As discussed in Section 9.2.2, by bringing women together, these associations are subject to the processes of social inclusion and exclusion—the positive and negative faces of social capital—that characterize group dynamics.

9.2.1 Individual and Household-scale Effects

The positive relationship between women's independent income and household decision-making power has been well documented across the African, Latin American, and Asian continents (see Blumberg 1991 for an excellent review). In many cases, new economic opportunities for African women have been shown to shift the balance of power in

women's favour within the household (Doss 2001). In Burkina Faso's province of Sissili, participation in shea projects is placing female participants in a new economic position *vis à vis* their husbands. The following section considers the social consequences these economic changes are having within the household, and particularly among spouses.

9.2.1.1 Women Speak

The women I interviewed reported a range of social benefits deriving from shea projects at the household level. One producer observed that the Union has improved her relationship with her co-wife, with whom she now gets along and collaborates in her productive activities (Korotimi, 08/01/07). As co-wives and in-laws produce butter together, common participation in the Union has similarly improved relations among other co-resident women.

Yet, the main social consequences of shea projects at the household-level occur within the relationship between UGPPK members and their husbands. The majority of the producers I interviewed claimed that their enhanced economic status as a result of shea projects has improved their marriage. This is mainly due to the fact that they now give their husband money and/or pay for things they could not formerly afford. For instance, husbands are relieved and pleased when their wives use their shea revenues to improve the household diet or pay for their children's school fees. A town-based member noted that, "we all benefit from the money so [my husband] has not opposed my participation in the Union since the beginning" (Kadiga, 15/10/06). Another participant from Lan stated that due to her enlarged revenues since joining the Union, she can more readily voice her opinion to her husband, who now makes greater efforts to control his temper (Assétou, 27/10/06). This observation supplements existing evidence of the positive correlation mentioned above between women's economic and political power within the household (Cohen 1971; Maher 1981).

In all cases, the women I interviewed requested permission from their husband to join the Union, and male spouses granted their consent. This is customary in Burkina Faso, where nearly all female activities are subject to male approval (Saul 1989; Diallo 2002). Some husbands reportedly accepted shea projects since their inception, and many even attended the UGPPK's inaugural ceremony. One female interviewee from Léo explained that since men recognize that they are unable to satisfy their wives' economic

needs, they find it difficult to prohibit their spouses from seizing an income-generating opportunity such as the one offered by shea projects (Bintou, 18/10/06). In fact, by and large, men's actions attest to their support of shea projects. Some spouses actively encourage their wives to partake in UGPPK orders (Bibita, 05/02/07; Fatimata, 15/11/06), while others drop their wives off at Union headquarters (A. Traoré, October 6, 2007) and relay messages about Union activities when messengers drop by while their wives are away. A few men, namely two in Léo, two in Prata, and one in Lan, have even built platforms and shelters to help their wives dry and store their shea nuts. In Prata, men have collaboratively made bricks and constructed a small building to allow village women to house a long awaited shea nut mill (Figure 9.1). Nearly all husbands lend their wives their donkey-cart to transport shea nuts from the field to their home or to Union headquarters. Further, seven of Prata's male participants use their bicycles or donkey-carts to personally transport, or have their children transport, their wives' shea nuts to Bieha to have them ground. In addition, one fifth of the men I interviewed (n=66) lend their wives money to purchase shea nuts. One woman reported that her husband even welcomed her home warmly when she returned from UGPPK headquarters at six p.m., despite the fact that she should customarily have been the one to greet him and fetch him water upon his arrival at the homestead (Kadiga, 15/10/06). Finally, men display tolerance of UGPPK activities by allowing their wives to take temporary leave of their farming and household duties during periods of pressing shea butter production for the Union (Kadiga, 15/10/06; Mathias, 17/10/06).

Figure 9.1: Brick-making for Construction of a Structure to House a Shea Nut Mill (Source: Author 2006)

Despite sanctioning their wives' participation in shea projects, however, a handful of husbands have exhibited concern about their spouses' UGPPK membership. Female participants admitted that many spouses—particularly in Léo, near Union headquarters—were initially reticent about their participation in shea projects (Bintou, 18/10/06). Husbands worried about their wives' whereabouts, especially when women came home late claiming they were at Union headquarters (Sala, 26/10/06). As discussed in the following section, where the perceptions of male participants are elucidated, some spouses also feel that their power is being eroded within the marriage as a result of their wives' involvement in shea projects.

9.2.1.2 Men Speak

According to male participants, men are both supportive of and discontent with shea projects for material and ideological reasons, respectively. As noted by female interviewees and reviewed above, over 80 per cent of male respondents reported that their wives' participation in shea projects has improved their marriage, predominantly for financial reasons. Whereas seven per cent of male spouses (n=66) did not believe their wives' earnings have increased since joining the UGPPK and 11 per cent stated ignorance about their wives' finances, 82 per cent of the husbands I interviewed deemed that their wives earn more now than prior to Union membership. In the three study sites, over one-third of the men I interviewed acknowledged that they are economically limited and that revenues from shea projects significantly contribute to the household, which would be in a more precarious state without this income. Male participants explained that before joining the Union, their wives asked them for money for their every expenditure. With the advent of the UGPPK, however, they feel that women have become more economically independent and that they contribute more to household expenses (Fessin, 12/02/07). Some men also commented that the sauce garnishing the daily porridge—and, in fact, the overall diet—has improved due to this perceived rise in women's incomes (Issa, 17/10/06, Aboudou, 20/10/06). Women now purchase their own clothes, creams, and soap, and supply greater sums to their children's school fees. Six male participants expressed their contentment that this allows them to reduce their own expenditures, and that they can now request money from their wives, if necessary. "When you marry, you do so to obtain women's help," expressed Mahmoudou (19/10/06) from Léo, adding that

"if they can help you financially, that is very good." A fellow resident stated, "I am happy my wife is in the Union, otherwise I would not let her. Her activities can help me" (Boucaré, 18/10/06). Five others agreed that if they were unsatisfied with their spouse's UGPPK membership, they would simply forbid it. Cassoum (14/02/07) from Lan thus expressed that his wife should appreciate the fact that he "allow[s] her to participate in the Union's economic activities as great gift on [his] behalf." Other men from Léo are also aware of the benefits shea projects can bring them. For instance, one young man stated his contentment that, with the advent of shea projects, he could potentially fulfil his desire of marrying three wives. Since participating women become more economically independent, he claimed, he could actually afford to become polygamous by marrying Union members (A. Yago, October 19, 2007).

Male acceptance of shea projects is eased by the fact that shea processing traditionally falls within the sphere of female responsibilities. Hamadou (13/02/07), an older participant from Lan, contended that making shea butter is "a female activity, so there is no point in prohibiting my wife from practicing it." Similarly, Rasmané (15/02/07) expressed that his wife's participation in the shea Union sits comfortably with their relationship and lifestyle. The fact that women were already involved in traditional GVF structures (refer back to Sections 4.2.3 and 7.3.1) additionally helped their husbands accept their membership in the Union (Rakiata, 16/10/06). Indeed, over 90 per cent of the women I interviewed were members of a GVF before the advent of shea projects, where they engaged in the common revenue-generating activities and savings associations listed in Table 9.1. Finally, men are themselves organized in a structure that parallels the shea Union, consisting of a union of village work groups for cotton cultivation. This enhances their understanding of, and enthusiasm for, their wives' participation in a similar association (Issoufou, 13/02/07).

Male participants provided additional reasons why shea projects have strengthened their marriage, their social capital, and local social relations more generally. First, they are pleased that their wives are working for money, and that they have a "job" which gets them out of the house (Aristide, 17/10/06; Nour, 17/10/06). They also contend that uniting women to pursue a common cause is constructive and that their wives have become more involved in community life since shea projects encouraged them to leave

the homestead (Alasan, 12/02/07). The husbands of the UGPPK's elected officers added that their wives' standing as Union leaders bears favourably upon their own social status (Zachary, 20/10/06). Finally, participants appreciated that through their wives' activities, they have been able to meet strangers such as myself, and felt that that those meetings have enriched their lives (Kader, 19/11/06). For all these reasons, one of Prata's respondents (Pierre, 21/11/06) summarized that shea projects "help us all."

Table 9.1: Primary GVF Activities of Female Participants prior to UGPPK Membership.

Locality	Name of GVF	Dominant Ethnic Group	Activities
Lan	Kaloubagana	Gurunsi	Grain and groundnut cultivation, shea nut collection and sale, contractual cotton harvest as village work group, cereal bank and speculation
Lan	Nongtaaba	Moose	Groundnut and bean cultivation, animal husbandry
Léo, Sector 1	Amariya	Gurunsi	Groundnut, grain, rice, and soya bean cultivation, rotating credit association
Léo, Sector 1	Kassanduan-Ne	Gurunsi	Soya bean cultivation
Léo, Sector 1	Nankoulgou	Gurunsi	Horticulture, tree nursery (acacias, mango trees, and eucalyptus for sale), shea butter production for sale, grain and groundnut cultivation, cereal bank
Léo, Sector 4	Mano	Gurunsi	Groundnut and rice cultivation, contractual maize and cotton harvests as village work group
Léo, Sector 4	Tegawende	Moose	Grain and shea nut speculation, cultivation of groundnuts and grains for sale, eucalyptus nursery for tree planting (supported by aid project)
Léo, Sector 5	Mandinga	Gurunsi	Grain, groundnut, bean, and soya bean cultivation, horticulture, shea butter production, eucalyptus nursery, horticulture
Prata	Djidouabamoupe	Gurunsi	Cotton harvesting and groundnut cultivation

Despite those benefits, shea projects have caused some amount of strain on household relations. Fifty-six percent of male participants believe that their wives are failing to fulfil some of their domestic and productive duties—such as cooking, pounding grain, and cultivating—to participate in shea projects. The most common male grievance

is voiced by participants in Léo, who believe that their wives spend too much time at Union headquarters. Two respondents reported that their wives sometimes only return from UGPPK locales at 8 p.m. or 10 p.m., and suggested the need for a compulsory closing time (Bassia, 18/10/06; Rahim, 16/10/06). They explained that when women arrive home late, men await their meals, and children may have to be awoken to be fed (Rahim, 16/10/06). There are also safety issues associated with late departures from UGPPK headquarters, as women have to walk long distances unaccompanied in the dark. Male participants thus feel that they demonstrate great tolerance in permitting their wives to do so (Zachary, 20/10/06). One participant even reported personally going to Union headquarters to find his wife; something he feels is completely unacceptable (Bassia, 18/10/06). According to male participants, when women spend too much time at Union headquarters, help from an unmarried daughter, sister- or daughter-in-law becomes essential to fulfil the woman's domestic responsibilities. Hence, they contend that detailed planning is required to ensure the completion of women's household duties during periods of shea butter production.

Intra-conjugal tensions particularly arise when UGPPK orders overlap with the agricultural period. At this time, women 'owe' their agricultural labour to the male household head.[190] The non-fulfilment of this duty as the result of individual economic activities and enlarged female incomes can create conflicts between husband and wife (Carney and Watts 1990; Schroeder 1999). Such tensions have already been reported in Moose households in areas of Burkina Faso (Terpend 1982; Crélerot 2001). As one female producer from Lan (Brigitte, 27/10/06) explains, "if there is no agreement within the household, producing shea butter during the agricultural period will bring you problems." In general, however, UGPPK members have managed to strike agreements with their husbands to integrate shea butter production into, or substitute it for, some of their agricultural responsibilities. According to the majority of male respondents, women's temporary withdrawal from their farming duties is acceptable since their wives then offer them money or assume household expenses in compensation for lost labour.

[190] As discussed in Chapter 3, the household head is generally the husband of a woman or her father, if she is unwed.

In Prata, all male participants claimed to tolerate a temporary reduction in their wives' agricultural activities during butter production periods, if need be; a sentiment shared by 91 per cent of Lan's male interviewees. One participant explained that he schedules his wives' work to ensure that they accomplish all their responsibilities. "I decide everything they do," he stated, "I plan their activities, and help them collaborate with each other" (Alasan, 12/02/07). Another participant added that "it's all a question of communication [between the spouses] and planning" (Apéwé, 19/10/06). Finally, 18 per cent of Léo's male interviewees (n=27) complained that their wives have failed to fulfill their productive and reproductive responsibilities since joining the Union. UGPPK members generally tread carefully; they squeeze additional work burdens into their labour calendar to minimize their husbands' discontent while fulfilling Union orders. This is illustrated in the account of one shea butter producer, who claims that: "Everything is fine with my husband since if he gives me work I hurry up and complete it before coming to the Union" (Mouniratou, 25/10/06).

Genuinely dissatisfied husbands are primarily those married to the UGPPK's executive officers, who work (above and beyond) full time at Léo's Union headquarters on a volunteer basis. In two such households, serious marital problems have transpired from women's dedication to shea projects. In one instance, an officer's husband married a second woman late in life to compensate for what he considered his first wife's inability to fulfil her household duties since joining the Union. Another officer's spouse left his wife for this same reason. The following quote, communicated by one of these husbands (Salif, 07/12/06), recapitulates the grievances of disgruntled male participants.

> My wife no longer cooks and could spend one week without bringing me water. She could spend three to five days without seeing me because she leaves early and comes home late. When I ask my children where their mother is, they say: 'she is at the Union.' Sometimes the men here even have to clean and feed the young children. Clearly, my wife is nobody's wife anymore if she does not see her husband and serve him.

Aside from these practical considerations, there are ideological reasons behind these men's dissatisfaction with shea projects. According to interviewees, there was originally ignorance and reticence about the meaning and goals of the projects. Some men believed shea projects were a "White person's scheme to take away their wives". For one, Zachary (20/10/06) from Léo recalled that people initially believed he was crazy

to allow his wife to participate in the UGPPK. Two other participants suggested that the NGOs involved in the projects should have conducted a popular information campaign to sensitize men to the initiative (Mohamed, 18/10/06; Issoufou, 13/02/07). Mohamed (18/10/06) from Léo added that he and his friends formerly "did not give importance to what women did and thought they would go [to UGPPK headquarters] to waste time. [They] did not think women could do things for themselves." Participants expressed initial concern that their wives would fail to meet the exigencies of the projects, and relief that women's capacities exceeded their expectations. In Léo, male worries further centred on the uncertainty of where women were when they claimed to be at union headquarters. Indeed: "With no closing time at the Union, we don't know when to expect [our wives]; they can go anywhere else, cheat on us, all the while pretending they are making shea butter" (Salif, 07/12/06). Men with young spouses were particularly concerned that their wives would have an affair when leaving the homestead (A. Traoré, October 6, 2007).[191] Prata's participants further admitted to fearing that if their wives left the house they would embrace their greater autonomy and "would not come back" (Ismael, 19/11/06).

Ultimately, a minority of men—all six of them from Léo—overtly expressed apprehension that their wives' increasing autonomy will cause them problems in the homestead. Essentially, these interviewees worry that shea projects will address not only women's practical needs, but also what Molyneux (1985) calls 'strategic' gender needs, which ultimately affect women's status within the household and community. Some male participants showed concern that women will become the masters of the household as their economic power increases (Zachary, 20/10/06). According to Aristide (17/10/06), "with money there is independence; women can divorce and take the kids themselves…so women should learn to contribute to the family and not have ideas of independence." Another participant explained that many men believe that allowing their wives to leave the house to earn money will create disorder, and that they consequently criticize other men who allow this to occur (Germé 27/10/06). Germé (27/10/06) further divulged that when women earn money, their husbands request it as credit but do not

[191] At *Songtaaba*, another Union of shea producers based in Ouagadougou, the national capital, angry men threatened their wives who worked at Union headquarters. One man apparently showed up at *Songtaaba* headquarters with a gun, menacing his wife to come home lest she want a divorce. She remained with her fellow shea butter producers, who walked her home at the end of the night. She still works with *Songtaaba* today, and her husband has come to terms with her Union membership (M. Ouédraogo, 2005).

reimburse it, thereby disabling the woman from investing in income-generating activities. This, he declared, is a form of control. Fundamentally, these men questioned whether in the long term, with women's economic gains and potentially greater autonomy, their wives will stop needing, listening to, and caring for them (Bassia, 18/10/06; Zachary, 20/10/06). While on the one hand, one male spouse from Léo believes that his wife actually demonstrates more respect for him since joining the Union (Salif-Caba, 25/10/06), on the other, the husband of one of the Union's officers asserts that "here, in Africa, a woman with too much economic power is mean towards her husband; she does not listen to him or show him respect" (Salif 07/12/06). The same interviewee encapsulates men's concerns in the following narrative:

> Women have learned about women's rights and female emancipation from Western people and now that's what they want. But in the bush, not in an office, 'women's rights' don't mean anything. If we are talking about a female bureaucrat who is your superior, we can talk of women's rights, but here, in Léo, where we're almost in the bush, this kind of talk is nonsense. If I bring my wife to the bush where she has to carry wood on her head and does not even have 5 fCFA to her name, who can talk of women's rights? Even if we men have nothing, we work hard and we suffer for our wives. That's what we do. We suffer for love. My wife does not answer to me anymore since she has money. She now does everything without my consent. She will bring troubles upon me. When a woman purchases her own clothes without even asking her husband's permission, it's a social disgrace. If a woman is your responsibility, it's shameful for her to buy her own things. When you are economically weaker than your wife, you can't carry out relations with her. She will insult you if you approach her in the night. It's not good. Her behaviour can bring me problems, even with the family counsel. The shea projects have brought us a lot of problems.

This distraught spouse believes that, whether or not they admit it, other husbands share his sentiment. The anguish expressed above resonates with Yépez del Castillo's description (2002: 200) of a "male identity crisis", which is tied to new economic roles for women and to men's inability to satisfy the household's financial needs in a context of dire poverty.

In general, male perceptions of the Union depend on the relationship men have with their spouse. Ablaye (12/02/07) suggested that problems arise when women no longer accept to completely submit themselves to their husbands. Six male interviewees added that the lack of communication between the spouses concerning shea projects and women's financial gains aggravate the situation. As many men like to control their wives' expenses, remaining ignorant of their spouse's financial situation irritates them. Yet, one

participant from Prata claimed that although some men did not initially endorse the Union, his entire village supports it now (Karim 19/11/06). Earlier male concerns have reportedly subsided since the UGPPK has strengthened its reputation and increased its membership base. Other Prata residents admitted, however, that some of their fellow villagers entirely failed to see the benefit of the UGPPK and have withdrawn their wives from the Union to focus instead on increasing their agricultural productivity (Karim, 19/11/06; Sibdou, 22/11/06). Likewise, a Moose respondent from Léo acknowledged that some of his acquaintances forbid their wives to participate in shea projects (Abdou, 20/10/06). While I was unable to interview these men since my informants preferred to maintain their anonymity, the concerns outlined above may reveal some of the reservations guiding their decision.

Reactions to shea projects are also a function of the household's socio-economic status. With few exceptions, participating households are very poor, and the significance of the additional income prevails over the grievances husbands may have towards the projects. In fact, 100 per cent of rural male participants (n=39) claimed that they are generally pleased with shea projects. Their wives have not gained the level of economic power and leverage of their urban counterparts that elicit the discomfort of some of Léo's male interviewees. In a focus group held in Lan (01/02/07), male participants expressed their satisfaction of shea projects by posing the following question: "who is happier: a person whose hunger is satisfied or a person who is hungry?" In general, then, shea projects are well received by nearly all male and female interviewees, and have tended to improve intra-conjugal relations. Indeed, this fact is critical for encouraging project sustainability. As discussed below, local acceptance of the projects is partly also the result of their community-scale social effects in the central-west region of Burkina Faso.

9.2.2 Community-scale Effects

One of the basic conditions of Fair Trade certification among small-scale producers is the creation of democratically run producer associations (see Box 7.2a, Chapter 7). As with other Fair Trade interventions (Milford 2004), NGO involvement in shea projects has been key for consolidating such associations that have gone on to sell Fair Trade products, and for facilitating the positive development outcomes of Fair Trade for participating producers (Bunin 2001; Paul 2005; Nel et al. 2007; Le Mare 2008). The

UGPPK is one such association, which in 2007 encompassed 33 women's work groups (GVFs) from Léo and surrounding areas. As discussed in Section 7.3.2 of Chapter 7, in 1997, the lead NGO working on shea projects in the provinces of Sissili and Ziro selected the most dynamic of the region's existing GVFs to form the Union and partake in shea projects. Table 9.1 outlines the activities these GVFs, which are traditional structures throughout Burkina Faso, already pursued at the time, with or (mainly) without the support of aid organizations. Many of these GVFs have grown significantly since joining the Union. Whereas some comprise only a dozen women, others—such as the one in the rural village of Prata—now encompass over 100 producers. Each GVF is represented by three elected officers who occupy the positions of president, secretary, and treasurer. These women attend the UGPPK's annual general assembly as well as special meetings, where they vote on behalf of their group members. Delegates are generally elected among the more educated or influential and charismatic women of the village. In a parallel structure at the Union level, members of different GVFs, nearly all from Léo, are elected to manage the UGPPK and motivate member producers. The official consolidation of village work groups and of the Union as a result of shea projects has provided a legal structure upon which other donor projects can also operate.

9.2.2.1 Promotion of Social Capital

According to UGPPK members, shea projects have favoured the development of social networks and improved local social dynamics by fostering the creation of bonding, bridging, and linking social capital. Bonding social capital refers to generally closely-knit and exclusive networks of individuals within relatively homogenous groups, such as kin, friends or some business organisations, that provide support for people on a daily basis (Putnam 2000; Turner 2007). Indeed, numerous participants noted that shea butter projects have allowed women from the same village to become better acquainted and to cooperate in shea butter and other activities. Interviewees cited the fact that projects have fostered greater agreement among producers in the Union's constituent GVFs as a key benefit of shea projects.

Shea projects have additionally promoted the creation of bridging social capital. This form of capital consists of more heterogeneous networks—such as those connecting individuals of different communities or backgrounds—that can transcend the closed

circles of bonding social capital. Shea projects have bolstered this type of capital by allowing women from separate GVFs, and different regions or villages, to meet and collaborate (Ladi, 25/10/06; Kadia, 09/01/07). In so doing, producers have developed inter-regional alliances of female producers that can integrate international shea markets, and through the Union structure, work to improve women's economic and labour conditions. Producers from the three study sites cited this as an important advantage of Union participation, but executive officers were particularly keen to point out that, given their role within the UGPPK, they have now personally developed relations with many of the Union's 1200 shea producers. They have additionally met shea butter producers from other associations who have come to visit and learn form the UGPPK.

Finally, projects have enhanced the linking social capital of some Union members. As opposed to bonding and bridging social capital, which form along more horizontal relationship lines, linking social capital refers to networks built upon vertical relations that cut across social and economic differences (Woolcock 2001; Turner 2007). Shea projects have enhanced the linking social capital of participating producers by creating ties among Union and national and international actors, such as NGO personnel and researchers, among others. Again, this form of capital is not equally distributed among Union members. It is concentrated among the UGPPK's executive officers, who welcome visitors on the Union's behalf and interact with international clients, government agencies, and the aid community (Poko, 05/02/07; Ladi, 25/10/06). The networks established extend beyond those directly involved in shea butter projects to other donor organizations. Recognizing the potential benefits of this linking social capital for the whole community, two of Léo's male respondents expressed their hope that the "honeypot effect"—whereby donors are attracted to successful aid schemes (NRET 1998 cited in Nelson et al. 2002: 107)—could garner additional support and funding for other community development activities (Nouhoun, 16/10/06; Mahmoudou, 19/10/06).[192]

The accretion of these different forms of social capital confers many advantages to producers, which favour their continued participation in shea projects and overall

[192] It is interesting to note that, as the traditional recipients of development aid, a number of Léo's male participants were well versed in the philosophy and jargon of donors. For instance, men talked of the "battle against poverty" (Mohamed, 18/10/06), "relief from poverty" (Aristide, 17/10/06), and "women's empowerment." Access to televisions and radios in Léo also provides exposure to this discourse, given that 'development' is a daily theme in Burkina Faso's media.

project sustainability. Female participants reported that working as a group within the Union offers them much needed moral, financial and physical support. Moreover, producers frequently process shea butter with other members of their GVF, in mutual aid arrangements. When orders are placed, women observe their fellow producers collecting or purchasing shea nuts and processing large quantities of shea butter. According to Barkissa (17/01/07), a producer from Prata, "this encourages you to do the same to find money; but if you're alone, you don't have the courage to push yourself as hard to produce butter as quickly." Emotionally, shea projects have also made producers feel less isolated. Participants from Léo described how, at Union headquarters, they laugh, talk, and enjoy each other's company, as opposed to working alone in their homestead. Consequently, the president of one GVF explained that, "when you're alone at home, you have too much time to think of your problems, but when you're surrounded by other people, you feel better because you see that they also suffer, maybe even more than you do, and with their husbands as well" (Poko, 05/02/07).

Many of the positive social capital effects experienced by Union members, which result from the strength of the associative bonds fostered by shea projects, have also been reported in other studies evaluating the impacts of participation in Fair Trade networks. In fact, the creation of robust producer associations is one of the very goals of FLO (Utting-Chamorro 2005) due to the recognition that strong producer associations are closely linked with sustainable livelihoods (Le Mare 2008). Among other outcomes reported in this and other studies, the solidification of producer associations has encouraged democratization by allowing more previously isolated voices to be heard, and opened up new grassroots opportunities to plan local development (Mendez 2002; Taylor 2002; Moberg 2005; Lyon 2007). Strong producer associations have been involved in lobbying for grants—as in the case of the UGPPK—or political causes related to the concerns of agriculturalists (Taylor 2002; Milford 2004; Taylor et al. 2005). Associations such as the UGPPK have also strengthened a sense of identity, common culture, and community among producers (Milford 2004). In the shea butter case as in others, the associative structure has improved the sharing of market information and knowledge, promoted innovation, favoured joint production among members, led to common investments in production that favour economies of scale, and improved product quality

(Rice 2001; Perezgrovas and Cervantes 2002; Le Mare 2008). As also detailed in the context of other Fair Trade schemes (Renard 1999; Rice 2001; Mendez 2002; Nelson et al. 2002), these benefits can augment women's incentives to participate in shea projects and lead producers toward 'empowerment', thereby promoting project sustainability.[193] As the positive consequences of the social capital garnered through associations have a clear human capital dimension, they are discussed further in Section 9.3. It is worth noting, however, that in the present study, as in other impact assessments of Fair Trade projects worldwide (Raynolds et al. 2004; Poncelet 2005; Le Mare 2008), producers cited the enhancement of social capital as a *primary benefit* of shea projects, which is equally if not more important than the projects' economic effects.

9.2.2.2 The 'Dark Side' of Social Capital: Social Tensions and Exclusion

Associations such as the UGPPK should not be idealized, however. Far from being egalitarian places of harmony, they comprise a number of social drawbacks. Personal observations and informal conversational interviews suggest that friction exists among certain producers both within and among GVFs. For instance, many rural producers dislike the UGPPK president because she expects them to produce what they consider to be unrealistic amounts of shea butter for the Union. As the president comes from Léo, where processing conditions are relatively easier, they argue that she is insensitive to village realities, and that she reprimands and demoralizes members who come short of meeting their butter quotas. Her demands reveal a 'dark side' of social capital, whereby excessive demands can be placed on members of a given network, such as the UGPPK.

The geographical distance separating GVFs also breeds the distrust of village producers, who believe that Léo's officers benefit most from the Union, and that they exclude isolated village producers from Union decisions and remunerative contracts (Fatimata, 15/11/06). This perception is not entirely false. For instance, until 2006, Léo's executive officers attributed the greater part of the Union's orders to their own GVFs. The three GVFs in which six of the UGPPK's seven executive officers hold membership

[193] 'Empowerment' refers to "the improvement of people's ability to secure their own survival and development, and increase their ability to participate in and exercise influence over crucial decisions affecting their survival. In effect, helping people to achieve their own purpose by increasing their confidence and capacity" (Barrow 1997: 299).

captured more than 30 per cent of order volumes. For a 35-tonne order of shea butter, each of the three GVFs was officially allotted five tonnes of butter, while 15 tonnes were shared among the UGPPK's 15 (at the time) other constituent GVFs. The remaining five tonnes were not openly declared, but secretly shared three-ways among the executive officers' GVFs (A. Tagnan, February 18, 2007). Since 2006, however, Fair Trade guidelines have given rise to an externally imposed set of criteria dictating more transparency and equitability in the distribution of trade benefits. As opposed to the previous system based on patronage, the point-based system described in Section 8.2.2.1 of Chapter 8 has made some headway towards protecting the interests of GVFs wielding less political clout.

Nonetheless, as also discussed in Section 8.2.2.1, inequities persist between rural and urban members' participation in Fair Trade orders. In addition to an order allocation system that subtly favours urban producers, the attribution of greater shares of the more remunerative contracts to urban GVFs has been justified on other bases. For instance, the Union's elected officers claimed that the short deadline imposed by a particular client for butter delivery left little time to include rural GVFs in a Fair Trade order.[194] Although such arguments may have some legitimacy, they have caused some of the Union's rural constituents to lose trust in UGPPK leadership.

Intra-GVF inequities also affect the distribution of orders at the producer level. Within Léo's Tchinekoua GVF, for instance, only 55 per cent of producers participated in the last Fair Trade order of the 2006-2007 campaign. While variables such as each producer's access to credit and shea nuts certainly play into this participation rate, my field observations suggest that political factors such as affinities among producers also account for this imbalanced allocation of orders.

Town and village-based UGPPK members are also distrustful of the Union's officers in other ways. Tensions arise when shea butter is weighed and collected from constituent GVFs because members—who are accustomed to selling their product locally according to volume-based measures—lack an understanding of the weighing process. As

[194] Greater transaction costs are involved in the participation of secluded, rural GVFs in international trade. Messengers must relay order specificities from Léo to rural areas where there is no cellular phone coverage, village women must gather to receive instructions, and butter must be collected from distantly located GVFs. Lack of roads or seasonally washed out trails as well as deficient infrastructure complicate getting the product to market and engender costs and delays (Mendez 2002; Page and Slater 2003).

producers are unable to read the scale, they frequently feel they have been cheated when the weight of their product, upon which their remuneration is based, is conveyed to them. Their confusion is aggravated by the fact that the volume of shea butter does not exactly correspond with its mass, nor does a given quantity of shea nuts always yield the same amount of shea butter. Producers therefore observe that they have produced the same volume of shea butter as other UGPPK members, but they are told that their product weighs less than their fellow producers'. In addition, they recall that the last time they transformed a given quantity of shea nuts their shea butter weighed more than it does when the same quantity of nuts is processed at a later time. Consequently, as many as eight of the husbands interviewed confided that their wives felt cheated by UGPPK officers. On the flip side, the spouse of one of the Union's executive officers believes that Union "latecomers" want to displace the UGPPK's founders, including his wife (Raissa, 19/10/06). These disputes highlight the differentiated experiences of shea producers according to their geographical location and role within the Union. Although for the time being they do not critically hinder project success, resolution of these disputes would work towards improving the sustainability of shea butter projects.

Tensions also arise among executive officers when opportunities to undertake a '*mission*' or acquire remunerated work for the Union materialize. Travel missions within Burkina Faso or to neighbouring countries are accompanied by a *per diem* and represent an occasion to meet people, discover places, and escape the monotony of daily life. Executive officers whose husbands allow them to travel therefore fight over the opportunity to do so. The lucky candidate is ultimately selected according to her social capital and political clout, and the decision process is fraught with internal conflicts. Similarly, remunerated positions within the Union are secured by the most powerful members' kin. For instance, in Léo, the sons of the executive officers are paid to run the Union's machinery. Likewise, in Tenkodogo's *Laafi* shea butter cooperative, the president's sons perform the paid marketing functions. In a context characterized by a dearth of remunerated positions, these highly sought jobs are secured through a person's social capital via networks of family, friends and other patronage relations.

The advent of shea projects has also renewed some of the pre-existing conflicts among women of different ethnic groups in Léo and surrounding areas. Nearly all of the

UGPPK's GVFs comprise women from only one ethnic group, and merely four Moose GVFs figure among the Union's 33 constituent groups. With few exceptions, the remaining GVFs are composed exclusively of Gurunsi women. Moreover, only one woman of Moose origin figures among the UGPPK's eight executive officers. Poor ethnic integration is evident in Prata, where Moose women prefer not to join the Union at all than to work with Gurunsi members (Zali, 17/01/07). One Moose woman explained that even sharing equipment in Prata is difficult, as she believes the indigenous Gurunsi residents monopolize village assets. For instance, Moose women have to wait until their Gurunsi counterparts finish pumping water before they can do so, even when they arrive at the pump before Gurunsi residents. As a result, they visit the water pump at early dawn or around 10 p.m. at night, when they are less likely to encounter the Gurunsi (Focus group result, 22/01/07). Conflicts between the FulBe, who area semi-nomadic herders, and the village's agriculturalists are even more pronounced. Moreover, tensions are increasing among Gurunsi, Moose, and FulBe women regarding shea nut collection. As discussed in Chapter 6, the rising value of shea nuts is threatening the access migrant women have to these NTFPs, even in open access areas. This restricted access to shea nuts represents an unofficial barrier to participation in shea projects, and demonstrates the limited incidence of bridging social capital among local ethnic groups.

Additional processes of social exclusion are revealed upon close examination of the UGPPK's activities. Theoretically, any woman is welcome to join the Union provided she is a member of one of the UGPPK's constituent GVFs. To join a GVF, women must accept the group's by-laws, and as detailed in Section 8.2.3 of Chapter 8, pay a joiner's fee as well as membership dues.[195] An ageing mother-in-law can also transfer her GVF membership to a daughter-in-law, who then becomes exempt from paying joining fees. Most non-Union producers cited the lack of money to pay these fees or a preference for working alone rather than in a group, among other reasons provided in Section 8.2.3, for not joining the UGPPK. Yet, other non-members such as Koura (18/02/2007) also claimed to have been excluded from GVFs or from the Union due to political tensions with more powerful members. Politics of exclusion thus contribute to shaping Union

[195] While at the beginning entire GVFs were approached by the project's lead NGO to join the Union, currently new members are drawn in to the UGPPK by existing members who persuade them of the Union's benefits.

membership, and influence who can reap the benefits of shea projects. Although this may not directly affect the sustainability of shea butter projects, it has clear implications for the ability of projects to deliver equitable benefits within the community.

In sum, despite fostering some processes of social exclusion, shea butter projects have generated many positive social capital and other social effects in the central-west region of Burkina Faso. In the large majority of cases, they have improved the relationships between participating producers and their husbands as well as among member producers. In this respect, NGOs have played a key role in uniting women within and across localities. The strength of the resultant UGPPK has allowed it to interact with international actors, thereby enhancing its linking social capital and the sustainability prospects of shea projects. The consolidation of the Union and the social capital projects have promoted have also had positive outcomes on the human capital of member producers. It is to these and other human capital effects of shea projects that we now turn.

9.3 HUMAN CAPITAL EFFECTS

Human capital refers to the quantity and quality of labour on which individuals or households can rely in the pursuit of different livelihood strategies (Rakodi 1999; Ellis 2000). This form of capital is a function of a person's capacities, including his or her education level, skills, health status, and other attributes, as well as those of other labourers a person draws upon to execute a given task. In this study, female and male participants suggested that some of the most favourable outcomes of shea projects relate to the personal intellectual development and physical well-being of UGPPK members.

In general, the human capital effects of shea projects parallel those reported by other producers participating in Fair Trade schemes. Worldwide, Fair Trade projects have been shown to strengthen the personal development of coffee producers, banana growers, and artisans (Littrell and Gibson 1999; Lyon 2002; Mendez 2002; Milford 2004). Through organizational and social capacity building and information exchanges, farmers acquired a greater understanding of the market and improved self-management abilities (Renard 1999; Raynolds et al. 2004; Bechetti and Constantino 2008). Moreover, growers received technical training on production and processing techniques leading to improved product quality (Rice 2001). This training extended to (non fairly traded) crops, and

included the development of trading skills (Nelson et al. 2002). Education was promoted in relation to farmers' rights, market structures and poverty-related issues. This awareness raising and knowledge of the market encouraged participants as diverse as coffee growers and artisans to be more self-assured and request higher prices when selling their products to street brokers and (Littrell and Gibson 1999; Lyon 2002; Milford 2004). In these Fair Trade schemes, market information allowed producers to diversify their livelihoods and enter other high return activities, such as the certified organic market (Raynolds 2002a; Le Mare 2008; Smith 2009a). Last but not least, producers gained pride and self-esteem through participation in Fair Trade projects (Robbins et al. 2000; Taylor 2002; van Dooren 2005). The following sections detail how similar effects are experienced by the shea producers I interviewed and their households (9.3.1) as well as by the larger community (9.3.2).

9.3.1 Individual and Household-scale Effects

The human development consequences of shea projects partly derive from an increase in the shea-related incomes of certain producers, which positively affects the intellectual development and physical well-being of producer households. As demonstrated in Chapter 8, Section 8.2.4, higher returns allow women to invest in their children's well-being through their schooling. In addition, Union members use their shea revenues to purchase food, and medicine when household members fall ill. Yet, it is also true that producers may have less time to attribute to their children during peak shea butter production periods, and that this can have repercussion for the welfare of young children.[196] Aside from these general consequences, however, shea projects shape women's personal development in ways discussed by the producers themselves (9.3.1.1) and by their spouses (9.3.1.2) below.

9.3.1.1 Female Perceptions

According to female interviewees, one of the most significant effects of shea projects is the intellectual stimulation and technical skills they help develop. Over half of female participants believed that a major benefit of shea projects is their capacity-building

[196] Authors have suggested the existence of a weakly negative association between maternal work and child-care activities in the Global South (Leslie 1989; Quisumbing et al. 1995; Pierre-Louis et al. 2007).

component, articulated through workshops designed to improve production techniques and strengthen their exporting enterprise. As a result of these workshops, women now produce butter of superior quality, even for household consumption. This has four major benefits. First, as six producers explained, women are proud to offer quality butter as a gift to friends and kin during lent, weddings or other celebrations.[197] Second, Mouniratou (25/10/06) and other producers noted that, even if they leave the Union, they now have the ability to process better quality butter that can easily be sold elsewhere. In addition, a few participants were visibly proud to acknowledge that, with their acquired skills, they are now personally able to teach others to process quality butter. Lastly, producers now consume a quality product in their home. Indeed, all male interviewees appreciated the fact that their wives produce better tasting butter since receiving formal training in butter processing. Beyond pleasing male spouses, however, the consumption of better tasting shea butter has positive consequences for the household diet. Although shea butter is a traditional cooking oil, many Burkinabè people dislike its taste when produced according to traditional methods. Unless shea kernels are carefully sorted and washed, the ensuing butter will have a pungent smell and rancid taste. Consequently, many women use only modest quantities of butter in their cooking. Numerous households with the means to do so have even substituted shea butter by alternate cooking oils in their cuisine. Yet, 86 per cent of the producers I interviewed claimed that, since attending NGO workshops, they use more of the sweeter tasting and smelling butter they produce in their meals. When processing large quantities of butter for sale, butter makers retain a portion of their production for the household. This is beneficial, as shea butter is a rare source of lipids, calcium, iron, and vitamin E in the household diet (Kar and Mital 1981; Badifu 1993; Crélerot 1995). Increased consumption of this vegetal fat can thus have positive effects on the health and physical wellness of household members.

Other producers, however, remarked that although they eat more butter when it is available, they eat it less frequently because the price of shea nuts and the economic value of shea butter are high. As Arainatou (18/10/06) from Léo explained, there were

[197] As in other parts of the world (Mauss 1922; Turrittin 1988; Blumberg 1991; Ertug 2003; Pieroni 2003), Burkinabè women's social relations are cemented around networks of gift exchanges and return favours (Fiske 1990; Saussey et al. 2006). Gifts of wild plants and produce are intrinsic to rural Burkinabè women's social networks and provide women with status and authority.

formerly so many shea nuts that she could not even gather them all. Now, as fewer nuts are available for collection, she produces butter as an income-generating activity, but consumes it more rarely. Ultimately, household members prefer the taste of the shea butter presently produced, but their consumption depends on the availability of shea nuts and the opportunity cost of consuming the butter rather than selling it to generate revenue (Fatimata, 15/11/06). As the price of shea butter increases, a greater percentage of the butter may be sold rather than retained for consumption purposes. Consequences of this practice on household food security would partly depend on whether the supplementary income is spent on food purchases, and if so, on the quality of purchased foodstuffs. Citing a study from *Écologie Sans Frontières*, Brondex (1999: 121) reports that income increases as a result of shea butter sales among poor households generally serve to improve the nutritional value of the household diet. A more detailed study of shea butter consumption and of the household diet, wherein households methodically record their consumption over time, is required to thoroughly assess the effects of shea projects on household food security.

Adding to these health-related human development effects, shea projects have enhanced women's knowledge about their trade. In general, producers situated in remote rural areas are unaware of the existence of alternative markets for their products (Page and Slater 2003). Via NGO-led workshops, shea projects have conveyed market information to these rural shea producers, including an understanding of product quality requirements. This information is essential for participating in international markets (Taylor 2002; Taylor et al. 2005). Were it not for the linking social capital fostered through shea projects, acquiring this information would represent a formidable task for isolated producers.

Aside from improving their practical skills, producers reported that shea projects have stimulated their intellectual development. Through informal and formal gatherings members have learned a great deal from each other about their trade and life in general (Barkissa, 17/01/07; Kadia, 09/01/07). For instance, one producer acknowledged that through Union membership, producers have discovered ways to save money (Brigitte, 27/10/06), while one of Léo's UGPPK members claimed outright that joining the Union

has helped her develop her intelligence (Fanta, 16/10/06). Members can apply many of the skills they have acquired in this way to other income-generating activities.

Of critical importance, shea butter projects have additionally taught women the price below which their butter is sold at a loss. As the general manager of the UGPPK explained, "producers used to be satisfied selling their butter for 500 fCFA ($CAD 1.06) per kilo. If they are no longer satisfied now, it's because of the work of the Union, which has sensitized them to the costs involved in shea production, and encouraged them to request more for their product" (A. Tagnan, December 15, 2006). Similarly, Milford (2004: 64) observed that Fair Trade coffee networks served as a "barometer of exploitation", indicating to Latin American producers, whether selling to the Fair Trade market or not, that they were being exploited.[198]

Among UGPPK members, the eight executive officers—and to a lesser extent the three elected representatives of each GVF—have experienced the most significant human capital development from shea projects. According to Alimata (17/01/07), whose story introduced the dissertation, and to Malika (17/01/07), delegates of rural GVFs have all travelled to Léo for the Union's general assembly, where they have been exposed "to new things" such as useful ideas and advice through contact with town-based members and NGO personnel. The Union's officers have also received special management, accounting, and organizational training from NGO personnel to learn to run their business autonomously. UGPPK leaders have learned to speak in public (Kadia, 09/01/07), and have been interviewed by NGOs, journalists and film crews. Three officers were proud to report that they have partaken in conferences in Léo, Ouagadougou, and internationally within West Africa. In 2007, the president of the UGPPK even went to France to represent her association in a Fair Trade fair. These are formidable feats for women with no formal education who had never before travelled more than a few dozen kilometres.

As previously mentioned, Union officers have also met hundreds of people. Beyond their travels, they have themselves hosted delegations of shea producers and NGO workers wishing to learn from the Union. UGPPK officers have therefore become

[198] The very presence of alternative markets additionally offers small-scale producers increased bargaining power and the chance to decrease their reliance upon traditional intermediaries, thereby improving their capacity to request higher prices for their goods.

mentors for other organizations working in the shea sector.[199] Union leaders have additionally met and negotiated with male and female donors and clients. Although in 2001, female producers were unable to look these respected figures in the eye, by 2006 they had gained sufficient confidence to discuss projects and contracts with them (A. Traoré, 14 November, 2006; fieldwork observations 2001 and 2006). This major transformation can bring about more structural changes in women's living conditions as they develop their negotiating skills and confidence to deal with decision makers and political figures. Due to their high rank within the Union, officers have also gained the respect of local female and male residents.

The intellectual stimulation and confidence resulting from shea projects not only allow women to strengthen their work skills—which represents a means to improving their living conditions—but, as per Sen (1999), they are also ends to a better quality of life. One producer from Léo captured this notion in the following quote: "going to the Union brings us joy and helps us gain knowledge. We don't want to stay home. We want to get to know more people" (Kacora, 20/10/06). Another member from Léo described how she is now able to manage many new tasks, and feels at ease in her new activities (Safi, 01/02/07). As also reported in other West African countries (Turrittin 1988; Brondex 1999), in Burkina Faso hard workers such as active UGPPK members command the respect of their community. For many producers, then, improved self-esteem, pride, and social approval result from participation in shea projects. These effects, elucidated above based on interviews with female participants, are also appreciated by the spouses of participating producers, and contribute to the success and longevity of shea butter projects.

9.3.1.2 Male Perceptions

Indeed, the men I interviewed provided many of the same reasons why they feel that shea projects have contributed to the well-being of their wives. Male participants agreed that working in a group stimulates women in their activities (Lougman, 12/02/07; Oumar, 13/02/07). According to interviewees such as Boucaré (18/10/06), producers feel rewarded to be part of something and to work towards a common cause. They have

[199] This has also caused them some grief as some of these delegations from nearby areas have ultimately competed with the UGPPK for limited shea butter markets.

gained a sense of community and solidarity, which has allowed them to improve their capacities and share useful information. Male interviewees asserted that the Union endows women with new knowledge, enhances their intelligence, understanding, awareness, and development, and overall "opens up a new world" for them (Zachary, 20/10/06). They explained that women are now more discerning of their strengths and weaknesses, and that they adjust their behaviour and strategies accordingly (Mahmoudou, 19/10/06). The men with whom I spoke felt that, since joining the Union, their wives have also become more active and have improved their money management and accounting skills (Gérôme, 18/10/06; Germé, 27/10/06). The husband of one executive officer further noted improvements in his spouse's public communication skills, and claimed that Union members have learned to dress better and act appropriately in meetings as a result of shea projects (Germé, 27/10/06). Spouses recognized the pride women take in being the source of their household's financial stability (Julien, 20/10/06) and feel that their wives are now happier, more relaxed, and less inclined to bother their husband for insignificant details (Harouna, 16/10/06).

Despite these benefits, a handful of male interviewees were concerned that processing shea butter is overly exhausting for women, who have insufficient access to labour-saving technologies. Two male participants explained that producers frequently fall ill following butter production campaigns, and many others denounced the fact that UGPPK members receive little remuneration for their arduous work. One man questioned what would happen to his wife and her fellow shea producers when, as they age, they can no longer produce butter for the Union (Zachary, 20/10/06). Others echoed his concern that producing large quantities of shea butter will prematurely exhaust their wives, who will then be left without productive capacities or income-generating activities. These considerations bring nuanced insight to the otherwise overwhelmingly positive effects of shea butter projects on the human capital of participating producers.

9.3.2 Community-scale Effects

Beyond these consequences at the individual and household-scale, shea projects have influenced the human capital of participating communities in ways that also favour project sustainability. According to Moberg (2005: 10), "perhaps the most important contribution that Fair Trade groups make to their local communities is the allocation of

social premiums for development projects of their devising." Among Fair Trade coffee and banana producers worldwide, this reinvestment premium has been allocated to building or running schools and health clinics, providing scholarships to impoverished youth, developing infrastructure, strengthening the internal structure of cooperatives, improving ecological conditions on farmed fields, and transitioning to organic production, among other causes (Murray and Raynolds 2000; Lyon 2002; Moberg 2005).[200]

As mentioned in Section 8.2.5 of Chapter 8, in 2006-2007 the UGPPK had a premium of 1,331,000 fCFA ($CAD 2,810.17) to invest in one or more local development initiatives. That year, the sum was earmarked for the purchase of school supplies for orphaned children in Léo and for literacy training of the members of three of the UGPPK's GVFs, thereby enhancing the human capital of these beneficiaries.[201] The UGPPK's general manager remarked that, in addition to helping the community, these investments strengthen the Union's sphere of political influence and endow it with a voice in community affairs that can lead to further human development (A. Tagnan, February 16, 2007).

Beyond Fair Trade premiums, UGPPK members intend to enhance the human capital of their communities through their personal investments. In Lan, for example, Union members contribute some of their shea revenues to an informal common fund to build a local maternity ward, a school, and a water pump. If, and when, these initiatives materialize, they will have lasting effects on the intellectual development and health of village residents.

Due to the benefits they offer participating communities, shea projects have garnered the support of village elders. For one, Prata's elders intervened when the village's shea producers refused to participate in an UGPPK order. These respected figures persuaded Union members that despite the unmanageably low prices the

[200] The transition to certified organic production lasts three years and entails expensive certification costs borne by producers. The reinvestment premium allows producers to assume the risks involved in the transition (diminished yields/incomes) and afford these certification fees (Rice 2001).

[201] In subsequent years, the premium has been used to construct a building to house processing units at UGPPK headquarters. In the future, the Union intends to assume the costs associated with running a daycare and playground for the children of Union members. These facilities were inaugurated in 2008 and are currently funded by *L'Occitane*, the Union's largest buyer.

conventional trade order offered, women's long-term participation in the UGPPK would contribute to everyone's well-being (Fatimata, 17/01/07). Instilled with a sense of responsibility and due to their respect for authority, Prata's producers ultimately fulfilled their quota of the order.

Finally, a male participant from Léo, observed that shea projects have conferred residents of the province of Sissili with a sense of identity, honour, and pride (Suley 08/01/07). As explained in Chapter 7, within Burkina Faso and internationally, shea butter from Sissili is renowned for its high quality and is placing the province on the map. Personal observations suggest that even local residents who do not participate in the shea trade are proud that their region is associated with a product that is nationally and internationally sought. Residents recognize that through shea exports, Sissili's shea butter producers are making a mark in the world.

9.4 Physical Capital Effects

Adding to their social and human capital effects, shea projects have enhanced the physical capital of shea producer households and communities. This type of capital consists of human-produced capital goods, including tools and infrastructure that facilitate production and exchange processes (cf. Ellis 2000). On an individual level, UGPPK members have acquired such tools by investing in the means of production of their shea trade and in other productive activities, as well as in goods that serve as insurance in times of need (see Section 8.2.4, Chapter 8). Over time, producers also wish to invest in house construction and buildings that would house social welfare services, such as a school and maternity ward, representing an increase in the physical capital of the entire community.

Shea projects have also affected the physical capital of participating communities in other ways. By 2006, the lead NGO working on shea projects (CECI) and the various other donors discussed in Chapter 7 had invested hundreds of thousands of dollars on developing commonly-held infrastructure on land donated to the UGPPK from the commune of Léo. The goal was to create conditions allowing the Union to meet the requirements of international clients who expect large volumes of top quality butter delivered within set timelines. To this end, four structures were built. The first, shown in

Figure 9.2, houses the UGPPK office and the laboratory. The structure is equipped with electricity, a telephone line, computer, and Internet connection, not to mention a fan to welcome international clients in 40-degree weather. Producers are proud of these amenities, which remain rare in most of Léo's other offices. The second building, depicted in Figure 9.3, serves as a warehouse where collected butter is filtered with a machine and packaged for international shipment. In the third building, which is a space for kneading and boiling butter, adapted fireplaces, shared cauldrons and basins are available to UGPPK members (Figure 9.4). Producers enjoy working in this covered enclosure, which protects their product from airborne impurities and provides shelter from the sun and rain. A tap is also located near this building to provide clean water for shea processing. The final building, which appears in Figure 9.5, encloses the kernel warming and crushing machines as well as the shea presses. Sandwiched between these third and fourth buildings, there is a cement platform dedicated to sorting shea kernels (Figure 9.6). In addition to these constructions, the UGPPK owns a pickup truck, which Union members (driven by a male driver) use for work purposes such as getting to conferences or collecting butter from GVFs distantly located from Union headquarters.

Figure 9.2: UGPPK Office Building (Source: Author 2006)

Figure 9.3: UGPPK Warehouse and Butter Filtering Premises (Source: Author 2006)

Figure 9.4: Workspace at UGPPK Headquarters (Source: Author 2006)

Figure 9.5: UGPPK Building Housing the Shea Nut Mill and Kernel Warming Machines (Source: Author 2006)

Figure 9.6: UGPPK Platform for Sorting Shea Kernels (Source: Author 2006)

Although technically available to all UGPPK members, the Union's physical assets are nearly all located in Léo, beyond the reach of rural producers.[202] In years to come, as the Union further develops its physical capital, it intends to decentralize its machinery and supply new equipment to GVFs in different neighbourhoods and villages. In this way, additional machinery would reduce not only the equipment and space constraints currently experienced at UGPPK headquarters, but also women's travel time to access this equipment. In Léo and Lan, 83 per cent of female participants felt that acquiring supplementary machinery would represent a primary way of improving the Union. Likewise, nine male participants in Léo and one in Lan suggested the need for additional equipment to facilitate their wives' work. Interestingly, in Prata, where no equipment is available for shea production, none of the producers or their husbands mentioned the need for processing machinery. When asked about ways to improve the Union, they focused instead on the importance of more timely remuneration for their butter. Perhaps having not acquired UGPPK equipment to date, they could not fathom receiving any in the future. Moreover, many of Prata's producers were probably uninformed that UGPPK equipment is available to some Union members. In contrast, Lan's participants—who live in close proximity to Léo and also lack production equipment—are well aware that town-based producers have access to such equipment.

The significance of the Union's physical capital extends beyond its practical value, however. For many members, UGPPK headquarters represent a secure feminine

[202] One shea mill is also situated in Sapouy, the largest of the UGPPK's participating villages in the province of Ziro.

space in a heavily patriarchal landscape. Léo's producers frequent Union headquarters in good and bad times, sometimes even when they are not producing butter. As Bintou (18/10/06) from Léo emphasized, the UGPPK's buildings and equipment are in the Union's name, and thus in *women's* name. In a country where women scarcely own any property or physical assets, these buildings are a source of security and pride that also attest to the professionalism of women's enterprise and occupation. The development of the Union's physical capital, and of that of its members, facilitates the success of the enterprise and is a major step towards achieving the sustainability of shea butter projects.

9.5 NATURAL CAPITAL EFFECTS

The consequences of shea projects on the physical environment also extend to the natural capital upon which producer livelihoods are based. Natural capital consists of the local stock of environmental resources, such as land, trees, and water, as well as access to these resources (Chambers 1995; Rocheleau and Edmunds 1997; Rakodi 1999; Gilling et al. 2001). For most shea butter makers, political-ecological entitlements to shea nuts represent an important form of natural capital facilitating their participation in shea butter schemes. As discussed in Chapter 6 and briefly in Section 9.2.2.2 of this chapter, however, this usufruct is by no means guaranteed. Since the advent of shea projects, access to valued shea nuts has become increasingly tenuous, especially for migrant women.

As discussed below, however, shea projects have already affected, or have the potential to affect, the natural capital of producer communities in three other primary ways. First, as explained in Section 9.5.1, projects have influenced the incentives of agricultural peoples to conserve economically valuable shea trees. Then, as shown in Section 9.5.2, projects have the potential to reduce the natural regeneration of shea trees. Finally, as discussed in Section 9.5.3, projects are engendering environmental impacts due to the auxiliary resources required to transform shea nuts into butter and to the by-products generated during this process.

9.5.1 Conservation Incentives

Chapters 6 and 7 detailed how the creation of the UGPPK as well as growing international demand for shea nuts and butter sourced from the province of Sissili have

raised the local value of these commodities. Similarly to other NTFPs of global economic importance (Wickens 1991; Cunningham 2001; Belcher and Kusters 2004), the increased value of shea nuts and butter has affected local tree conservation incentives. Yet, the fact that the species is traditionally protected in cultivated fields makes it difficult to assess the extent to which changes in conservation practices are actually occurring. Moreover, shea trees are conserved not only for the shea nut and butter revenues they provide, but also because of the importance of shea fruit and butter to the household diet, and of the tree's medicinal, ecological, and cultural properties.

Nonetheless, as detailed in Chapter 5, male and female participants claimed that shea butter projects have increased the value they ascribe to shea trees and nuts, and encouraged them to conserve the species for its financial benefits. In fact, the husband of a Union member from Lan remarked that shea nuts were among the most valuable local commodities (Alasan 12/02/07). Hence, he questioned whether cultivating other crops was worthwhile or whether his household should be investing its full labour in shea nut collection. A fellow male resident explained that he will exert greater control over shea nut collection activities in his fields because of the species' growing economic worth (Fessin, 12/02/07). In turn, Lougman (12/02/07) from Lan noted that although shea roots and bark possess medicinal properties, villagers no longer unearth the tree for fear of destroying a source of revenue. A number of female producers also felt that all shea trees should be conserved due to their economic value and that greater efforts should be made to sensitize people to the importance of protecting the species.

Some male migrants from Lan disagreed with that assessment, however. There is an opportunity cost to leaving shea trees standing in cultivated fields, as the shade from tree canopies affects underlying crops. As a result, a number of Lan's Moose migrants feel that they do not retain sufficient revenues from the species to maintain and manage shea trees in their fields beyond what their traditional practices entail (refer back to Chapter 5). An older resident explained that he refuses to manage his shea trees because he will not be the one to benefit from prospective improvements in the tree's yield. He believes that if a "better tomorrow" arrives and the tree's productivity increases, he and his family will be chased from their fields to allow indigenous Gurunsi women to collect shea fruit (Ablaye, 12/02/07).

Nonetheless, on the whole, economic benefits stemming from shea butter projects have reportedly encouraged the agriculturalists I interviewed to conserve a greater number of shea trees in their fields. As the tree was already strongly protected, however, the effect to date is probably negligible and bears little influence on the sustainability of these projects. For the time being, customary and to some extent legal restrictions on shea tree culling ensure the continued prevalence of the species in the province of Sissili, even among Moose migrants who do not traditionally maintain as many specimens in their fields. The economic gains stemming from shea butter sales may play a greater role in the species' conservation incentives in the medium to long-term, as cotton cultivation and animal traction make inroads into the province of Sissili. Since these practices encourage agriculturalists to eliminate trees from their fields, their value no doubt will be pitted against that of shea trees to determine the most economically appealing management options.

The value of shea trees will also come into play as new markets materialize for UGPPK shea butter. For instance, access to the certified organic market can generate substantial returns for shea butter makers and encourage them to pursue ecologically sound practices throughout their agricultural system. This has already been the case for other producers, such as Mexican coffee farmers who are experimenting with organic methods in their entire (*milpa*) farming system after entering the certified organic coffee market (Bray et al. 2002). Likewise, producers from Oaxaca, Mexico, have begun producing certified organic honey within organic coffee plots (Taylor, 2002). As more shea butter producers face the prospects of entering the organic shea butter market, their households will eventually have to choose between pesticide and fertilizer-intensive cotton cultivation, which is increasingly prevalent in the central-west region of Burkina Faso and provides returns to male farmers, and organic shea butter certification, which for the time being profits female producers. Pursuing the latter option may, in due time and given favourable market prospects, also encourage agriculturalists to cultivate more remunerative organic cotton. As usual, economic, political, and labour considerations will guide these choices.

The current craze for shea nuts may also induce local entrepreneurs to establish shea tree plantations. Instances of farmers planting shea trees have already been reported

in northern Ghana and Gambia (Elias and Carney 2007; Y. Tomomatsu, November 10, 2006). Yet, none of the agriculturalists I interviewed in Léo, Lan, and Prata had ever planted a shea tree, nor did they demonstrate intentions of doing so. Nonetheless, the general manager of the UGPPK expressed interest in founding plantations of grafted shea trees that begin producing at seven, rather than 15, years of age. To date, no steps have been taken to move forward with this project, and the Union's long-term access to large expanses of land for this scheme remains problematic. Other shea producer associations in Burkina Faso have begun directly or indirectly experimenting with shea plantations, however. In Tenkodogo, located in the country's south-eastern region, the *Laafi* women's group purchases shea nuts from a male entrepreneur who owns a shea plantation (M. Zéba, February 26, 2007). Likewise, the Songtaaba women's group, which is based in Ouagadougou, has established an experimental plantation of shea trees in one of the capital's peripheral villages from which the association acquires the shea nuts used in its certified organic production. These initiatives encourage a relatively steady supply of shea nuts for continued shea butter production, and in so doing favour the sustainability of shea projects.[203]

9.5.2 Gathering Practices and Species Regeneration

In addition to their influence on shea tree conservation incentives, shea projects affect the natural capital of participating communities by altering shea nut collection practices. As other authors report among Brazil nut collectors in Peru (Nelson et al. 2002) or concerning gathered forest products more generally (Arnold and Perez 2001), Fair Trade and other markets leading to increased values for NTFPs can prompt overexploitation of the forest resource. Yet, based on her research in Benin, Schreckenberg (2004) argues that the prevalence of shea trees in farmed fields coupled with non-destructive harvesting techniques leaves no reason to believe that the species is threatened by overexploitation. In contrast, Terpend (1982) reports that entire Burkinabè nut stocks can be collected in zones of easy nut access, thereby preventing further self-seeding and regeneration of the species in these areas. Raising the value of shea nuts through shea butter projects can further intensify the harvesting pressure on shea tree populations.

[203] 'Relatively steady' refers to the fact that shea nut yields naturally vary inter-annually and may be quite poor during certain years and/or in particular regions.

Indeed, in Chapter 6 I demonstrate that rising shea nut prices coupled with a market for poor quality kernels encourage shea nut and butter vendors to seek the greatest amount of shea nuts possible. In fact, more than half of the women I interviewed claimed to gather all available shea nuts in cultivated fields, fallows, and unclaimed areas, rather than exclusively those of good quality for making butter. Whereas decaying nuts were previously left behind and allowed to germinate, they are now entering international commodity chains. Moreover, despite the moral stigmas associated with the activity, some gatherers are attempting to improve their harvest by forcing fruit down from their trees rather than merely collecting shea nuts from the ground (Téni, 31/01/2006). Finally, areas of shea nut collection are expanding as new actors, such as young men with motorbikes, are drawn to this activity. Although I argued in Chapter 5 that the effects of these practices on the shea tree population are not yet perceptible, in the long-term these incidences may hinder the species' regeneration and negatively impact the sustainability of shea projects. Likewise, they may force other shea fruit enthusiasts, such as bats and sheep, to seek new feeding grounds (Brondex 1999).

9.5.3 Production Inputs and By-products

Along with shea nuts, large quantities of firewood and water are required for shea butter processing. Approximately 8.5 to 10 kilos of firewood are consumed while processing one kilogram of shea butter (Niess 1988), and an estimated 200 litres of water are used to produce 8.5 kilos of shea butter (M. Saussey, July 17, 2007). Based upon these figures, 510 to 600 tonnes of firewood and 1412 tonnes of water must have been consumed to produce the nearly 60 tonnes of shea butter supplied by the Union during the 2005-2006 campaign. Even greater quantities still were required to fulfil the larger orders (88 tonnes) of the subsequent shea campaign. These amounts are all the more astounding in a region of where firewood is in short supply and water seasonally scarce.

The use of appropriate technologies can improve the ratio of wood consumption to butter produced. For instance, van Driel (1993) calculates that the use of simple adapted fireplaces can reduce firewood consumption by up to 30 per cent while cooking or preparing shea butter. Moreover, when using a shea mill rather than pounding kernels by hand, the duration of the kernel warming step can be shortened (Brondex 1999). Despite the availability of these technologies at Union headquarters, however, the annual

production of multiple tonnes of shea butter, which hinges on the use of abundant quantities of firewood and shea nuts, continues to exert pressure on these collected woodland resources.

The participants I interviewed claimed that it is increasingly difficult to collect large quantities of firewood, and that they must travel progressively longer distances to gather sufficient amounts. In fact, 37.5 per cent of the producers I interviewed in Léo (n=33) (but none in the rural areas) purchase some or all of the firewood required for their shea production. The urban butter makers I spoke to proudly reported that they reprimand vendors who sell the wood of the shea tree. Despite being conscious of their stake in conserving shea trees, however, producers seemed nonchalant about their consumption of other species as firewood. Efforts to decrease wood consumption may nonetheless be greater in Léo, where many producers purchase the resource, and these effects will likely increase as the price of firewood continues to rise. Via the development and dissemination of appropriate technologies, the aid community can gainfully assist producers in these conservation efforts. Although the situation is not yet dire, such efforts will prove invaluable for ensuring the sustainability of shea projects.

There are also environmental consequences associated with the by-products of shea processing. Large quantities of carbon monoxide are produced from the annual combustion of over 600 tonnes of firewood. Moreover, a considerable amount of wastewater must be disposed of during butter processing. Around their compounds, women pour their shea nut residue-filled water in a designated area, and allow the water to evaporate. They thereafter recuperate the dried residues—termed shea cake—and use them to ignite fires. At UGPPK headquarters, significant amounts of turbid wastewaters are discharged during periods of production for large orders. Much to the neighbours' discontent, the smell of shea butter, by-products, and sodden earth permeate the air.

Faced with a similar problem, the *Laafi* association of shea producers located in south-eastern Burkina Faso designed a simple but efficient way to dispose of a mid-sized quantity of wastewater. The system involves decanting residue-filled water in huge basins, removing the overlying layer of water by hand, and sun-drying the bottom residues. The shea cake is then retained for fire ignition, and substitutes some of the wood producers would otherwise burn during shea processing. Devoid of its residues, the

water removed is also less of a nuisance. Such cost-effective technologies can reduce the negative effects of shea projects on the natural capital of producers and their communities, as well as the labour inputs (human capital) required for firewood collection and/or shea processing. This is one example of the ways that natural and human capital are intertwined within this study. In the conclusion that follows, I explore additional ways the five capitals discussed throughout the chapter interact within the context of shea projects, and the influence this has on project sustainability.

9.6 CONCLUSION

As I have detailed in this chapter, shea projects have affected the asset portfolios of shea producers, households, and communities. The five capitals on which I have focused in Chapters 8 and 9, namely financial, social, human, physical, and natural, are interrelated (Moser 1998; Rakodi 1999; Rigg 2001). As livelihood strategies rarely draw upon and enhance all types of capital to the same degree, their sustainability must be considered in light of the combinations of, and substitutions among, these capitals and their overall stock through time (Serageldin and Steer 1994).

The data presented above suggests that shea projects have enhanced the overall stock of capital assets possessed by UGPPK members and their households, and have prompted positive interactions among the five capitals. In so doing, shea projects have brought about some of the desirable sustainable livelihoods outcomes—consisting of improved incomes, increased well-being, reduced vulnerability, greater food security, and more sustainable use of the natural resource base—discussed in Chapter 2. Interactions among capital assets and their livelihood outcomes as a result of shea projects are discussed below.

To begin, superior incomes and/or access to lump sums of money from shea sales (financial capital), discussed in Chapter 8, have enhanced the well-being of participating households by enhancing their human capital. Many households are now able to send their children to school and to improve their health through the purchase of medicine. With their shea revenues, Union members have additionally been able to purchase food to supplement their diet. Yet, as discussed in Section 9.3.1.1, the effects of shea projects on food security cannot be ascertained. Some project participants are now consuming larger

amounts of shea butter, which is itself a nutritious part of the household diet, than they were prior to Union membership, whereas others are reserving the butter they produce for sale to the UGPPK. Whereas in many cases, shea butter revenues allow producers to smooth consumption, in other instances delayed payments from the Union increases producers' vulnerability to shocks that can jeopardize their food security. In the short term, producers are particularly vulnerable while waiting for Union remuneration as their savings—in the form of shea nut supplies or grains sold to purchase these—have been spent on butter production. In the medium term, however, shea projects can improve the resilience of shea producers and their households to shocks and stresses by strengthening their asset portfolios overall.

Financial capital earned through shea projects has additionally bolstered the social capital of producers by enabling UGPPK members to nurture their social networks through gift-giving. Another positive social effect for the large majority of member producers has been the ability to gain the favours of their husbands by providing larger financial contributions to the household. Further, remuneration from the Union has translated into enhanced physical capital, as women have used their income to acquire productive tools, including accessories used in the shea trade. This accretion in the physical capital of producers has allowed them to reduce the labour (human capital) involved in the collection and processing of inputs for shea butter production. Yet, in some households, the amount of labour available for household subsistence production has been curtailed as women shift their efforts towards butter export sales. Lastly, shea-related revenues have encouraged farmers to conserve their natural capital in the form of shea trees in cultivated fields. The Union's acquisition of improved production technologies (physical capital), such as adapted fireplaces, has also alleviated some of the pressure on fuelwood and reduced the projects' environmental footprint. By and large, however, shea projects have promoted financial capital at the expense of natural capital in the form of water and firewood required to produce shea butter.

The development of the UGPPK's infrastructure (physical capital) in Léo has also affected the social and human capital assets of Union members. Léo's producers have consolidated their social networks during visits to UGPPK headquarters, which represent a secure feminine space. This link between physical and social capital is an important

observation, which remains unexplored in the literature. It points to the importance of place, which can be intimately associated with the built environment as in this case, for cementing social relations.

Social interactions stemming from participation in shea projects have also stimulated producers intellectually, thereby leading to a growth of their human capital. For many producers, these 'secondary' effects on their human capital (knowledge and acquired skills) and social capital (relationships and networks) override the economic outcomes of the projects, and represent both an end and a means to improved producer livelihoods and well-being. By promoting these capitals, shea projects have encouraged producers to participate more meaningfully in their community, and have allowed some women to develop the means to challenge the gender ideology that maintains their subjugation; precisely the tools certain male participants admitted to fearing during our interviews. Unfortunately, this has given rise to intra-conjugal tensions among the UGPPK's executive officers and their spouses and eroded some of the support these producers rely upon in times of need.

In sum, the sustainable livelihoods framework has facilitated a multi-scalar, and multi-dimensional analysis of the effects of shea projects on the lives of participating producers as well as on their households and communities. Drawing upon this approach, I have shown in Chapters 8 and 9 that shea projects have had positive and negative effects within the province of Sissili, but that on the whole they have strengthened the asset portfolios of their participants. Hence, the continued success of these projects has been favoured. To provide a global assessment of the sustainability of these projects, however, the findings presented in Chapters 8 and 9 must be coupled with the analysis of shea agroforestry and of shea nut and butter commodity chains presented in Chapters 5, 6 and 7. This is the task I pursue in the following, concluding chapter of this thesis.

CHAPTER 10

CONCLUSION: SUSTAINABILITY PROSPECTS OF SHEA BUTTER PROJECTS AND POLICY IMPLICATIONS

10.1 INTRODUCTION

In response to calls for empirically based studies on the effects of NTFP collection and trade, Fair Trade, and global market integration on producer livelihoods in the Global South, the aim of this thesis was *to assess the sustainability of shea butter projects in the centre-west region of Burkina Faso*. The shea butter projects on which I focused, which along with others like them have commanded significant development monies, are carried out by a leading NGO (CECI) as well as secondary organisations in the provinces of Sissili and Ziro. They primarily consist of the creation of a union (the UGPPK) of extant women's work groups (GVFs) of shea butter producers located in and around the town of Léo, Sissili. They entail the provision of technical training to shea butter producers to allow them to produce a top quality product that meets international standards. In addition, interventions focus on linking the shea producers' Union with international clients, some of them willing to pay women above-market prices for their commodity through Fair Trade channels. As these shea butter projects have been conceived within the Women in Development (WID) paradigm, which involves women-specific development programming, I questioned in this study whether the projects are sustainable or whether they too involve some of the drawbacks experienced in prior WID initiatives.

To address my thesis aim, I explored three complementary objectives. These objectives, discussed in Chapter 1, were: 1) to investigate the nature of shea tree management and conservation in rural areas of the centre-west region of Burkina Faso, and the extent to which these are gendered; 2) to analyse the conventional and alternative international shea nut and butter commodity chains originating in the centre-west region of Burkina Faso; and 3) to assess the economic, socio-political, physical, and ecological effects of shea butter projects to date in the centre-west region of Burkina Faso. Taken as a whole, the issues these objectives broach allowed for a multi-dimensional and multi-scalar analysis of the sustainability of shea butter projects in my specific study sites.

To begin the thesis, in Chapter 2 I outlined the conceptual framework informing my study. I explained how scholarship on feminist political ecology, traditional ecological knowledge, commodity chains, and sustainable livelihoods contributes useful concepts to guide this thesis. The feminist political ecology approach provided a core entry point for the thesis. Following this perspective, I treated gender as a critical variable that interacts "with class, caste, race, culture, and ethnicity to shape processes of ecological change (and) the struggle of men and women to sustain ecologically viable livelihoods" (Rocheleau et al. 1996: 4). Thus, I placed the gendered power relations that frame resource use decisions at the centre of my analysis of the gendered livelihoods, knowledge, and meanings associated with shea butter production and trade in Burkina Faso.

I additionally drew upon works on traditional ecological knowledge, which provided insights of particular relevance to my first objective. These works focus on the "cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes 1999: 8). Specifically, this perspective helped me conceptualize the gendered and culturally specific ways of knowing, managing, harvesting, processing, and conserving shea trees and their derivatives in my study sites, and the cultural importance of these activities.

Different traditions within the commodity chain analysis approach contributed complementary concepts of particular importance for achieving my second objective. Following the approach, I performed a multi-locational analysis of the passages of and meanings embodied by shea nuts and butter from their point of production to their points of consumption (Hopkins and Wallerstein 1986; Gereffi and Korzeniewicz 1994; McMichael 1995; Leslie and Reimer 1999). Articulating the symbolic aspect of shea with its conditions of production and exchange (Appadurai 1986; Long and Villareal 1998), I examined the actors involved in the shea trade, the meanings they attach to the commodity, and the gains they retain from this activity.

Finally, concepts from the sustainable livelihoods perspective informed my analysis of the tangible and intangible resources (assets or capitals) which shea producers

exploit using diverse livelihood strategies to make a living (Chambers and Conway 1992; Sen 1993, 1997; Carney 1998; Ellis 1998; Scoones 2009). Drawing from this approach, I considered the material and cultural outcomes—such as physical well-being, a meaningful existence, and the capability to shape the larger context in which people live—of the strategies shea butter producers deploy to secure or ameliorate their subsistence (Bebbington 1999). I examined how access to assets is constantly shifting, and how in this context, livelihoods are continually reshaped (Bebbington 2000; Rigg 2006). I further adopted the perspective's multi-dimensional concept of sustainability, which rests in achieving a balance and an adequate overall stock of assets over time. These notions were particularly relevant to the third objective of my study and to my overall aim.

Pursuing this aim additionally required a detailed understanding of the context within which shea butter projects unfold. In Chapter 3, I therefore provided contextual information on Burkina Faso and my three study sites. The discussion focused on the physical geography, demography, political history, social organization, and tenure systems of the country, as well as the gendered livelihoods of its people, with an emphasis on the town of Léo, the peri-urban village of Lan, and the rural village of Prata where I carried out my fieldwork. Of particular importance for this study, I highlighted that Burkina Faso is one of the poorest countries in the world, and has few resources favouring its participation in the global economy. Shea exports, as well as international aid interventions focusing on shea, are important contributions to the country's depressed economy. Similarly, the production and/or trade of shea kernels and butter is central to the livelihoods of a majority of Burkinabè women, who are over-represented among the country's poor.

In Chapter 3, I further explained that women's diverse livelihood activities reflect the division of labour according to the prevalent age and gender hierarchies that structure Burkinabè society. Gendered power relations, skewed in men's favour, are manifest in the gendered rights and responsibilities, access to resources, decision-making ability, and income and consumption streams within the household. Given this phenomenon, the shea trade takes on particular significance for women, as revenues from shea sales represent one of the few culturally sanctioned female income-generating opportunities.

International shea butter markets, and the shea butter projects designed to capture these markets opportunities, thus offer dynamic prospects for alleviating the poverty of many the country's poor.

Finally, in Chapter 3 I described how the province of Sissili, where my three study sites are located, has experienced large inflows of migrants from the Moose and FulBe ethnic groups. These migrants, who are on the whole very poor, have weaker access rights to the region's resources than the also impoverished indigenous Gurunsi population. These limited access rights apply to land, but also to the naturally occurring shea tree from which shea nuts derive. Dynamics among co-resident ethnic groups influence these migrants' ability to participate in shea butter projects, as well as the effects of projects on local ethnic groups. Likewise, the distinct living conditions experienced by rural and urban dwellers engender differentiated opportunities and constraints for participation in the Union and in shea butter projects, and more generally in the shea trade on which these projects are based. Rural-urban distinctions additionally affect the ways socio-economic changes, such as the ones prompted by shea butter projects, are experienced at the local level.

To acquire the empirical data for this study, I conducted fieldwork in the centre-west province of Burkina Faso. In Chapter 4, then, I detailed my methodology, which consisted of observation, informal and semi-structured interviews, wealth-ranking exercises, and shea tree mapping and measuring, all the while remaining reflexive in the field. Interviews with multiple stakeholders in the shea trade and/or in shea butter projects contributed rich information to my case study from a variety of perspectives. Further, triangulating methods in the field allowed me to acquire a fuller range of data to holistically address my thesis aim.

10.2 Key Findings and Broader Conceptual Advances

In the subsequent five chapters of the thesis, I presented the key findings derived from these data and their interpretation. To begin, in Chapter 5 I examined my first objective and three subsidiary questions. These lines of enquiry were: first, what use and knowledge of shea do male and female Burkinabè farmers have, and how do they manage the species in their fields? Then, what factors incite Burkinabè farmers to conserve

particular shea trees in their fields? Finally, how, if at all, do use, knowledge, and management of shea as well as shea tree conservation incentives vary according to gender and ethnicity?

Based on my analyses, I argued that the features of the shea parklands that characterize regional landscapes reflect the local population's detailed knowledge of shea. This knowledge includes an understanding of the factors affecting tree yields and shea nut characteristics, ways to manage the shea tree, and the myriad uses for the tree and its derivatives. With respect to my study of shea projects, an important dilemma arose concerning large inter-annual and spatial fluctuations in shea yields, with a general trend towards decreasing fruit yields. This is problematic given that access to shea kernels represents a primary condition of participation in the shea trade, and thus in donor-led shea butter projects. The main factors participants advanced to explain a decline in productivity are a drop in rainfall over the past decade and the prevalence of semi-parasitic plants from the *Tapinanthus* family that stunt the growth of their host, decrease tree yields, and can lead trees to perish. Hence, whereas local residents have little control over the weather, controlling the *Tapinanthus* population will be important to maintain the vigour of the shea population.

In Chapter 5, I demonstrated that TEK of the shea tree allows participants to manage the species in ways that improve its short and long-term yields, thereby favouring the continued exploitation of shea kernels in the region. I further showed that traditional ecological knowledge of shea is not visibly differentiated according to the gender or ethnicity of participants. The fact that women and men of both Gurunsi and Moose origin interact with and rely on the shea tree and its derivatives on a daily basis helps explain the familiarity they all share with respect to the species. Likewise, interactions among spouses and among co-resident ethnic groups may explain the convergence in their ecological knowledge and management practices.

In like fashion, male and female participants of Moose and Gurunsi origin cited similar, interrelated factors influencing the selection of shea trees in cultivated fields. Specifically, spacing, productivity, and shading effects are primary determinants for the conservation of specific shea specimens on farmed lands. Shea tree mapping and nearest neighbour analyses substantiated the fact that shea tree populations growing in cultivated

fields are rarely clustered, in contrast to those found in the brush or in fallows. Results from interviews with male and female farmers coupled with an analysis of physical parkland features indicated that both male and female agriculturalists—who reportedly share relevant information about the species with one another to guide management decisions—have shaped the contemporary state of shea parklands.

These findings point to the need to adopt a more fluid conception of how traditional ecological knowledge develops and circulates within a community. Although, as described in the traditional ecological knowledge literature, this knowledge is related to features of a person's social identity such as gender and age, it is by no means bound or held in isolation. Despite the gendered nature of natural resource use, traditional knowledge is often shared not only inter-generationally, but also through daily interactions among spouses and other co-residents. As a result, men and women can acquire a familiarity of valuable species that exceeds the knowledge they have developed through personal observation and species' use. The case of shea suggests that information sharing about valuable natural resources may be more common within the household than previous work on African agroforestry has led us to believe.

Of direct consequence for the sustainability of shea butter projects, in the rest of the chapter I examined the population structure of Prata's shea parklands, comparing shea populations across five land types and uses: farmed Gurunsi fields, Gurunsi fallows, farmed Moose fields, farmed FulBe fields, and brush areas. I demonstrated that Gurunsi participants maintain many small shea specimens and high shea tree densities in their fields, which signals favourable prospects for shea tree regeneration in their cultivated lands. In turn, Moose migrants retain slightly lesser shea densities in farmed fields, and few small specimens. In their fields, as in the FulBe's—where significantly fewer shea trees and virtually no small specimens are found—shea populations appear to be ageing. The fact that FulBe herders do not rely on the species to any great extent, and that Moose and FulBe migrants have insecure land tenure in my study sites does not encourage them to support the establishment of self-seeding trees that will eventually shade their crops. In contrast, in Gurunsi fallows and brush areas, a large number of small specimens and a very high density of self-seeded shea trees provide evidence of shea tree regeneration. This observation tempers studies describing the widespread degradation of shea

parklands throughout the shea belt. The relatively high density of shea trees preserved in both Gurunsi and Moose fields demonstrates that, provided that appropriate management practices are adopted, the future of local shea parklands is promising. Finally, the prevalence of small shea specimens in Gurunsi fields and fallows as well as in the brush suggests that the recent increase in shea nut harvesting described in Chapters 6 and 8 has not yet begun to affect shea tree regeneration. Yet, this remains an impending possibility that will require continued monitoring in years to come.

In sum, these findings signal positive prospects for the ecological sustainability of shea butter projects based on the shea species. Yet, these prospects will depend on the continued adoption of sustainable tree management and conservation practices among the Gurunsi. The greater retention of small shea specimens in Moose and FulBe fields would additionally enhance the species' regeneration, although these migrants' management practices bear less impact overall given the relatively small areas they farm in the region. Moreover, as the shea tree population's regeneration potential hinges on the species' ability to self-seed, a sufficient quantity of shea nuts must be left unharvested to ensure the species' reproduction. Finally, the ecological sustainability of shea projects will require a tighter control on the proliferation of semi-parasitic plants that negatively affect shea tree productivity. After all, the continued exploitation of shea butter ultimately rests in the achievement of favourable shea yields.

The analyses presented in Chapter 5 demonstrate that the feminist political ecology approach, complemented with concepts from the literature on traditional ecological knowledge, offers promise for studying local use, management, and conservation of natural resources. They illustrate that gendered power relations and the historically-contingent relationships different ethnic groups have with the shea tree guide local resource use decisions. My analyses further reveal the importance of examining how land use decisions occurring at micro scales—from the individual land manager's to his or her household's and community's—are strongly influenced by larger-scale variables such as international trends in the shea market. Finally, attention to biophysical processes and physical landscape features, coupled with socio-political analyses, uncovers essential elements about natural resource management systems. I argue that such biophysical factors—which have tended to be neglected by scholars focusing on the

politics of resource use—must figure prominently in future studies of nature-society relations from a political ecology perspective.

Turning towards the market aspects of shea, in Chapter 6 I explored the configuration of the international conventional shea nut commodity chain that draws its origins in Burkina Faso's centre-west region. This examination, which addresses the first part of my second objective, set the stage for understanding how shea butter projects affect and are affected by the dynamic, customary shea nut trade in my study sites. Findings from this chapter contribute to an assessment of the medium to long-term socio-economic prospects of these projects at the local level.

I demonstrated that local demand for shea kernels has grown in response to two evolving markets: an international market for low quality shea kernels, which are traded by Ghanaian importers and their agents, and an international market for quality shea butter based on the transformation of high quality kernels by members of the UGPPK. These markets cater to different consumers; the former integrates butter extracted from exported shea kernels into chocolate, while the latter incorporates shea butter produced in Africa into high-end cosmetics products. In both cases, leading firms located overseas control product pricing and specifications in historically-rooted trade patterns, while numerous intermediary traders involved in the commodity chains attempt to capture the greatest gains from the trade. Although they represent the most disadvantaged of the chains' participants, small-scale shea kernel vendors are not passively drawn into these commodity chains, but covertly manipulate the terms of trade in their favour in whatever ways they can.

I additionally argued in Chapter 6 that renewed market demand for shea has increased the local economic value of shea nuts and triggered intense competition among actors involved in the trade. In turn, competition has generated socio-economic changes throughout the shea nut commodity chains, including renegotiations in access rights to the valued NTFPs, the introduction of male actors in nut gathering activities, and changes in customary nut collection patterns. Tensions have arisen among different groups of collectors, and uneven gains from the shea trade have favoured indigenous over migrant women, younger swifter women over older collectors, and (new) male collectors over their female counterparts.

As a result of these changes, female UGPPK members who have traditionally been involved in the shea trade now expend greater energy to collect shea nuts, which they are frequently unable to gather in sufficient quantities to satisfy the requirements of their butter production activities. This threatens the sustainability of shea butter projects in at least two primary ways. First, Union members are forced to purchase a portion of the shea nuts needed to meet their UGPPK quotas, and to do so at high prices given the rise in the product's value. This diminishes the net revenues women retain from shea butter sales, at times rendering the entire enterprise unprofitable. Then, Union members are tempted to sell shea kernels, whose price has increased locally due to competition, on the local market rather than processing and selling shea butter to the Union.

Findings from this chapter illustrate the value of expanding traditional commodity chain analyses to explore not only the distribution of rents among nodes, but also returns to labour at specific nodes. As demonstrated above, these returns may decrease—as labour demands for shea nut collection increase, for example—even as income rises. In the case of NTFPs such as shea, returns to labour at the collector node partly depend on natural variations in tree yields that affect the local value of the resource. To the greatest extent possible, inter-annual and spatial fluctuations in yields as well as seasonality considerations must therefore be factored into chain analyses. The case of shea additionally points to the importance of considering the ways different commodity chains—such as the shea nut and shea butter chains—intersect, and how economic or other opportunities arising within one chain (such as a rise in shea nut prices) can influence the dynamics of other chains (for instance, by causing the withdrawal of UGPPK members from the shea butter commodity chain).

Adding to these considerations, I argued in Chapter 6 that the new shea nut gathering patterns described above have potential ecological repercussions. As new markets compel nut collectors to gather all accessible shea nuts, immature fruit are plucked from shea trees, and few nuts are left on the ground to germinate. As previously mentioned, this can have long-term repercussions on shea tree regeneration, further intensifying competition for a diminished nut supply. Whereas such ecological considerations are often overlooked in commodity chain analyses, my study illustrates that combining the commodity chains approach with a political ecology perspective can

bring a more nuanced understanding of the ecological consequences of a given form of trade at specific nodes.

Moving along the shea commodity chain, in Chapter 7 I examined the transformation of these nuts into butter, and the local and international trade of the ensuing butter. I answered the following two questions: first, how are the international conventional trade and alternative shea butter commodity chains that draw their origins in Burkina Faso's centre-west region configured? Then, what meanings does shea butter carry for the actors involved in the distinct shea commodity chains that draw their origins in Burkina Faso's centre-west region? This investigation revealed the prospects and limitations of participation in distinct shea butter commodity chains, with an emphasis on the material and symbolic benefits offered by Fair Trade. I argued that these benefits influence the attractiveness, success, and accordingly sustainability of the shea butter projects that promote this trade model.

I began the chapter by analysing the conventional shea butter commodity chain, which is characterized by atomized small-scale shea butter producers who sell their butter informally on the local market. The production process is strenuous and requires significant inputs in the form of water, firewood, shea kernels, and labour. The availability of these inputs differs in rural and urban areas, as shea nuts and firewood are more easily encountered in rural areas, while urban women have greater access to water. On the whole, butter processing is easier in towns such as Léo, where labour-saving technology is more readily available. In this commodity chain configuration, producers sell their butter on the local market and earn meagre returns for their labour. Buyers include local households that cook with shea butter, women who use the product in their income-generating activities, and/or intermediary traders. These last clients then resell the butter along the commodity chain, where it transits among urban Burkinabè exporters, agro-food and to a lesser extent cosmetics industries, and finally Western consumers.

In contrast, in the alternative shea butter commodity chain promoted by shea projects, butter makers sell their butter to the Union in which they hold membership. The UGPPK then sells this butter directly to domestic or international clients through Fair Trade certified or non-Fair trade certified channels. Distinct benefits accrue to producers depending on the market they supply, with women retaining substantially greater returns

when selling to the Fair Trade market. In this market outlet, producers and importers obey a set of socio-economic and environmental criteria aiming to improve producer livelihoods. Third party agencies monitor compliance with Fair Trade criteria, certify participants in the movement, and label Fair Trade products to allow consumers to distinguish the presumably ethical conditions of the commodity's production and trade. In this shorter, alternative shea butter commodity chain, women produce top quality shea butter according to standardized processing techniques promoted in shea butter projects. These techniques require more labour than traditional shea butter processing, and the use of additional inputs. Unless superior earnings offset the costs associated with these supplementary inputs—which is not necessarily the case in the non-Fair Trade certified version of the alternative commodity chain—producers may withdraw their participation from shea butter projects.

Due to the numerous changes shea projects have brought to the shea butter commodity chain, the meanings associated with the commodity's processing and trade have been altered. In both the conventional and alternative shea butter commodity chains, making butter is integral to the female sphere of activities and closely associated with womanhood. Yet, in the chain's alternative configuration, production of high quality butter for international clients, and membership in the UGPPK in the context of shea butter projects, also evoke feelings of pride, professionalism, and security among producers. These sentiments encourage women's continued participation in, and favour the sustainability of, shea butter projects.

Shea butter also assumes positive meanings in development circles, where the product embodies the notions of sustainable development, Fair Trade, and women's empowerment, among others. These powerful representations of shea butter have garnered prolonged support for projects focused on the commodity. This support has been invaluable for consolidating the shea producers' Union, developing the capacities of Union members, achieving Fair Trade certification, and securing overseas markets for the product. Together, these achievements promote the sustainability of shea butter projects.

Finally, on the consumption end, shea butter is associated with the natural, the exotic, and the socially and environmentally just. This political ecological imaginary of Fair Trade shea butter appeals to educated women in the higher income bracket in the

Global North, who are also the biggest consumers of cosmetics and Fair Trade products in general. Their growing interest and confidence in the product bodes well for the sustainability of shea butter projects. Nonetheless, particularly fickle consumer tendencies in the cosmetics market temper the long-term prospects of this market niche.

The commodity chain analysis I performed in Chapter 7 underscores the importance of considering the symbolic dimension of commodities that contributes to shaping commodity-specific production-consumption linkages. In the case of shea, this perspective sheds light on some of the reasons why female producers choose to participate in the alternative shea butter commodity chain (and in shea projects more generally), why NGOs focus their efforts on the specific commodity, and why female consumers in the Global North purchase the fairly traded product. Essentially, then, this form of analysis—promoted by the commodity systems approach to commodity chain analysis—illustrates the very reasons underlying the chain's existence. Moreover, examining the meanings imbued in the shea butter commodity chain helps us understand how horizontal factors such as the gender of Fair Trade shea butter producers and consumers contribute to shaping commodity chain dynamics. Lastly, this type of analysis reveals how a tropical commodity, such as shea butter, with a long history of international trade can come to occupy new product niches—in this case as an ingredient in cosmetics—and adopt new commercial pathways, such as those based on Fair Trade.

In Chapters 8 and 9, the final results and analysis chapters, I drew upon the sustainable livelihoods perspective to revisit the issues discussed above and integrate these with additional findings influencing the sustainability of shea butter projects in the centre-west region of Burkina Faso. In pursuit of my third objective, the questions I addressed in Chapter 8 were twofold. First, I asked: what are the effects (if any) of shea butter projects on the financial capital of female shea producers, their households, and communities in the centre-west region of Burkina Faso? Then, what are the similarities and differences in these effects along the rural-urban continuum in the centre-west region of Burkina Faso? Continuing where Chapter 8 leaves off, in Chapter 9 I addressed the following four related questions: first, what are the effects (if any) of shea butter projects on the social and human capital of female shea butter producers, their households, and communities in the centre-west region of Burkina Faso? Second, what are the physical

capital effects (if any) of shea butter projects on participant communities in the centre-west region of Burkina Faso? Third, what are the ecological effects (if any) of shea butter projects in the centre-west region of Burkina Faso? Finally, as a crosscutting question, I ask: what are the similarities and differences in the social, human development, and physical effects of these projects along the rural-urban continuum in the centre-west region of Burkina Faso? Examining the effects to date of shea butter projects helped me assess the long-term prospects of these projects in my three study sites.

Key findings from these two chapters were that project effects differ across the rural-urban continuum, as well as across ethnic, gender, and socio-economic groups. Likewise, women from different ethnic and socio-economic groups participate in shea butter projects to a different extent. Whereas Gurunsi women dominate among Union members and leaders, Moose women remain poorly represented within the UGPPK.[204] Then, whereas poorer women from Léo are the town's primary project participants, in rural areas women from all wealth categories (all of whom remain poor) partake in the projects. I explored some of the variables underlying these patterns, including the weak access rights migrants have to natural resources, processes of social exclusion, and pull-factors drawing poorer women to the projects.

My analyses illustrate the importance of exploring the processes of differentiation occurring *within* the 'community' of shea butter producers, rather than treating Union members as a homogeneous group. Indeed, the case of shea illustrates that new economic opportunities arising—or not—in the context of development projects are mediated by existing place-based and historically-contingent power relations. Hence, NGO interventions such as those based on shea will not benefit all segments of a sub-population (such as all female shea butter producers) to the same extent. The prospects these interventions bring are likely to be captured locally by those already in a privileged position (such as indigenous producers) at the expense of more marginalized groups of society (such as migrant women). Design and analyses of development projects must therefore be attentive to the local power asymmetries that affect the distributional outcomes of these interventions.

[204] FulBe women, who are herders and do not traditionally have a close association with shea, do not process shea butter or participate in shea projects. They were therefore not included in these particular analyses.

Chapters 8 and 9 were structured around the effects of shea projects on each of the five capitals comprising the asset pentagon in sustainable livelihoods frameworks. In terms of financial capital, analysed in Chapter 8, the most significant project outcome is to provide Union members with lump sums of money. These lump sums allow producers to diversify their livelihood activities all the while specializing in the shea trade. UGPPK returns are also spent on basic necessities, children's school expenses, and are tied up in different forms of savings, among other investments. Yet, while Union members appreciate these investment opportunities, many of the UGPPK's members are not actually earning superior incomes, measured annually, since joining the Union. This is especially true for rural producers, who in 2005-2006 earned 12 times less than the annual shea-derived revenues of their urban counterparts. Indeed, in addition to securing a larger proportion of the non-Fair Trade certified contracts, urban producers have been disproportionately capturing Fair Trade contracts that offer women superior returns on their labour. Fair Trade does favour a more transparent and equitable system for allocating orders among the Union's constituent GVFs, but this system requires further refining. Despite their smaller returns, rural producers continue to sell to the UGPPK as these sales represent one of the only means to acquire cash in villages, and perhaps women's only opportunity to acquire money in a lump sum. This finding points to the importance of unravelling the 'financial capital' facet of the asset pentagon, bearing in mind not only the overall sums earned by producers, but also the timing of this income, the ways producers access this income (as smaller, periodic payments or as lump sums), as well as other contextual and cultural considerations.

In Chapter 8 I further argued that remuneration from sales to the UGPPK must be weighed against the opportunity costs of participation in shea projects. These costs include the diversion of labour from other livelihood activities to the production of large quantities of shea butter for sale to the Union, lost investment opportunities due to delayed payments from the Union, and considerable time commitments involved in maintaining Union membership, among others. These costs, which are particularly significant for women unable to mobilize additional labour or those earning small amounts from shea projects, may deter producers from project participation.

Aside from their financial effects, some of the projects' most positive outcomes relate to the social capital of participating producers and to other social effects. These outcomes were examined in Chapter 9 where I argued that on the whole, projects have strengthened intra- and inter-village bonds among Union members. Relationships fostered by the UGPPK have helped shea producers morally, financially and physically in pursuit of their livelihood activities.

Shea butter projects have also improved the relationships between producers and their spouses. A few notable exceptions occurred when shea projects interfered with established gender roles in ways that favoured women. For instance, husbands of the Union's executive officers complained that, since the advent of shea projects, their wives have failed to fulfil some of their domestic responsibilities, and have gained assurance and influence, thereby becoming less docile. By and large, however, the pressing economic needs of member households encourage men to support their wives' participation in shea butter projects. When women carry out some of the basic financial responsibilities traditionally assumed by men with their approval, male spouses are pleased and commend the projects. In these instances, however, primary project beneficiaries may be male spouses rather than Union members themselves, who provide the labour of shea processing. This does little to 'empower' women and can discourage them from partaking in the projects.

The renegotiation of conjugal financial responsibilities I observed in this case study highlights the need to examine the power relations that determine how financial capital is allocated within the household. This requires extending analyses beyond an examination of producer revenues to consider the investments producers are making with their income. I demonstrated that doing so offers a deeper understanding at the micro scale of who actually benefits from new economic opportunities, such as those arising in the context of shea projects, the ways in which they benefit, and if relevant at whose expense.

In terms of human capital, also examined in Chapter 9, both female and male participants recognize that projects have significantly improved women's intellectual and emotional lives, particularly in Léo. Projects have stimulated women and developed their capacities. Producers feel proud to have been formally trained in butter production, and

have gained the respect of their peers for having received—most of them for the first time—a form of schooling. In Léo, women spend time at Union headquarters where they are exposed to new ideas, people, and technologies through the projects. In contrast, in village areas, shea projects have had lesser effects on the human capital of participant producers, save the GVF leaders. On the long-term, however, additional human development effects in the three study sites will derive from the opportunity children have to attend school as a result of their mothers' UGPPK remuneration. These effects all favour women's interest in shea butter projects, and thus project continuity.

In Chapter 9 I further argued that one of the most interesting outcomes of shea projects has been the positive influence the development of the Union's physical capital has had on the community of shea producers. The creation of Union headquarters in Léo, where women meet to use butter processing machines and facilities, has fostered close ties among producers and created a female-controlled space. This observation demonstrates the need to carefully explore interactions among the five types of capitals, and to encourage constructive synergies between capitals through well-planned interventions. The acquisition of labour-saving technology has also reduced the physical demands and time involved in shea processing in Léo. In contrast, rural areas continue to lack this equipment. As the Union's machines and buildings are some of the rare material assets in women's name in Burkina Faso, the meanings they carry for female producers compound their practical benefits.

To date, shea projects have had ambiguous outcomes on the natural capital of producers and their communities. Despite increasing farmers' incentives to conserve shea trees, projects may—on the long term—curtail the regeneration of shea trees by leading to a rise in shea nut collection. As fewer shea nuts are left on the ground to germinate, the self-seeding potential of this naturally occurring species becomes questionable. The production of large quantities of butter additionally demands significant amounts of firewood and water and generates undesirable environmental by-products. In this respect, I proposed in Chapter 9 that appropriate technologies can help reduce the negative outcomes of shea projects on local natural resources, and favour project sustainability.

In light of the above findings, I concluded that, primarily due to their social and human development dimensions, shea projects are highly beneficial, particularly for

urban Union members. In promoting many desirable livelihood outcomes and increasing the overall asset stock of participating producers over time, while promoting a favourable balance among these capitals, shea projects demonstrate promising sustainability prospects. Yet, their financial effects remain meagre in rural areas, where women are most in need of additional income. In those areas, participation in shea butter projects may owe as much to the lack of alternative income-generating opportunities as to the benefits projects provide.

In sum, this case study on shea contributes a nuanced understanding of gendered livelihoods among small-scale producers in the Global South undergoing a process of global economic integration. Through its focus on an indigenous tree species growing in agroforestry parklands, it advances our understanding of the reasons why local people continue to exploit NTFPs that promise low returns to labour. These reasons extend beyond economic considerations, and include the use value of these products, the dearth of opportunities available to rural savanna dwellers to make ends meet, but also the meanings associated with the NTFP, which is profoundly integrated in the local culture, lifestyle, and sense of identity. This study further calls attention to the need for micro-scale analyses that extend beyond the local village level to examine phenomena occurring within the household and at the individual producer sphere. Such analyses are required to expose the distinct aims and opportunities individuals and households face, the heterogeneous nature of relationships within a 'community', and the ways these factors affect the variety of local livelihoods. As I have shown, these considerations influence the sustainability of shea butter projects. In the following section, I detail additional factors that bear upon overall project sustainability.

10.3 Additional Considerations for a Global Assessment of Project Sustainability

Expanding upon the above discussion, I propose that the sustainability of the UGPPK enterprise hinges not in the continuation of NGO-led shea projects over time, but rather in their gradual *withdrawal* from the centre-west region of Burkina Faso. To date, the ability of shea butter producers to produce top quality shea butter within set deadlines, develop a strong and relatively transparent Union structure, maintain Fair Trade

certification, and transact with international clients has hinged to a large extent on NGO support. Over time, ensuring the success of the shea producers' Union will require having sufficient capabilities at the local level to maintain and expand upon these achievements. Sooner or later, as donor tendencies shift and NGO projects come to an end, the Union will have to gain autonomy.

Given that UGPPK members lack the educational, business and administrative skills to singlehandedly run an enterprise of the Union's size and complexity, hiring a qualified and honest general manager will be a key step towards sustaining the Union. According to the UGPPK's present general manager, whose salary is paid by the leading NGO, the Union will have to sell 150 tonnes of shea butter, of which 100 tonnes will have to enter Fair Trade markets, to afford hiring such a person and meet its minimum threshold of profitability (A. Tagnan, November 1, 2006). The sharp rise in the Union's shea exports—from 58 tonnes of non-Fair Trade certified butter in 2004-2005 to 142 tonnes of butter exported in 2009-2010, including 18 and 17 tonnes going to the high return organic and Fair Trade markets, respectively (A. Tagnan, June 24, 2010)—suggests that the enterprise is moving in the right direction to break its financial dependency on the NGOs that birthed it.

Sustainability prospects for the UGPPK are enhanced by the fact that it was the first association of shea butter producers to acquire its Fair Trade certification. As such, it is one of the best-known associations in the sector and has been able to capture emerging Fair Trade markets. Yet, these more remunerative outlets for shea butter remain limited even for their participants, and may be altogether inaccessible to newly certified associations. Raynolds et al. (2004) explain that this also applies to new associations participating in other sectors of the Fair Trade market. Indeed, a greater number of associations in the Global South now vie for increasingly saturated markets whose quality requirements are constantly on the rise.

Despite entailing drawbacks in terms of the gains to be made in Fair Trade contracts, the limited capacity of this market outlet may also carry advantages for the Union and its constituents. For one, it has encouraged the UGPPK to pursue a diversity of markets for its product, including the high-return certified organic outlet. This diversification reduces the Union's vulnerability to shifting consumer tendencies and

strengthens its sustainability prospects. Interestingly, the principal of Prata's elementary school remarked that growing Fair Trade markets could also cause problems, as faced with their prospects, nobody would choose to cultivate subsistence crops anymore (Marc Ouédraogo, January 17, 2007). His point is well taken. The fact that women's participation in the Union represents only one facet of their diverse livelihood portfolios—within which subsistence agriculture remains the foundation—reduces their dependency on unpredictable shea butter markets and strengthens the resilience of their livelihoods.

Although for the time being Fair Trade markets remain limited, the prospective growth of alternative shea butter markets appears promising. Given the very large mark up for shea butter in the cosmetics industry, companies may be able to offer producers superior remuneration without significantly infringing upon their own profit margin. In my own experience running a small-scale Fair Trade shea butter company (discussed in Chapter 4), I became critically aware that the largest fraction of the price paid for imported shea butter is spent on transportation rather than primary commodity costs, even when meeting Fair Trade price requirements. Moreover, additional costs (packaging, marketing and research and development, for instance) far outweigh the relatively minute sums spent on shea butter as a product ingredient. The additional sums spent on doubling producer remuneration, should cosmetics companies wish to do so, may thus be absorbed by the importer and can be offset by the positive image the company projects when partaking in Fair Trade. Another consideration is that many cosmetics companies presently purchase shea butter from Western agro-industries that import and industrially-transform shea kernels. Direct butter purchases from producer associations could provide these cosmetics firms with additional price savings all the while offering producers interesting returns on their labour (Greig 2006). Finally, the fact that women from high income brackets are the primary consumers of both Fair Trade and cosmetics products bodes well for fairly traded shea butter.

In sum, I contend that projects are sustainable due to their accretion of the overall stock of financial, social, human, and physical capital of participating producers, households, and communities. Natural capital effects are somewhat ambiguous, but on the whole do not seem to jeopardize project sustainability. Provided that appropriate

measures are taken to address the projects' limitations, alluded to in previous sections and discussed below, the Union enterprise seems well suited to enrich the sustainable livelihoods prospects of female shea butter producers over time.

10.4 POLICY IMPLICATIONS

The above analysis permits the formulation of additional recommendations for policymakers, project managers and advocates to address the limitations and improve the sustainability of shea butter projects. First, care must be taken to spread the gains from shea butter projects more equitably across different ethnic groups and along the rural-urban continuum. Within the UGPPK, refinements in the order allocation system that presently favours urban producers, and improvements in third-party auditing of the distribution of rents, would represent first steps in this direction. More generally, serious attempts to understand the poverty and environmental concerns of shea producers must focus on the role of power relations in (re)producing these phenomena. Power relations mediate access to resources as well as the terms under which these resources are mobilized (Bebbington 1999; de Haan and Zoomers 2005). Examining these power relations at all scales is thus required to link poverty to social exclusion, to understand the distributional impacts of mediating processes on different groups, and to ensure that vulnerable populations can benefit from the opportunities emerging within the context of shea projects (de Haan 1998; Forsyth et al. 1998; Rakodi 1999).

On a different note, since the main body of fieldwork for this study was carried out in 2006 and 2007, the Union has considerably grown. Whereas at the time, it encompassed 1200 female producers and 33 GVFs, in 2010 its membership surpasses 3000 women. This rapid growth reflects the benefits the association has provided to member producers, who have shared their experiences with neighbouring villagers that have then sought Union membership. As the number of GVFs constituting the Union has risen to 55 in 2010, however, so too has the difficulty of running the enterprise (A. Tagnan pers. comm., January 2010). Moreover, many benefits have become more diluted among the Union's numerous members. As more women additionally adhere to participant GVFs, the stake each member has in her group's performance may diminish, and internal dynamics become more complicated. Yet, because the UGPPK's order

allocation system depends on each GVF's track record, it is crucial that all GVF members feel motivated and strongly vested in their group to meet their production quotas. In light of these issues, creating smaller GVFs, comprising 20 or so members, and limiting the growth of the Union would favour the Union's sustainability.

In terms of human capital, educating individual members about issues related to the Union, product specifications, and existing market niches would be valuable. This can be achieved by working closely with producer assemblies and producing used-friendly (illiterate) and inexpensive learning tools (Mendez 2002). A training session granting new and existing members a greater understanding of Fair Trade and situating them within the trade network would also be appropriate. Including male spouses in these sessions could enhance their own appreciation and support of shea butter projects. The establishment of a permanent external agency facilitating market information and services would provide an additional valuable resource for the UGPPK and other shea producer associations (Page and Slater 2003). In a different vein, dietary changes, including changes in shea butter consumption, should be monitored within producer households to assess the effects of shea butter projects on food security. Lastly, the timing and size of UGPPK orders must be adjusted to avoid overburdening producers during the agricultural season.

Improving the timing of Union orders would also improve the financial benefits members retain from butter sales. Ideally, clients should provide sufficient notice of their purchasing intentions to allow producers to acquire shea kernels when they are in season. This would minimize production costs and increase producer returns. Monetary, social, and organizational costs of participation in alternative markets can be further alleviated by implementing a dual seal for commodities produced according to organic and Fair Trade standards (Mendez 2002). Moreover, in Northern countries, government support for importers can augment their incentives to distribute Fair Trade and organic goods, and create more remunerative opportunities for UGPPK members and other producers. Last but not least, delays in payment and financing difficulties, which discourage growers from selling their product to the UGPPK, must be addressed. As discussed in previous chapters, producers invest their assets or acquire informal credit to produce large quantities of shea butter for the Union. They then have to wait months for Union

remuneration, during which time they are particularly vulnerable to shocks and stresses. Although Fair Trade contracts technically offer pre-financing, in practice the amount advanced does not reach producers in a timely fashion, but is initially used to cover the transport costs of shea butter to its international destination. This issue might be resolved to some extent as the Union acquires a working-capital fund and can promptly distribute the pre-financing to its members. Another potential solution would see the Union acquire and stock large quantities of shea kernels when they are in season, to make these available on credit to shea butter producers during butter production campaigns. The cost of these kernels could then be deducted from the producer's remuneration, as it is when members use Union machinery in Léo (A. Tagnan, January 2007). Government credits and grants, as well as low-interest loans from banks or partner importers should also be promoted.

Next, to preserve the local stock of natural capital, parkland conservation programs must collaborate with local farmers whose traditional ecological knowledge can provide invaluable insights about shea. Then, partnerships among researchers, extension agents, and farmers are recommended to control the *Tapinanthus* population, which decreases shea yields and can cause tree mortality. These partnerships can also play a role in ensuring the species' regeneration, a *sine-qua-non* condition of project sustainability. At a most basic level, tenure considerations must be addressed in any arboreal conservation initiative.

Finally, in terms of physical capital, the creation of additional female spaces that offer a comfortable and safe work environment, while favouring gatherings and exchanges, is recommended. Serious efforts on behalf of the aid community should also aim to improve returns to women's shea processing labour by equitably disseminating appropriate technologies that will permit butter production with fewer time and labour inputs. Unless these returns improve, shea projects—which hinge upon women's production of large quantities of quality butter—will perpetuate the exploitation of women's labour behind the veil of international aid.

10.5 Closing Remarks

In closing, it is worth stressing once more that the financial benefits shea butter projects have offered to date, particularly to their rural participants, are primarily attractive due to the lack of alternate economic options these women face. As mentioned earlier, Fair Trade contracts aside, most producers invest an enormous amount of labour in shea butter production to earn very meagre sums. As such, although projects may help women cope with dire economic conditions, earning approximately 67.6 f CFA ($CAD 0.143) per hour when selling butter to the UGPPK will not 'lift women out of poverty' as donors would hope. Nonetheless, in conditions of utter poverty, money is indispensable when goods need to be bought, no matter the labour costs. In fact, participation in the Union's non-Fair Trade certified shea butter orders is only worthwhile economically if women's labour is considered to be nearly free. Unless their returns on labour increase, women may lose interest in shea projects if faced with the opportunity to carry out alternative income-earning activities that do not require the colossal labour inputs of shea butter production.

Although butter processing is considered a value-added activity, given the low returns it tends to provide on women's labour it is worth asking who this value is added for. Seen under a certain light, shea butter projects may appear to be more favourable to other stakeholders than to the producers they are designed to support. For one, shea projects provide international companies with a strong structure with which to transact, and allow these firms to inexpensively acquire a quality product. All the while, multinationals can improve their public image by purchasing butter from African women, whether or not they actually respect Fair Trade pricing and principles.

Aside from cosmetics companies, women's returns from shea butter projects alleviate some of the pressures on the governments of producer countries. When partaking in Fair Trade sales, producer associations receive a social development premium that must be invested in their community's development. Despite the worthy causes these premiums support, the idea of a sum being withdrawn from the producer's remuneration to support social services is somewhat questionable.[205] For instance, in the

[205] In Fair Trade criteria, the social premium is said to be added to, rather than withdrawn from, producer remuneration. These are essentially two different ways of conceptualizing the same phenomenon.

case of the UGPPK, this social premium was spent on the schooling of orphans. Yet, many producers are themselves caring for orphans and may have difficulty sending them to school. The social premium thus embodies a normative occidental concept of solidarity, which is superimposed upon local ideas of mutual help and community development. It incorrectly insinuates that producers would not willingly invest in their community's development unless they are obliged to do so. Yet, if Western employees in Fair Trade and other organisations do not have a portion of their paycheques withheld for charity works, why should this be the case for poor producers? Moreover, shifting the burden of community development from corrupt governments or multinational companies that are allowed free reign to underprivileged producers is problematic.[206]

I have previously demonstrated that shea butter projects also redistribute financial responsibilities within the household. This begs the question of who ultimately benefits from women's labour. When intra-household resource transfers and expenditure responsibilities are taken into account, enhancing women's economic activities may result in increased male claims on female labour. That is, if women's work serves to provide for what were formerly male expenses, does participation in shea projects represent a genuine gain for female producers? Otherwise put, do projects overburden women with a labour-intensive enterprise that offers them low-remuneration while increasing their financial responsibilities?

To temper some of these political and ideological concerns, I propose that shea butter projects should not be conceptualized as a magic bullet or an exact formula for achieving poverty reduction. They cannot singlehandedly solve the complex issues of poverty and marginalization, but should instead be understood as part of a diversified development strategy. Their benefits to participating producers should be compared not with an ideal state of development, but rather with what development opportunities exist in their absence; which are sadly exceedingly few.

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[206] A comparable critique has been applied to the approach with which the World Bank has operationalized the concept of social capital. In the Bank's neo-liberal perspective, social capital is depoliticized and mobilized as a resource that can substitute for government regulation and public goods. Individual participation in associations and other social networks is thus promoted at the expense of policies and programmes to support those in need (Harriss and de Renzio 1997; Fox 1997; Fine 1999, 2001; Harris 2001; Bebbington et al. 2004; van Staveren and Knorringa 2007).

As they stand, Fair Trade and other alternative markets remain limited in scope, and their standards apply only to registered companies voluntarily engaging in these market niches. The challenge, then, lies in globally incorporating these standards, as well as wider poverty and environment-related standards, into conventional business practices through national and global regulation (Raynolds 2000; Barrientos 2000). With some political will, this would improve the prospects of engendering meaningful, sustainable livelihoods for Alimata and her fellow shea butter makers, as well as other marginalized producers in the world.

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APPENDIX I: CALENDAR OF ACTIVITIES, PHASE II OF FIELDWORK

Date	Place	Activity
29/09/2006-06/10/2006	Ouagadougou	Meet researchers from local research centers: the *Institut de l'Environnement et Recherches Agricoles* (INERA) and the *Center for International Forestry Research* (CIFOR)
07/10/2006	Léo	Attend annual UGPPK assembly
08/10/2006 13/10/2006	Léo	Become acquainted with shea producers; observe butter-making operations; informal conversational interviews with shea producers and their husbands; informal conversational interviews with shea nut and butter vendors at the market
14/10/2006-25/10/2006	Léo	Semi-structured interviews with shea producers and their husbands; informal conversational interviews with shea nut and butter vendors at the market
26/10/2006	Prata	Introductory trip: introduce myself and my project, request hospitality, meet local chiefs and villagers
27/10/2006-05/11/2006	Ouagadougou	Attend conference at the *Salon International de l'Artisanat de Ouagadougou*: '*Artisanat africain et commerce équitable'*
06/11/2006-09/11/2006	Bobo-Dioulasso	Attend conference organized by the CNRST/Pro*Karité*: '*Contrôle qualité, normalisation et certification des produits et systèmes : avantages économiques et application à la filière karité'*
10/11/2006	Ouagadougou	Meet with researchers/NGO personnel working on shea
12/11/2006-17/11/2006	Prata	Informal conversational interviews with shea producers and their husbands
18/11/2006-27/11/2006	Prata	Semi-structured interviews with shea producers and their husbands
28/11/2006-23/12/2006	Prata	Shea tree mapping with GPS in interview participants' fields and fallows, and in forested areas
24/12/2006-05/01/2007	Ouagadougou	Holiday celebrations; meet with local researchers; enter data
06/01/2007-11/01/2007	Léo	Semi-structured interviews with shea producers and their husbands; informal conversational interviews with shea nut and butter vendors at the market
12/01/2007-20/01/2007	Prata	Semi-structured interviews with Moose and FulBe migrants living in Prata
21/01/2007-29/01/2007	Prata	Shea tree mapping with GPS in interview participants' fields and fallows
30/01/2007-07/02/2007	Léo	Informal conversational interviews with shea nut and butter vendors at the market
08/02/2007-21/02/2007	Lan	Informal conversational and semi-structured interviews with shea producers and their husbands (while lodging in Léo)
22/02/2007	Léo	Host meeting with researchers from the CIFOR at the UGPPK
23/02/2007-26/02/2007	Tenkodogo	Travel and meet with the executive committee and representatives from another shea producer cooperative (*Groupement Laafi)*
27/02/2007-02/03/2007	Ouagadougou	Meet with local researchers from the INERA and the CIFOR; prepare departure

APPENDIX II: KEY INFORMANTS CITED IN THE THESIS

A. Diasso Yago	Shea butter producer and Assistant Treasurer of the UGPPK.
A. Tagnan	General Manager of the UGPPK and Project Manager of shea butter projects for Québec NGO CECI.
A. Traoré	Hired Supporting Personnel for the UGPPK.
A. Yago	Male Gurunsi community activist from Léo and interpreter for parts of my study in Léo and Lan.
B. Nébié	Male Gurunsi interpreter during parts of my study in the village of Prata
E. Guiro	Consultant for shea butter projects and former personnel at CECI. Now hired by various bilateral donor agencies.
E. Masters	Regional Project Coordinator, World Agroforestry Centre (ICRAF) in Bamako, Mali. Coordinator of various shea projects, including *ProKarité* across French West Africa and The Shea Project in Uganda.
E. Zéba	Marketing Representative of the *Laafi* women's group of shea butter producers located in Tenkodogo, south-east Burkina Faso. Son of *Laafi*'s President, M. Zéba.
F. Crélerot	Researcher previously working on shea butter and nutrition in Burkina Faso.
F. Traoré	Consultant for shea butter projects and former personnel at CECI. Currently hired by various bilateral donor agencies.
H. Diasso	Representative of the *Union Nationale des Producteurs de Coton du Burkina* (UNPCB), based in Léo
M. Bassia	Shea butter producer and Treasurer of the UGPPK
M. Briard	Project Manager of shea butter projects for French NGO *Tech Dev*
M. Ouédraogo	President of *Songtaaba*, Burkina Faso's largest association of shea butter producers, based in Ouagadougou
M. Saussey	Anthropologist and consultant working on gender issues and shea butter in Burkina Faso
M. Zéba	President of the *Laafi* women's group of shea butter producers located in Tenkodogo, south-east Burkina Faso
Marc Ouédraogo	Principal of Prata's elementary school
N. Diasso	Shea butter producer and President of the UGPPK
Y. Tomomatsu	Student researcher working on shea agroforestry in northern Ghana

APPENDIX III: SEMI-STRUCTURED INTERVIEW PARTICIPANTS: FIRST STUDY POPULATION: UGPPK MEMBERS AND THEIR HUSBANDS IN LÉO, LAN, AND PRATA

Legend
Ethnic origin: G = Gurunsi; M = Moose Wealth rank: P = poor; M = medium wealth; R = rich

Town/ Village	Neigh-bourhood	GVF number	Producer name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank	Husband's name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank
LÉO	**A**	**1**	Abibata	22/10/06	G	*	Aristide	17/10/06	G	*
			Madina	15/10/06	G		Harouna	16/10/06	G	
			Latifah	15/10/06	G		Germé	27/10/06	G	
			Asséta	15/10/06	G		**			
			Kadiga	15/10/06	G		Nouhoun	16/10/06	G	
			Fati	20/10/06	G		Rahim	16/10/06	G	
			Safi	01/02/07	G		Achille	27/10/06	G	
		2	Alizéta	20/10/06	G		Issa	17/10/06	G	
			Sadatou	20/10/06	M		Nour	17/10/06	M	
			Kadia	09/01/07	G		Suley	08/01/07	G	
			Ladi	25/10/06	G		Salif	07/12/06	G	
			Kacora	20/10/06	G		**			
		3	Mouniratou	25/10/06	G		Mathias	17/10/06	G	

Town/ Village	Neigh-bourhood	GVF number	Producer name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank	Husband's name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank
			Ourkiatou	22/10/06	G		Bassia	18/10/06	G	
			Habibou	25/10/06	G		Gérôme	18/10/06	G	
		4	Maimata	17/10/06	G		Mohamed	18/10/06	G	
			Binta	17/10/06	G		Apéwé	19/10/06	G	
			Azarata	17/10/06	G		Boucaré	18/10/06	G	
	B	**5**	Delphine	16/10/06	M		**			
			Fanta	16/10/06	M		Abdou	20/10/06	M	
			Pusga	16/10/06	M		Yahaya	22/10/06	M	
			Rakiata	16/10/06	M		Mahamoudou	19/10/06	M	
			Samira	17/10/06	M		Raissa	19/10/06	M	
		6	Timbila	26/10/06	G		**			
			Sala	26/10/06	G		**			
	C	**7**	Arainatou	18/10/06	G		Dieudonné	20/10/06	G	
			Bintou	18/10/06	G		Baouia	26/10/06	G	
			Justine	18/10/06	G		Aboudou	20/10/06	G	
			Mamou	18/10/06	G		Aséni	25/10/06	G	
			Rouki	19/10/06	G		Julien	20/10/06	G	
			Timpoko	19/10/06	G		Salif-Caba	25/10/06	G	

Town/ Village	Neigh-bourhood	GVF number	Producer name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank	Husband's name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank
			Zarata	19/10/06	G		Zachary	20/10/06	G	
			Ayi	25/10/06	G		**			
LAN	**D**	**8**	Pogbila	08/01/07	M	M	Fessin	12/02/07	M	M
			Téné	09/01/07	M	M	Raogo	13/02/07	M	R
			Patiendé	09/01/07	M	R	Gueswendé	15/02/07	M	M
			Abassiri	09/01/07	M	M	Hamadou	13/02/07	M	P
			Adjarax	08/01/07	M	M	Alasan	12/02/07	M	M
			Samiratou	09/01/07	M	M	Ablaye	12/02/07	M	R
			Zourata	02/02/07	M	M	Oumar	13/02/07	M	M
			Diaharatou	02/02/07	M	P	Cassoum	14/02/07	M	P
			Korotimi	08/01/07	M	M	Igounia	12/02/07	M	M
			Aminata	02/02/07	M	M	Lougman	12/02/07	M	M
			Mariam	08/01/07	M	M	Alasan	12/02/07	M	M
			Bibita	05/02/07	M	P	Pamoussa	15/02/07	M	P
			Djénébou	05/02/07	M	M	Issoufou	13/02/07	M	M
			Nana	05/02/07	M	M	Sada	13/02/07	M	M
			Célestine	05/02/07	M	M	Rasmané	15/02/07	M	M
			Safoura	02/02/07	M	P	Igounia	12/02/07	M	M

Town/ Village	Neigh-bourhood	GVF number	Producer name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank	Husband's name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank
			Poko	05/02/07	M	R	**			R
	E	**9**	Céline	27/10/06	M	M	**			
			Brigitte	27/10/06	M	--	**			
			Assétou	27/10/06	M	M	**			
			Adissa	27/10/06	M	M	**			
PRATA	**F**	**10**	Zalihatou	15/11/06	G	P	Moumouni	19/11/06	G	P
			Fatimata	15/11/06	G	R	Sidiki	15/11/06	G	R
			Awa	16/11/06	G	M	Oumarou	16/11/06	G	M
			Ourkia	16/01/07	G	M	Daouda	21/11/06	G	M
			Paraté	16/01/07	G	M	Sibdou	22/11/06	G	M
			Nassiratou	16/01/07	G	M	Ousmane	22/11/06	G	M
			Madeleine	16/01/07	G	M	**			
			Minata	17/01/07	G	R	Pierre	21/11/06	G	R
			Malika	17/01/07	G	R	**			
			Barkissa	17/01/07	G	M	Malik	22/11/06	G	M
			Nadia	17/01/07	G	P	Issouf	17/01/07	G	P
			Alimata	17/01/07	G	R	Karim	19/11/06	G	M
			Safiata	17/01/07	G	M	Kader	19/11/06	G	M

Town/ Village	Neigh-bourhood	GVF number	Producer name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank	Husband's name (pseudonymn)	Date of interview (dd/mm/yr)	Ethnic Origin	Wealth Rank
			Zalissa	19/01/07	G	M	Lassané	19/11/06	G	M
			Salia	19/01/07	G	M	Suleyman	21/11/06	G	M
			Salamata	19/01/07	G	R	Rasak	21/11/06	G	R
			Marguerite	19/01/07	G	R	Salifou	21/11/06	G	R
			Azéra	19/01/07	G	P	Amadou	20/11/06	G	P
			Zénabou	20/01/07	G	M	Abdou	21/11/06	G	P
			Salimatou	20/01/07	G	M	Tinga	21/11/06	G	P
			Maimouna	20/01/07	G	M	Kiaboré	19/11/06	G	M
			Assana	20/01/07	G	M	Ismael	19/11/06	G	M
			Roukiétou	22/01/07	G	M	Sayouba	23/11/06	G	M
			Thérèse	**	G	M	Bureima	22/11/06	G	P
			Maimounata	23/01/07	G	M	Moussa	23/11/06	G	M

* For the reasons explained in Chapter 4, wealth ranks could not be determined for Léo's producers.
** The double star indicates that the shea producer's husband had passed away or was otherwise incapable of carrying out the interview.

N.B. Due to the region's cultural makeup, there were significantly more Gurunsi than Moose women in the Union. Rather than over-sampling Moose women to ensure their equal representation in the sample, I weighted the selection process so as to include participants from a number of different GVFs, according to their geographical distribution within the town. As a result, an unequal number of Moose and Gurunsi women were included in the sample in Léo, but more women from the different regions of the town, who work in different GVFs, partook in the study.

For confidentiality purposes, the executive officers are listed but not identified in the table.

APPENDIX IVA: SEMI-STRUCTURED INTERVIEW PARTICIPANTS: SECOND STUDY POPULATION: NON-UGPPK MEMBER *SHEA NUT* VENDORS IN LÉO

Participant name (pseudonym)	Date of interview (dd/mm/year)	Gender	Ethnic origin
Martine	03/02/2007	Female	Gurunsi
Abdullay	03/02/2007	Male	Moose
Adama	03/02/2007	Male	Moose
Afiata	03/02/2007	Female	Moose
Nassi	03/02/2007	Female	Moose
Maxime	03/02/2007	Male	Moose
Boukary	03/02/2007	Male	Moose
Oumou	03/02/2007	Male	Moose
Nora	10/02/2007	Female	Moose
Caba	14/10/2006	Male	Moose
Désirée	05/02/2007	Female	Gurunsi

APPENDIX IVB: SEMI-STRUCTURED INTERVIEW PARTICIPANTS: SECOND STUDY POPULATION: NON-UGPPK MEMBER *SHEA BUTTER* VENDORS IN LÉO

Participant name (pseudonym)	Date of interview (dd/mm/year)	Neighbourhood of residence within Léo	Location of shea butter sales*
Kaima	20/02/2007	Sector 1	H
Koura	18/02/2007	Sector 5	M
Dadeley	10/02/2007	Sector 5	M
Nati	10/02/2007	Sector 6	M
Daphnée	10 and 20/02/2007	Sector 3	M+H
Mariama	10/02/2007	Sector 2	M
Dabirée	03/02/2007	Sector 6	M
Muria	03/02/2007	Sector 6	M
Katia	03/02/2007	Sector 6	M
Nohad	06/02/2007	Sector 6	M
Folashadé	06/02/2007	Sector 6	M
Marie	06/02/2007	Sector 6	M
Béa	06/02/2007	Sector 6	M
Djamila	06/02/2007	Sector 6	M
Raphaelle	06/02/2007	Sector 6	M
Jasmine	06/02/2007	Sector 5	M
Rania	06/02/2007	?	M
Roula	21/10/2006	Sector 6	M
Téni	31/01/2006	Sector 1	H
Kania	31/01/2006	Sector 5	M

*Location of shea butter sales: M = market; H = homestead

N.B. For confidentiality purposes, the single Moose woman is listed but not explicitly identified in the table.

APPENDIX VA: SEMI-STRUCTURED INTERVIEW PARTICIPANTS: THIRD STUDY POPULATION: MOOSE MIGRANTS TO PRATA

Male head of the household name (pseudonym)	Date of interview (dd/mm/yr)	Wife of the head of the household (pseudonym)	Date of interview (dd/mm/yr)	Year of migration to Prata
Raso	04/12/06	Adiata	13/01/07	2003
Ramatou	04/12/06	Rasmata	13/01/07	2005
Yaya	13/01/07	Safi	15/01/07	2004
Ouséni	13/01/07	Koulsoum	13/01/07	2002
Saidou	13/01/07	Nouria	13/01/07	1998
Moustafa	15/01/07	Adji	15/01/07	2004
Aziz	15/01/07	Sita	15/01/07	2005
Géssou	16/01/07	Aisha	16/01/07	2004
Salam	16/01/07	Koudpoko	16/01/07	2005
Issaka	16/01/07	Tibila	16/01/07	2006
Hamidou	17/01/07	Zali	17/01/07	2005
Lamoussa	17/01/07	Tinpoussa	17/01/07	2004
Arzouma	19/01/07	Affia	19/01/07	2006
Madi	19/01/07	Salamata	19/01/07	2005

APPENDIX VB: SEMI-STRUCTURED INTERVIEW PARTICIPANTS: THIRD STUDY POPULATION: FULBE MIGRANTS TO PRATA

Male head of the household (pseudonym)	Wife of head of the household (pseudonym)	Date of interview	Year of migration to Prata
Aboubacar	Sira	28/01/007	2002
Ali	Mam	28/01/007	1997
Ibrahim	Aissa	27/01/007	1986
Djibril	Affisetou	27/01/007	2000
Haissa	Ramata	27/01/007	1992
--	Yoro	27/01/007	2006
--	Alima	27/01/007	2003

APPENDIX VI: INTERVIEW PROGRAM A: FOR UGPPK MEMBERS

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom et prénom
B. Age
C. Nombre d'enfants
    i. nombre de filles et leur âge
    ii. nombre de garçons et leur âge
D. Nombre d'enfants actuellement à votre charge
E. Autres personnes à votre charge
F. Nombre d'enfants présentement scolarisés (garçons, filles)… Qui paie la scolarisation?
G. Nombre d'enfants qui contribuent financièrement et occupations (cultivateur, fonctionnaire, commerçant)
Si veuve : nombre de membres du ménage, nombre d'actifs
H. Avez-vous des co-épouses? Si oui, est-ce qu'elles produisent du beurre? Sont-elles membres de l'Union?
I. Avez-vous des animaux d'élevage (volaille, moutons, chèvres, etc.)… un vélo?… stockez-vous des céréales ou des amandes?
J. Occupations et activités génératrices de revenus : pendant l'hivernage et la saison sèche

    i. Qu'est-ce que vous cultivez dans vos champs personnels?
    ii. Est-ce que c'est pour la vente?
    iii. Connaissez-vous la grandeur de vos champs personnels?
    iv. Connaissez-vous la distance de vos champs personnels?
K. Rang occupé par la vente du beurre de karité

Questions sur le karité

1- Est-ce que votre GVF existait avant l'Union? Depuis quand? Quelles étaient les activités principales de votre GVF?
2- Est-ce que vous vendiez du beurre de karité ou des amandes de karité avant de devenir membre de l'Union? Si oui…
    a. Où?
    b. A quel prix?
    c. Combien environ par semaine ou par mois?
    d. A l'année longue?
    e. Qu'est ce que vous faisiez avec les revenus du beurre?
    f. Est-ce que vous vendez encore du karité sur ces marchés?

g. **Si non…** comment gérez-vous financièrement les périodes entre les commandes?
Si oui…
   i. Combien de beurre ou d'amandes vendez-vous et combien de revenus gagnez-vous par semaine?
   ii. Pendant quelles saisons vendez-vous du beurre?
   iii. Est-ce que vous vendez la même qualité de beurre sur le marché qu'à l'Union? Si oui, est-ce qu'il se vend bien sur le marché local?
   iv. Pensez-vous que le marché du karité a changé ces dernières années (plus ou moins de vendeuses? d'acheteurs? coûts?)

h. Est-ce que vous vendez plus ou moins de beurre de karité au total maintenant qu'avant de devenir membre de l'Union?

3- Est-ce que vous pensez gagner plus d'argent par année depuis que vous êtes membre de l'Union?
4- Combien pensez-vous gagner par année dans l'Union?
5- Qu'est ce que vous faites avec les revenus du beurre que vous vendez à l'Union?
6- Est-ce que vous payez pour certaines dépenses pour lesquelles vous ne payiez pas avant (ou que votre mari payait)?
7- Est-ce que vous donnez une partie de vos revenus du beurre à votre mari?
8- Est-ce que vous avez laissé tomber d'autres activités (e.g. agriculture, marché, cuisine, etc.) pour consacrer plus de temps à travailler avec l'Union? Lesquelles?
9- Est-ce que ça dérange votre mari ou le dérangeait au début que vous soyez dans l'Union?
10- Est-ce que vous préparez le beurre que vous consommez selon les méthodes de l'U?
11- Est-ce que la quantité du beurre que vous consommez a changé depuis que vous êtes membre de l'Union? Si vous consommez plus de beurre, est-ce que le beurre remplace une autre huile de cuisson?
12- Est-ce que vous pensez que votre adhésion à l'Union a affecté votre condition de vie et votre ménage?
13- Quels sont les aspects positifs de l'Union, incluant les aspects non monétaires?
14- D'après vous, qu'est-ce qui pourrait être amélioré par rapport à l'Union?
15- Est-ce que votre mari ou vos enfants (filles et garçons) s'impliquent dans la collecte, la production, le transport ou la vente d'amandes ou de beurre de karité, soit pour vous aider ou à leur compte?
16- Pourquoi pensez-vous que certaines femmes ne sont pas membres de l'Union?
17- D'après vous, y a-t-il autant d'arbres à karité aujourd'hui que dans le temps?
18- Connaissez-vous les arbres à karité qui produisent le mieux dans vos champs? Est-ce qu'ils sont les même d'année en année? Quelles sont leurs caractéristiques?
19- Connaissez-vous les arbres qui produisent les meilleures noix? Quelles sont les caractéristiques des noix qui donnent le plus de beurre et le meilleur beurre? Et de leurs arbres?
20- Faites-vous (ou votre mari) quelque chose pour que vos arbres à karité produisent bien? (Au besoin, demander spécifiquement :)
   a. Encercler arbre de terre (rehausser la terre autour des racines)?
   b. Couper les parasites? (lesquels, fréquence, qui décide et qui les coupe?)

c. Couper des branches? (lesquelles, fréquence, qui décide et qui les coupe?)
d. Couper d'autres arbres autour du karité (à quelle distance, etc.)?
e. Labourer et désherber autour de l'arbre pour éviter les feux de brousse?

21- Quand vous défrichez un champ, comment décidez-vous et qui décide quels arbres à karité conserver? Qui coupe les arbres non désirés et comment?
22- Est-ce que vous et votre mari vous consultez avant d'intervenir dans la gestion de l'arbre à karité?
23- Pensez-vous que la production du karité a changé au cours des dernières années?
24- Pensez-vous qu'il y a plus de parasites du karité qu'avant?
25- Est-ce qu'il y a plus de compétition pour collecter et acheter les amandes que dans le temps?
26- Qui a le droit de ramasser les amandes dans vos champs collectifs et personnels?
27- Est-ce qu'il arrive que quelqu'un d'autre ramasse les amandes de votre champ? Que faites-vous si vous trouvez quelqu'un en train de ramasser vos amandes?
28- Comment obtenez-vous vos amandes de karité?
    a. **Si vous ramassez vos amandes** : Où ramassez-vous vos amandes?
    b. Ramassez-vous le même nombre de noix de karité maintenant qu'avant de devenir membre de l'Union?
    c. Est-ce que toutes les amandes sont ramassées sous les arbres dans vos champs? Et en brousse?
    d. **Si vous achetez vos amandes** : Vous achetez quelle proportion de vos amandes?
    e. Comment financez-vous l'achat de grosses quantités d'amandes?
29- Mis à part le beurre de karité, est-ce que l'arbre à karité vous sert à autre chose? Spécifiquement :
    a. les feuilles
    b. l'écorce
    c. les racines
    d. la sève
30- Si vous gagnez bien avec une commande, qu'est-ce que vous aimeriez faire avec les revenus?
31- Savez-vous où va le beurre de karité que vous vendez à l'Union ou qui le consomme?

Merci beaucoup.

APPENDIX VII: INTERVIEW PROGRAM B: FOR UGPPK MEMBERS'

HUSBANDS

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom, prénom
B. Age
C. Nombre d'épouses
D. Nombre d'enfants
E. Nombre d'enfants actuellement à votre charge
F. Autres personnes à votre charge
G. Nombre d'enfants présentement scolarisés (garçons, filles)… Qui paie (mari ou femme?)
H. Nombre d'actifs (personnes avec revenus) dans le ménage
I. Activités génératrices de revenus/occupations : primaires (durant hivernage), secondaires (pendant saison sèche)
    i. Quelle est la grandeur de vos champs?
    ii. Avez-vous des animaux de traction?
    iii. Utilisez-vous du fumier pour cultiver?
    iv. Connaissez-vous votre rendement annuel par produit?
    v. Obtenez-vous du crédit pour cultiver?
J. Avez-vous des animaux (bœufs, petits ruminants, etc.), une charrette, un vélo, une radio, une moto, un toit en tôle?
K. Si vous êtes un migrant, depuis quand êtes-vous ici et comment avez-vous acquis la terre?

Questions sur le karité

32- D'après vous, y a-t-il autant d'arbres à karité aujourd'hui que dans le temps?
33- Connaissez-vous les arbres à karité qui produisent le plus dans vos champs? Est-ce qu'ils sont les même d'année en année? Quelles sont leurs caractéristiques?
34- Pensez-vous que la production du karité a changé au cours des dernières années?
35- Pensez-vous qu'il y a plus de parasites du karité qu'avant?
36- Connaissez-vous les arbres qui produisent les meilleures noix? Connaissez-vous les caractéristiques des noix qui donnent le plus de beurre et le meilleur beurre? Et des arbres d'où proviennent ces noix?
37- Faites-vous (ou votre femme) quelque chose pour que vos arbres à karité produisent bien? (Au besoin, demander spécifiquement :)
    a. Encercler arbre de terre (rehausser la terre autour des racines)?

b. Couper les parasites? (lesquels, fréquence, qui décide et qui les coupe?)
c. Couper des branches? (lesquelles, fréquence, qui décide et qui les coupe?)
d. Couper d'autres arbres autour du karité (à quelle distance, etc.)?
e. Labourer et désherber autour de l'arbre pour éviter les feux de brousse?

38- Coupez-vous certains arbres à karité (quand vous défrichez vos champs ou lors de la culture)? Si oui, lesquels? Qui décide et qui les coupe (comment)?
39- Est-ce que vous et vos femmes vous consultez avant d'intervenir dans la gestion de l'arbre à karité?
40- Qui a le droit de ramasser des noix de karité dans vos champs?
41- Est-ce qu'il arrive que quelqu'un d'autre ramasse les amandes de votre champ? Que faites-vous si vous trouvez quelqu'un en train de ramasser vos amandes?
42- À part le beurre de karité, est-ce que vous tirez d'autres bienfaits de l'arbre à karité? Spécifiquement, utilisez-vous :
    a. les feuilles
    b. l'écorce
    c. les racines
    d. la sève
43- Êtes-vous content que votre épouse soit dans l'Union de productrices de beurre?
44- Pensez-vous que votre épouse gagne plus d'argent par année depuis qu'elle est membre de l'Union?
45- Quelles sont vos responsabilités financières?
46- Quelles sont les responsabilités financières de votre épouse?
47- Est-ce que les contributions financières de votre épouse ont augmenté depuis qu'elle est membre de l'Union?
48- Trouvez-vous que votre femme a laissé tomber d'autres activités (e.g. agriculture, marché, cuisine, etc.) pour consacrer plus de temps à travailler avec l'Union? Si oui, lesquelles?
49- Est-ce que l'adhésion de votre femme à l'Union a affecté votre relation avec votre femme?
50- D'après vous, quels sont les bienfaits de l'Union?
51- D'après vous, quels sont les aspects moins positifs de l'Union?
52- Est-ce que les hommes que vous connaissez apprécient l'Union?
53- Est-ce qu'il y a des hommes qui s'impliquent dans la filière du karité? Est-ce que vous vous êtes déjà impliqué, soit à votre compte ou pour aider votre femme, dans la récolte des noix de karité? Leur transport? Leur vente?

Merci beaucoup.

APPENDIX VIII: INTERVIEW PROGRAM C: FOR NON-UGPPK MEMBER

SHEA NUT VENDORS

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom, prénom
B. Age
C. Lieu de résidence
D. Activités génératrices de revenus/occupations : primaires (durant hivernage), secondaires (pendant saison sèche)
E. Si vous êtes migrant, depuis quand êtes-vous ici?

Questions sur le karité

1- Depuis quand vendez-vous des amandes de karité?
2- Vendez-vous des amandes de karité à l'année longue?
3- À quel prix les vendez-vous, selon les saisons? Comment ces prix ont-ils évolués?
4- Quelle quantité d'amandes vendez-vous?
5- Sélectionnez-vous les amandes que vous vendez selon leur qualité?
6- Où et comment obtenez-vous vos amandes? À quel prix? De qui (hommes ou femmes, groupe ethnique, etc.)?
7- Comment financez-vous l'achat de grosses quantités d'amandes?
8- Comment transportez-vous vos amandes?
9- Comment sont conditionnées les amandes que vous achetez? Et celles que vous vendez?
10- À qui vendez-vous vos amandes?
11- Avez-vous perçu des changements dans le marché du karité depuis les quelques dernières années? Si oui, lesquels?
12- Vendez-vous autre chose que des amandes de karité? Si oui, les amandes occupent quel rang en termes de revenus par rapport aux autres produits que vous commercialisez?
13- Savez-vous ce qui arrive aux amandes que vous vendez?
14- Autres commentaires ou questions?

Observation personnelle : Noter la qualité des amandes vendues.

Merci beaucoup.

APPENDIX IX: INTERVIEW PROGRAM D : FOR NON-UGPPK MEMBER SHEA BUTTER VENDORS

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom, prénom
B. Age
C. Lieu de résidence
D. Activités génératrices de revenus/occupations : primaires (durant hivernage), secondaires (pendant saison sèche)

Questions sur le karité

i. Depuis quand vendez-vous du beurre de karité?
15- Où vendez-vous votre beurre?
16- Quelle quantité de beurre de karité vendez-vous par semaine?
17- Vendez-vous du beurre de karité à l'année longue?
18- À quel prix le vendez-vous, selon les saisons? Comment ces prix ont-ils évolués?
19- Quels bénéfices tirez-vous de la vente de beurre de karité?
20- Vendez-vous autre chose que du beurre de karité? Si oui, le beurre se classe à quel rang en termes de revenus par rapport aux autres produits que vous vendez?
21- À qui vendez-vous votre beurre (grands ou petits commençants, ménages, hommes, femmes, groupe ethnique, etc.)?
22- Comment obtenez-vous les amandes que vous utilisez dans la préparation du beurre de karité? Si vous les achetez, comment financez-vous cet achat?
23- Avez-vous perçu des changements dans le marché du karité depuis ces quelques dernières années? Si oui, lesquels?
24- La qualité du beurre de karité vendu sur le marché local a-t-elle changé ces dernières années? La qualité de votre beurre a-t-elle changé?
25- Selon quelles techniques préparez-vous votre beurre de karité?
26- Consommez-vous autant de beurre de karité maintenant qu'il y a quelques années?
27- Êtes-vous dans un GVF?
28- Avez-vous entendu parler de l'UGPPK-S/Z? Si oui, pourquoi n'en faites-vous pas partie?
29- Autres commentaires ou questions?

Observation personnelle : Noter la qualité du beurre vendu.

Merci beaucoup.

APPENDIX X: INTERVIEW PROGRAM D: FOR NON-UGPPK MEMBERS, MALE MOOSE MIGRANTS TO PRATA

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom, prénom
B. Age
C. Nombre d'épouses
D. Nombre d'enfants
I. Activités génératrices de revenus/occupations : primaire (durant hivernage), secondaire (pendant saison sèche)
    vi. Quelle est la grandeur de vos champs?
    vii. Avez-vous des animaux de traction?
    viii. Utilisez-vous du fumier pour cultiver?
    ix. Connaissez-vous votre rendement annuel par produit?
    x. Obtenez-vous du crédit pour cultiver?
J. Avez-vous des animaux (bœufs, petits ruminants, etc.), une charrette, un vélo, une radio, une moto, un toit en tôle?
K. D'ou êtes-vous originaires, depuis quand êtes-vous ici et comment avez-vous acquis la terre?

Questions sur le karité

54- D'après vous, y a-t-il autant d'arbres à karité aujourd'hui que dans le temps?
55- Connaissez-vous les arbres à karité qui produisent le plus dans vos champs? Est-ce qu'ils sont les même d'année en année? Quelles sont leurs caractéristiques?
56- Pensez-vous que la production du karité a changé au cours des dernières années?
57- Pensez-vous qu'il y a plus de parasites du karité qu'avant?
58- Connaissez-vous les arbres qui produisent les meilleures noix? Connaissez-vous les caractéristiques des noix qui donnent le plus de beurre et le meilleur beurre? Et des arbres d'où proviennent ces noix?
59- Faites-vous (ou votre femme) quelque chose pour que vos arbres à karité produisent bien? (Au besoin, demander spécifiquement :)
    a. Encercler arbre de terre (rehausser la terre autour des racines)?
    b. Couper les parasites? (lesquels, fréquence, qui décide et qui les coupe?)
    c. Couper des branches? (lesquelles, fréquence, qui décide et qui les coupe?)
    d. Couper d'autres arbres autour du karité (à quelle distance, etc.)?
    e. Labourer et désherber autour de l'arbre pour éviter les feux de brousse?

60- Quand vous défrichez un champ, comment décidez-vous et qui décide quels arbres conserver?
61- Coupez-vous certains arbres à karité? Lesquels? Qui les coupe?
62- Si vous allez intervenir dans la gestion de l'arbre à karité, est-ce que vous et vos femmes vous consultez avant de le faire?
63- Qui a le droit de ramasser des noix de karité dans vos champs?
64- Est-ce qu'il arrive que quelqu'un d'autre ramasse les amandes de votre champ? Que faites-vous si vous trouvez quelqu'un en train de ramasser vos amandes?
65- À part le beurre de karité, est-ce que vous tirez d'autres bienfaits de l'arbre à karité? Spécifiquement, utilisez-vous :
    a. les feuilles
    b. l'écorce
    c. les racines
    d. la sève
66- Pensez-vous que ça vaut la peine de préserver les arbres à karité?
67- Est-ce que vous vous êtes déjà impliqué, soit à votre compte ou pour aider votre femme, dans la récolte des noix de karité? Leur transport? Leur vente? Est-ce qu'il y a des hommes que vous connaissez qui s'impliquent dans la filière du karité?

Merci beaucoup.

APPENDIX XI: INTERVIEW PROGRAM D: FOR NON-UGPPK MEMBERS, FEMALE MOOSE MIGRANTS TO PRATA

Ces entretiens sont effectués dans le cadre d'une étude sur le karité pour l'université. Nous ne sommes pas affiliés avec un organisme quelconque. Ces entretiens sont anonymes et confidentiels. Les réponses seront analysées dans leur ensemble. Merci de prendre le temps de répondre à nos questions.

Caractéristiques personnelles

A. Nom et prénom
B. Age
C. Nombre d'enfants
    iii. nombre de filles et leur âge
    iv. nombre de garçons et leur âge
F. Nombre d'enfants présentement scolarisés (garçons, filles)… Qui paie la scolarisation?
G. Nombre d'enfants qui contribuent financièrement et occupations (cultivateur, fonctionnaire, commerçant)
Si veuve : nombre de membres du ménage, nombre d'actifs
H. Avez-vous des co-épouses? Si oui, est-ce qu'elles produisent du beurre?
I. Avez-vous des animaux d'élevage (volaille, moutons, chèvres, etc.)… un vélo?… stockez-vous des céréales ou des amandes?
J. Occupations et activités génératrices de revenus : pendant l'hivernage et la saison sèche

    v. Qu'est-ce que vous cultivez dans vos champs personnels?
    vi. Est-ce que c'est pour la vente?
    vii. Connaissez-vous la grandeur de vos champs personnels?
    viii. Connaissez-vous la distance de vos champs personnels?

K. Êtes-vous membre d'un GVF?

Questions sur le karité

68- Vendez-vous du beurre de karité ou des amandes? Si oui…
    a. Où?
    b. A quel prix?
    c. Combien environ par semaine ou par mois?
    d. A l'année longue?
    e. Rang occupé par la vente de karité par rapport aux autres activités?
    f. Avez-vous entendu parler de l'UGPPK-S/Z?
    g. Trouvez-vous que le marché de karité a changé ces dernières années? *Si oui :* Pensez-vous que la formation de l'Union a affecté ce marché local?
    h. Pourquoi n'êtes-vous pas membres de l'Union?

69- D'après vous, y a-t-il autant d'arbres à karité aujourd'hui que dans le temps?
70- Connaissez-vous les arbres à karité qui produisent le mieux dans vos champs? Est-ce qu'ils sont les même d'année en année? Quelles sont leurs caractéristiques?
71- Connaissez-vous les arbres qui produisent les meilleures noix? Quelles sont les caractéristiques des noix qui donnent le plus de beurre et le meilleur beurre? Et de leurs arbres?
72- Faites-vous (ou votre mari) quelque chose pour que vos arbres à karité produisent bien? (Au besoin, demander spécifiquement :)
    a. Encercler arbre de terre (rehausser la terre autour des racines)?
    b. Couper les parasites? (lesquels, fréquence, qui décide et qui les coupe?)
    c. Couper des branches? (lesquelles, fréquence, qui décide et qui les coupe?)
    d. Couper d'autres arbres autour du karité (à quelle distance, etc.)?
    e. Labourer et désherber autour de l'arbre pour éviter les feux de brousse?
73- Quand vous défrichez un champ, comment décidez-vous et qui décide quels arbres à karité conserver? Qui coupe les arbres non désirés et comment?
74- Est-ce que vous et votre mari vous consultez avant d'intervenir dans la gestion de l'arbre à karité?
75- Pensez-vous que la production du karité a changé au cours des dernières années?
76- Pensez-vous qu'il y a plus de parasites du karité qu'avant?
77- Est-ce qu'il y a plus de compétition pour collecter et acheter les amandes que dans le temps?
78- Qui a le droit de ramasser les amandes dans vos champs collectifs et personnels?
79- Est-ce qu'il arrive que quelqu'un d'autre ramasse les amandes de votre champ? Que faites-vous si vous trouvez quelqu'un en train de ramasser ces amandes?
80- Comment obtenez-vous vos amandes de karité?
    a. **Si vous ramassez vos amandes** : Où ramassez-vous vos amandes?
    b. Ramassez-vous le même nombre de noix de karité maintenant qu'auparavant?
    c. Est-ce que toutes les amandes sont ramassées sous les arbres dans vos champs? Et en brousse?
    d. **Si vous achetez vos amandes** : Vous achetez quelle proportion de vos amandes?
    e. Comment financez-vous l'achat de grosses quantités d'amandes, s'il y a lieur?
81- Mis à part le beurre de karité, est-ce que l'arbre à karité vous sert à autre chose? Spécifiquement :
    a. les feuilles
    b. l'écorce
    c. les racines
    d. la sève

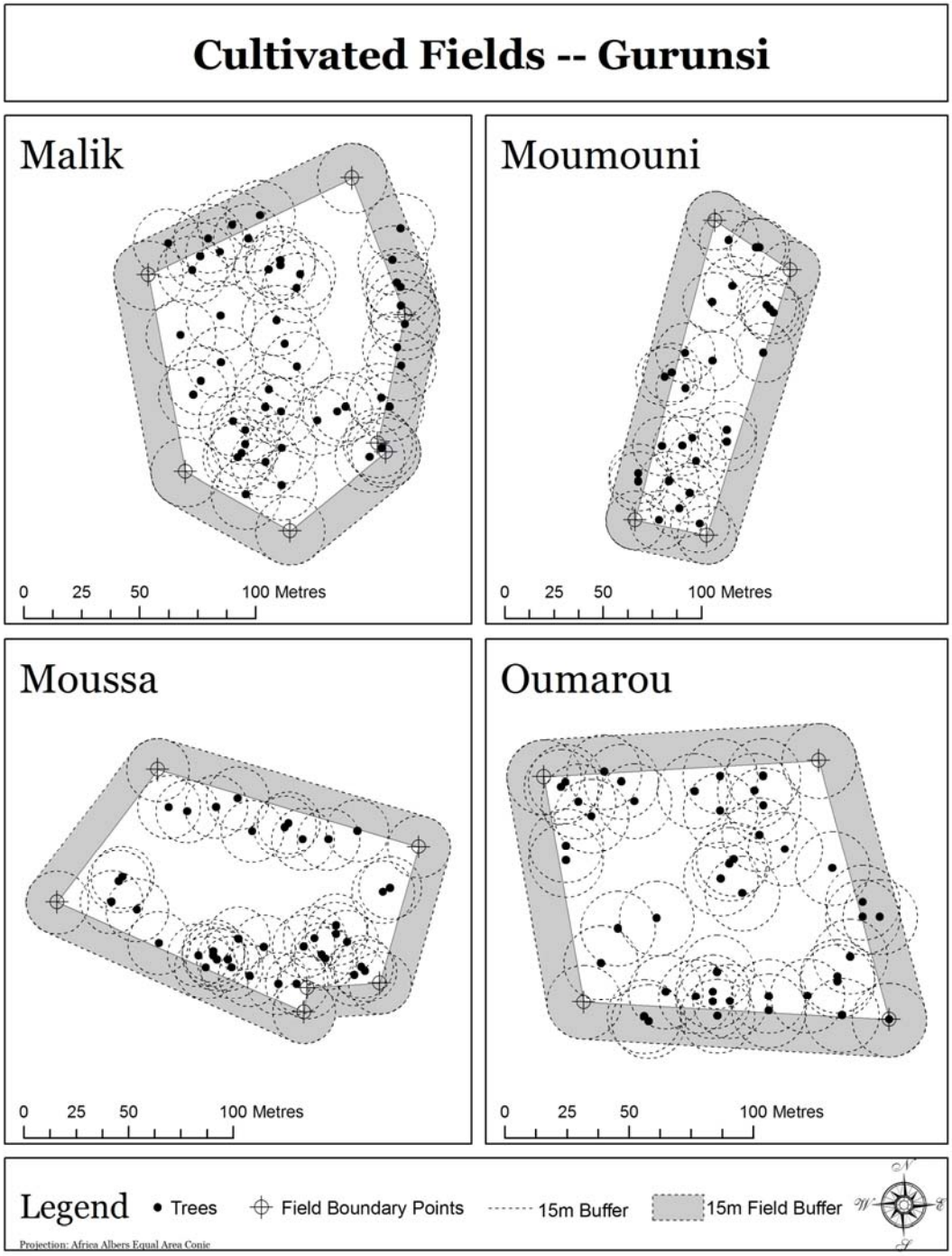
Merci beaucoup.

APPENDIX XII: LIST OF FIELDS SURVEYED IN PRATA'S CULTIVATED, FALLOW, AND BRUSH AREAS

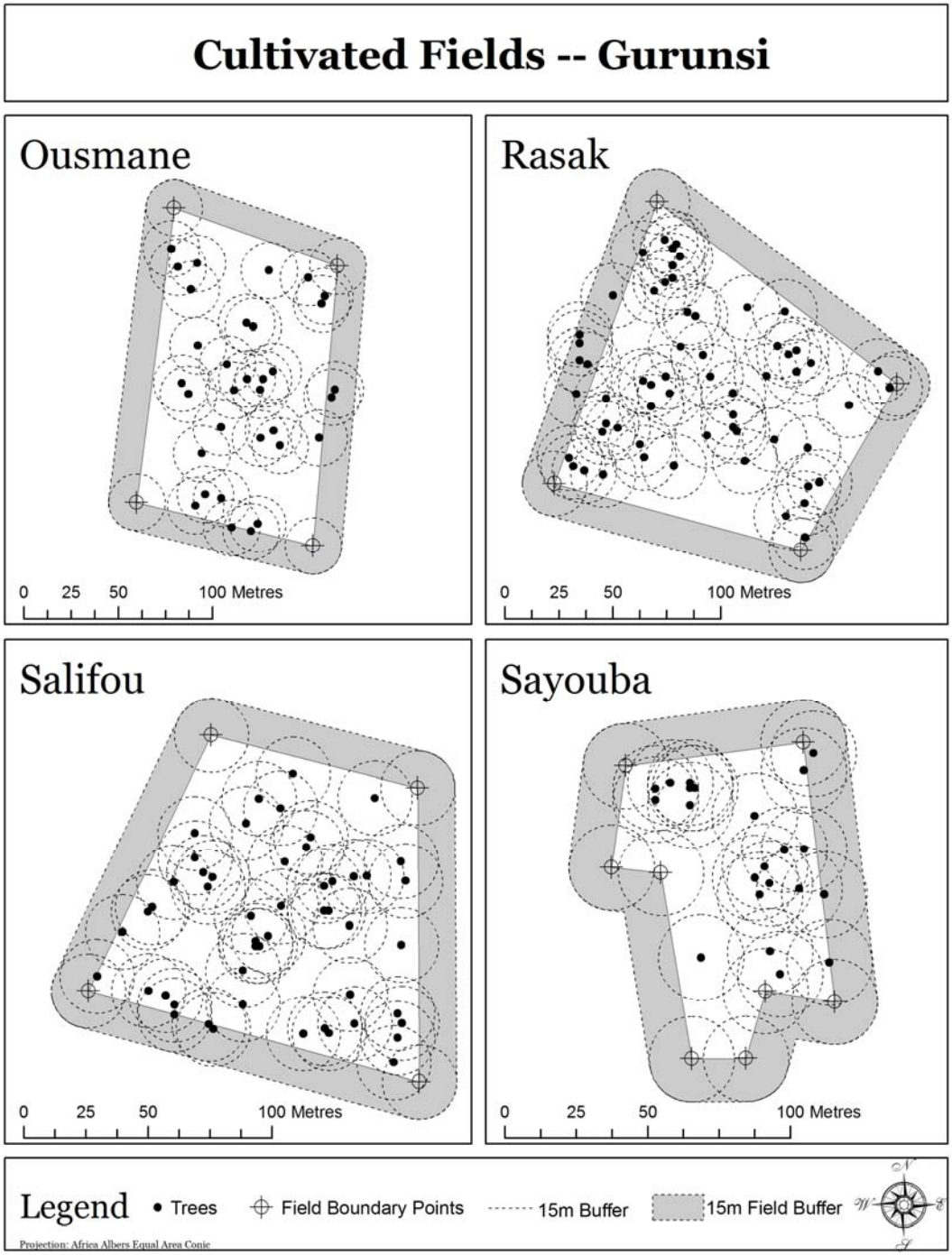
Field Type	Participant Name (Pseudonym) or Field Name	Date of Survey dd/mm/yr
Cultivated, Gurunsi	Moumouni	20/11/06
	Sidiki	16/11/06
	Oumarou	17/11/06
	Malik	30/11/06
	Issouf	17/11/06
	Karim	20/11/06
	Kader	20/11/06
	Lassané	20/11/06
	Suleyman	01/12/06
	Rasak	05/12/06
	Salifou	01/12/06
	Amadou	22/11/06
	Abdou	22/11/06
	Ousmane	22/11/06
	Kiaboré	20/11/06
	Ismael	30/11/06
	Sayouba	29/11/06
	Moussa	30/11/06
Cultivated, Moose	Raso	20/01/07
	Ramatou	18/01/07
	Yaya	18/01/07
	Ouséni	23/01/07
	Saidou	25/01/07
	Moustafa	18/01/07
	Aziz	18/01/07
	Géssou	23/01/07
	Salam	24/01/07
	Issaka	24/01/07
	Hamidou	20/01/07
	Lamoussa	20/01/07

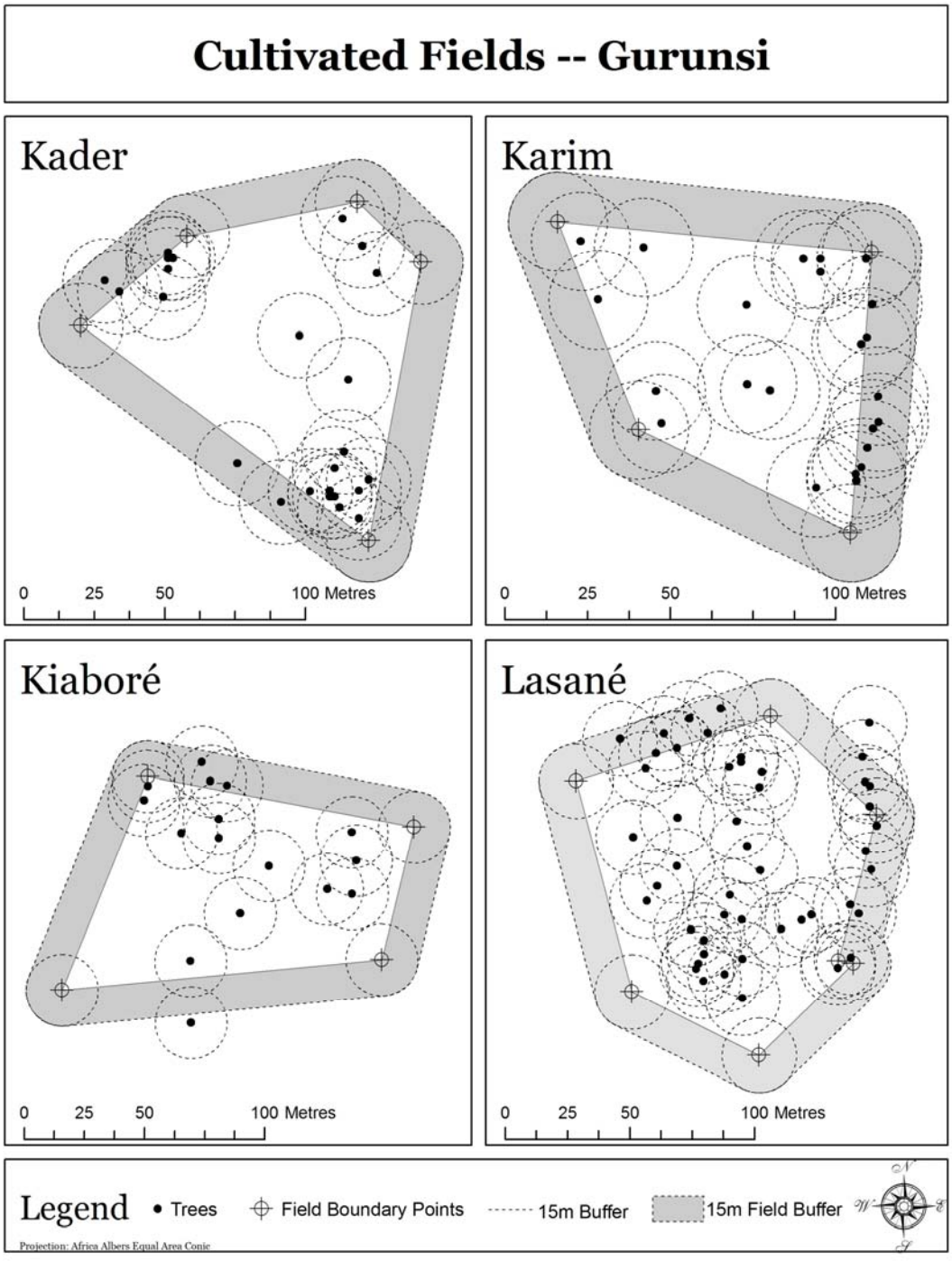
	Arzouma	20/01/07
	Madi	20/01/07
Cultivated, FulBe	Aboubacar	29/01/07
	Ali	28/01/07
	Ibrahim	27/01/07
	Djibril	27/01/07
	Haissa	27/01/07
Fallow, Gurunsi	Moumouni	04/12/06
	Sidiki	03/12/06
	Malik	30/11/06
	Issouf	04/12/06
	Karim	04/12/06
	Kader	04/12/06
	Lassané	20/11/06
	Suleyman	01/12/06
	Amadou	22/11/06
	Abdou	22/11/06
	Ousmane	22/11/06
	Kiaboré	04/12/06
	Ismael	30/11/06
	Sayouba	29/11/06
	Moussa	30/11/06
Brush	Brush 1	04/12/06
	Brush 2	05/12/06
	Brush 3	05/12/06
	Brush 4	05/12/06
	Brush 5	06/12/06
	Brush 6	06/12/06
	Brush 7	07/12/06
	Brush 8	07/12/06
	Brush 9	07/12/06
	Brush 10	07/12/06

APPENDIX XIII: SPATIAL DISTRIBUTION OF SHEA TREES IN GURUNSI FIELDS, VILLAGE OF PRATA

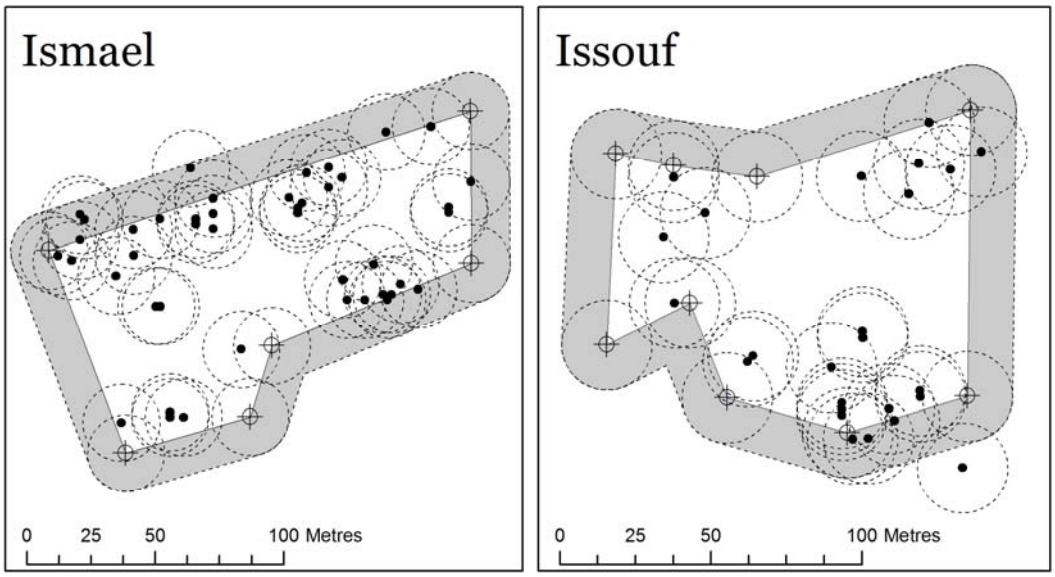


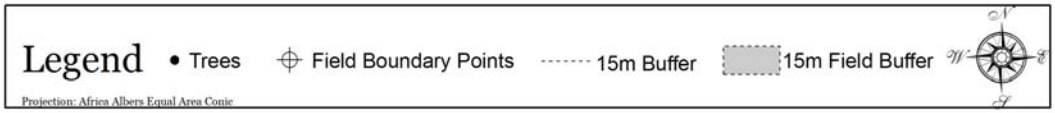

Cultivated Fields -- Gurunsi
Sidiki
0 25 50 100 Metres
Suleyman
0 25 50 100 Metres
Abdou
0 25 50 100 Metres
Amadou
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic


Cultivated Fields -- Gurunsi
Ousmane
0 25 50 100 Metres
Rasak
0 25 50 100 Metres
Salifou
0 25 50 100 Metres
Sayouba
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic

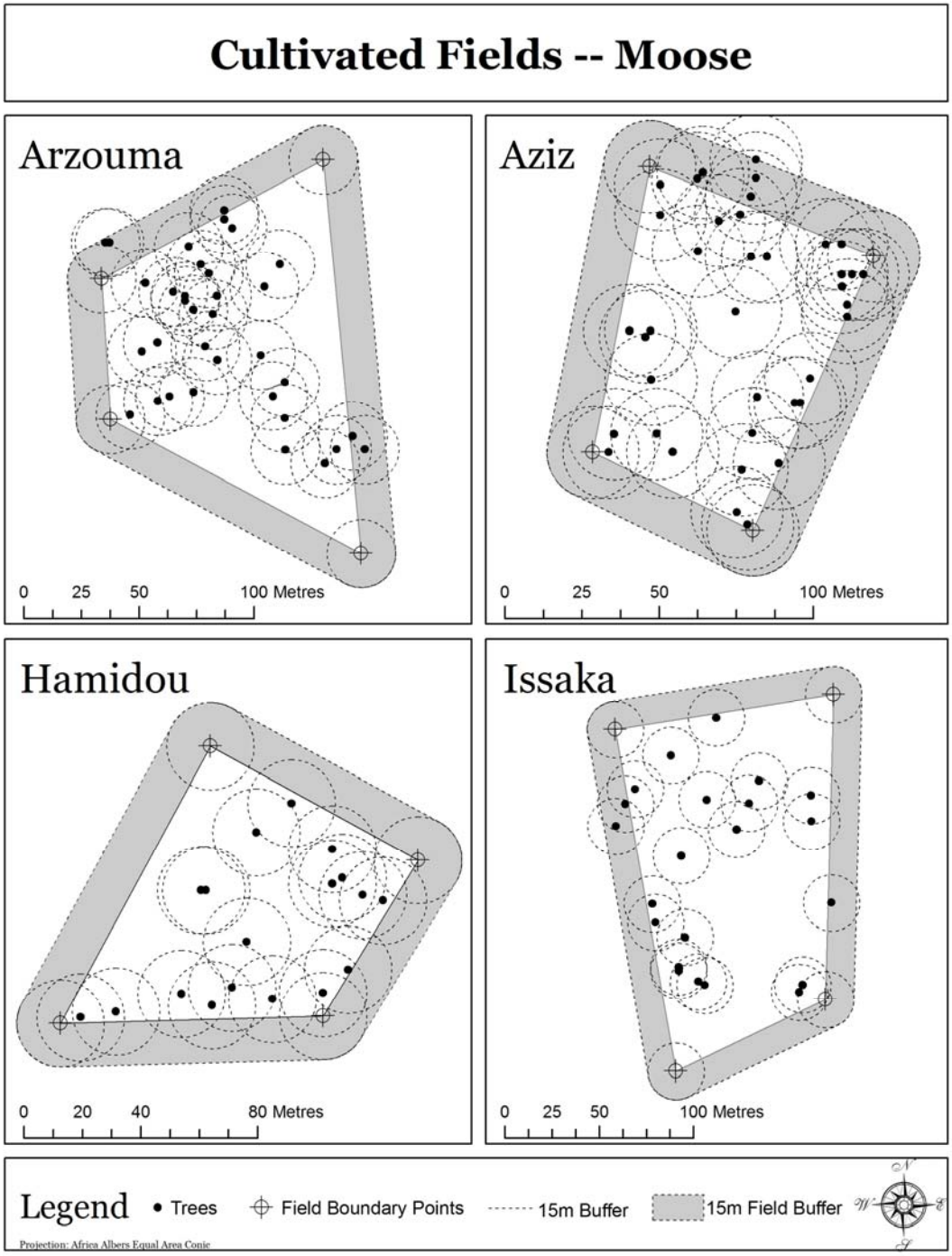

Cultivated Fields -- Gurunsi
Kader
0 25 50 100 Metres
Karim
0 25 50 100 Metres
Kiaboré
0 25 50 100 Metres
Lasané
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic

Cultivated Fields -- Gurunsi

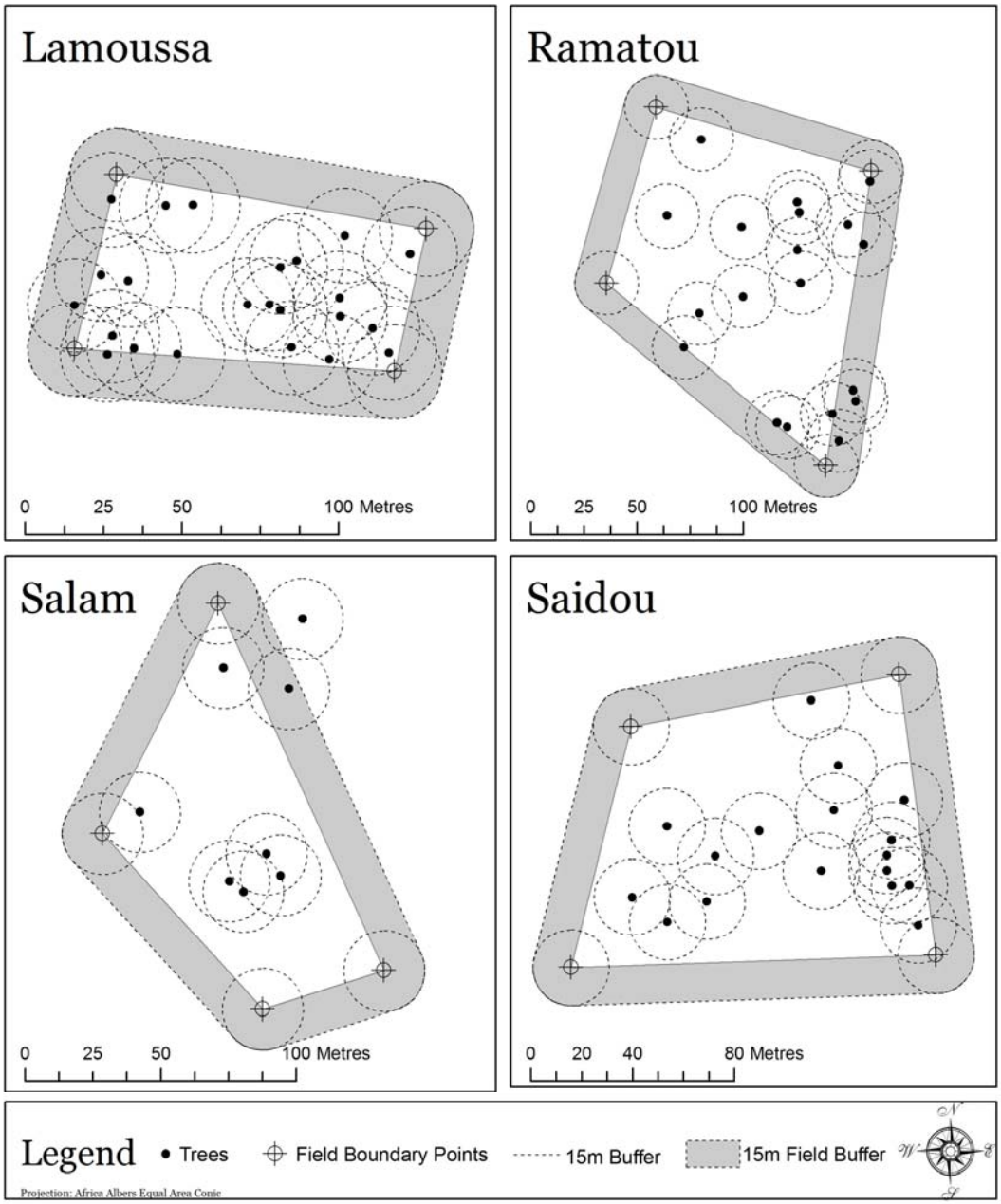


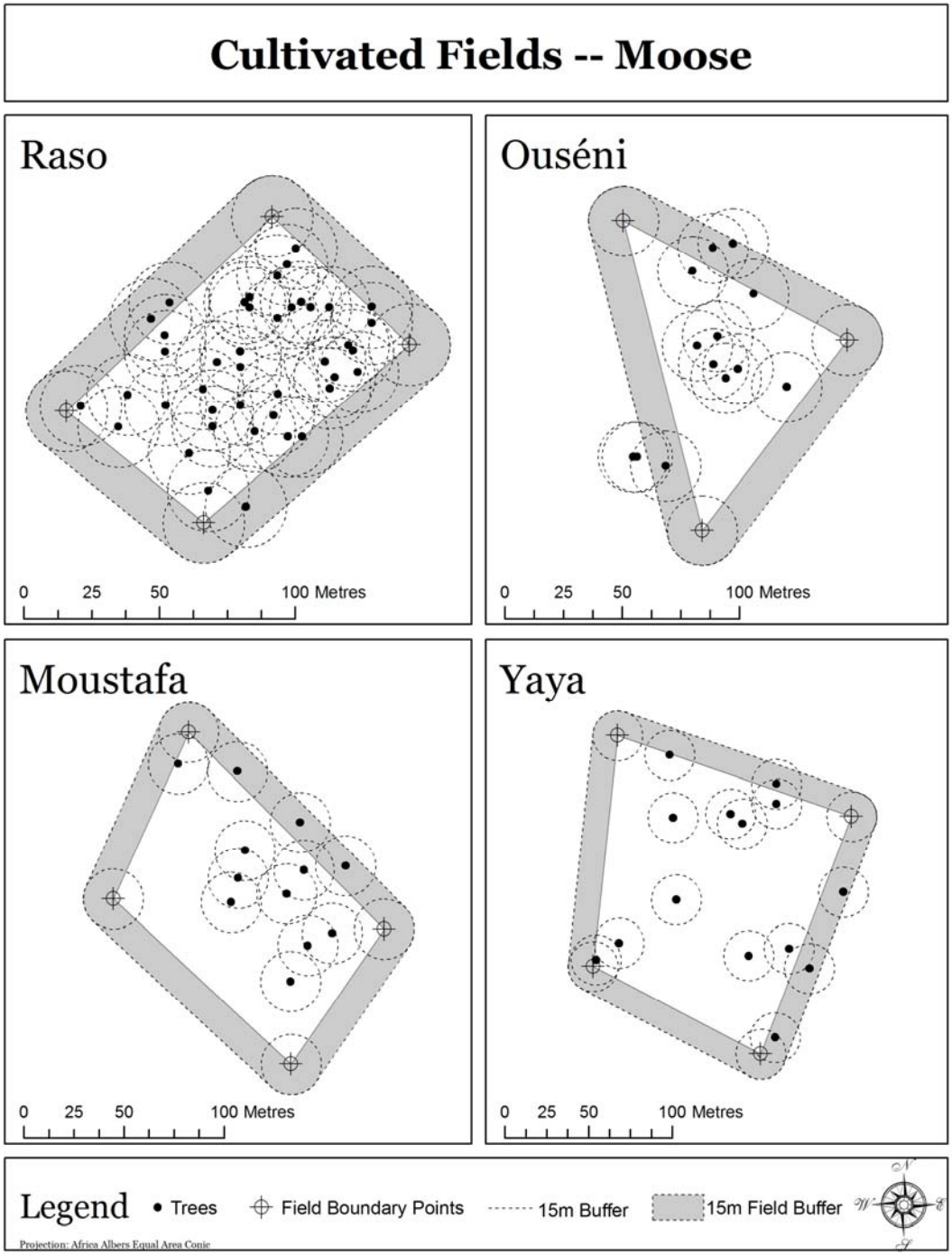


APPENDIX XIV: SPATIAL DISTRIBUTION OF SHEA TREES IN MOOSE FIELDS, VILLAGE OF PRATA

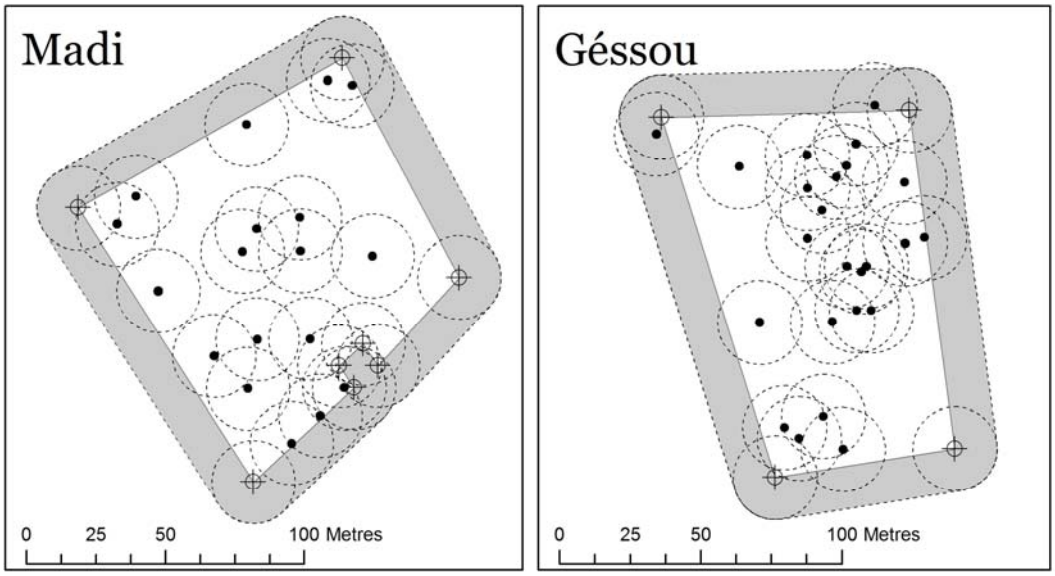


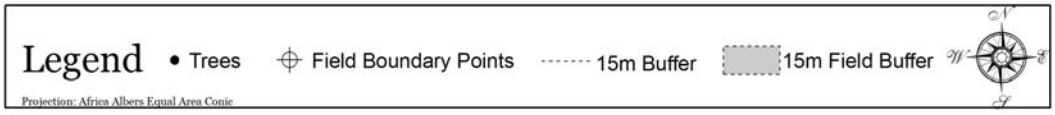
Cultivated Fields -- Moose



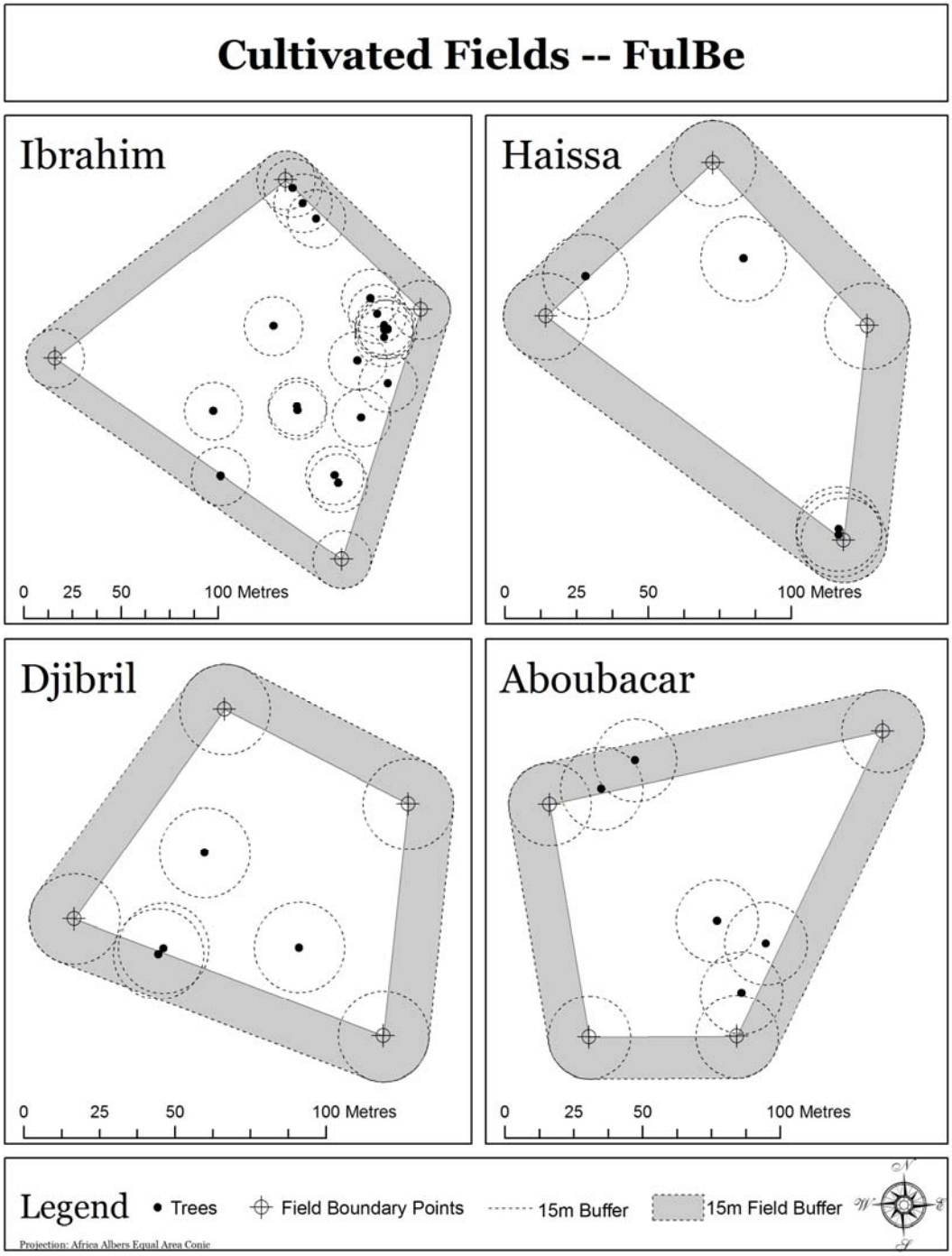

Cultivated Fields -- Moose
Raso
0 25 50 100 Metres
Ouséni
0 25 50 100 Metres
Moustafa
0 25 50 100 Metres
Yaya
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic

Cultivated Fields -- Moose

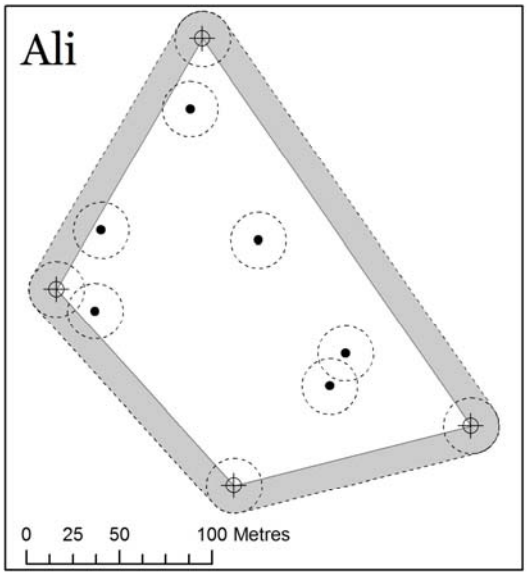


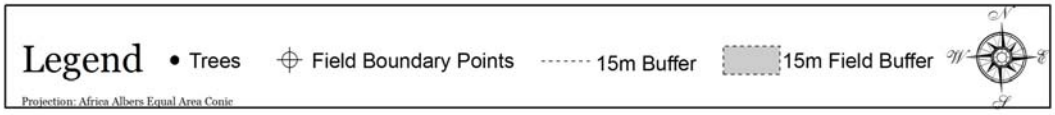


APPENDIX XV: SPATIAL DISTRIBUTION OF SHEA TREES IN FULBE FIELDS, VILLAGE OF PRATA

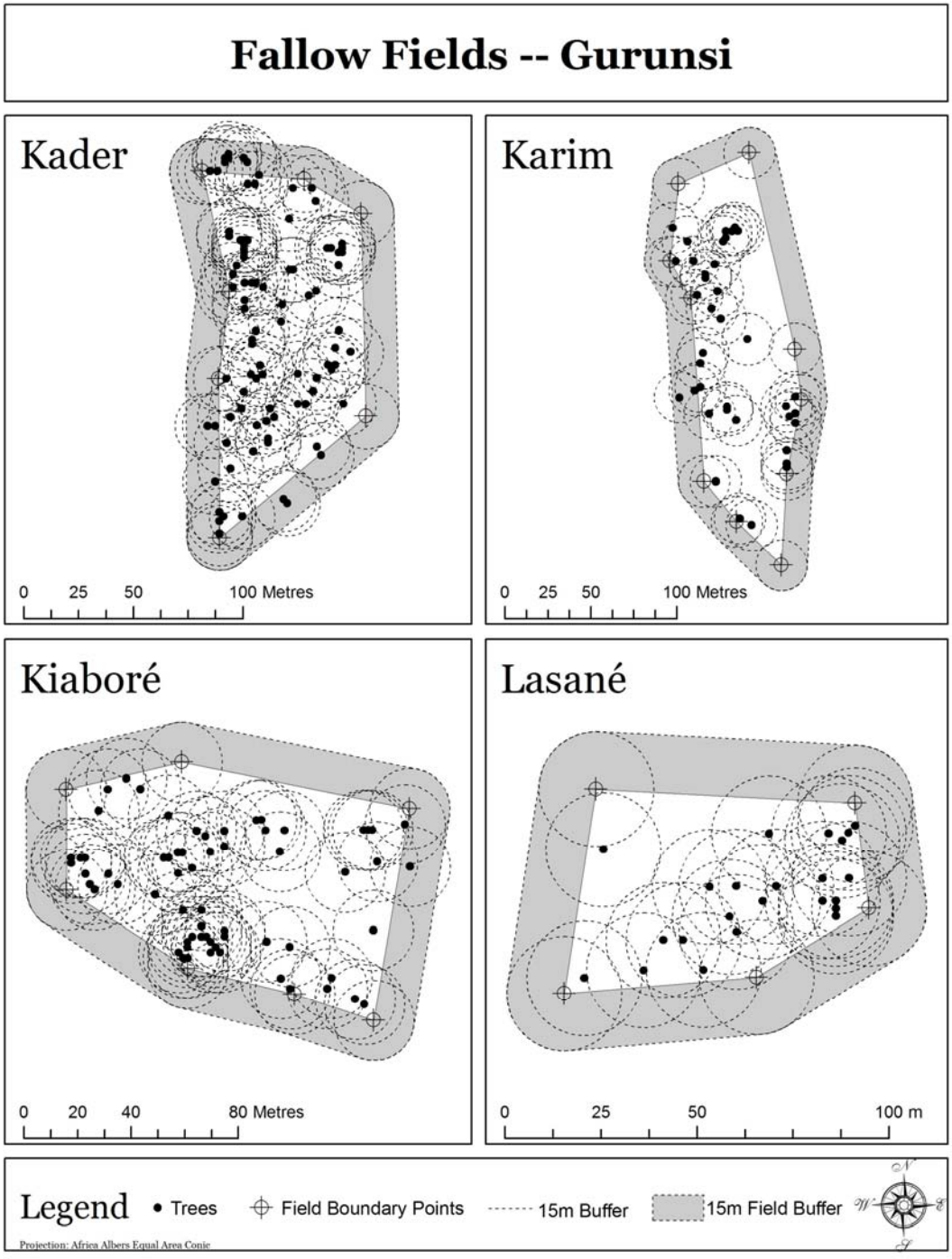


Cultivated Fields -- FulBe

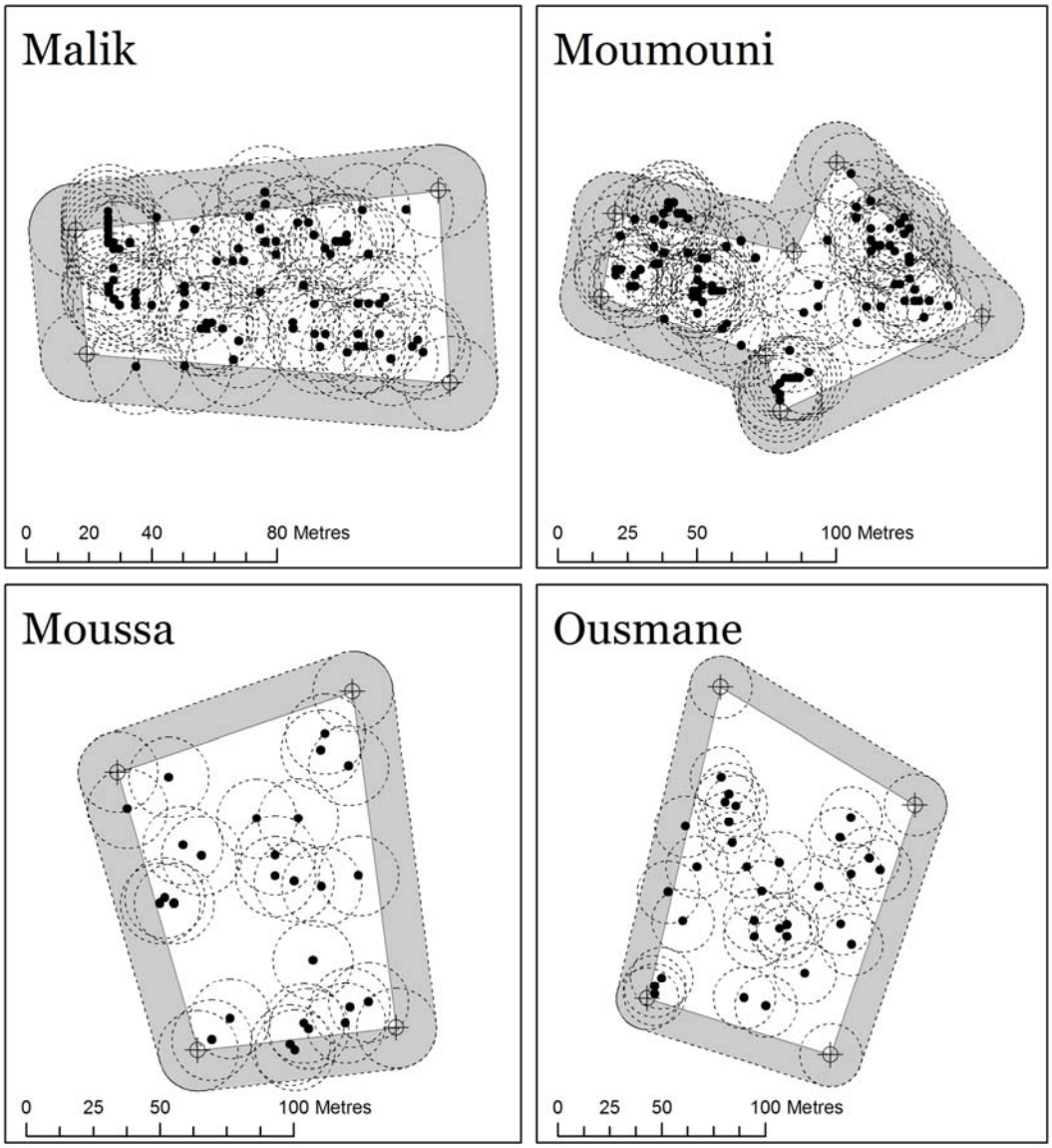




APPENDIX XVI: SPATIAL DISTRIBUTION OF SHEA TREES IN GURUNSI FALLOWS, VILLAGE OF PRATA

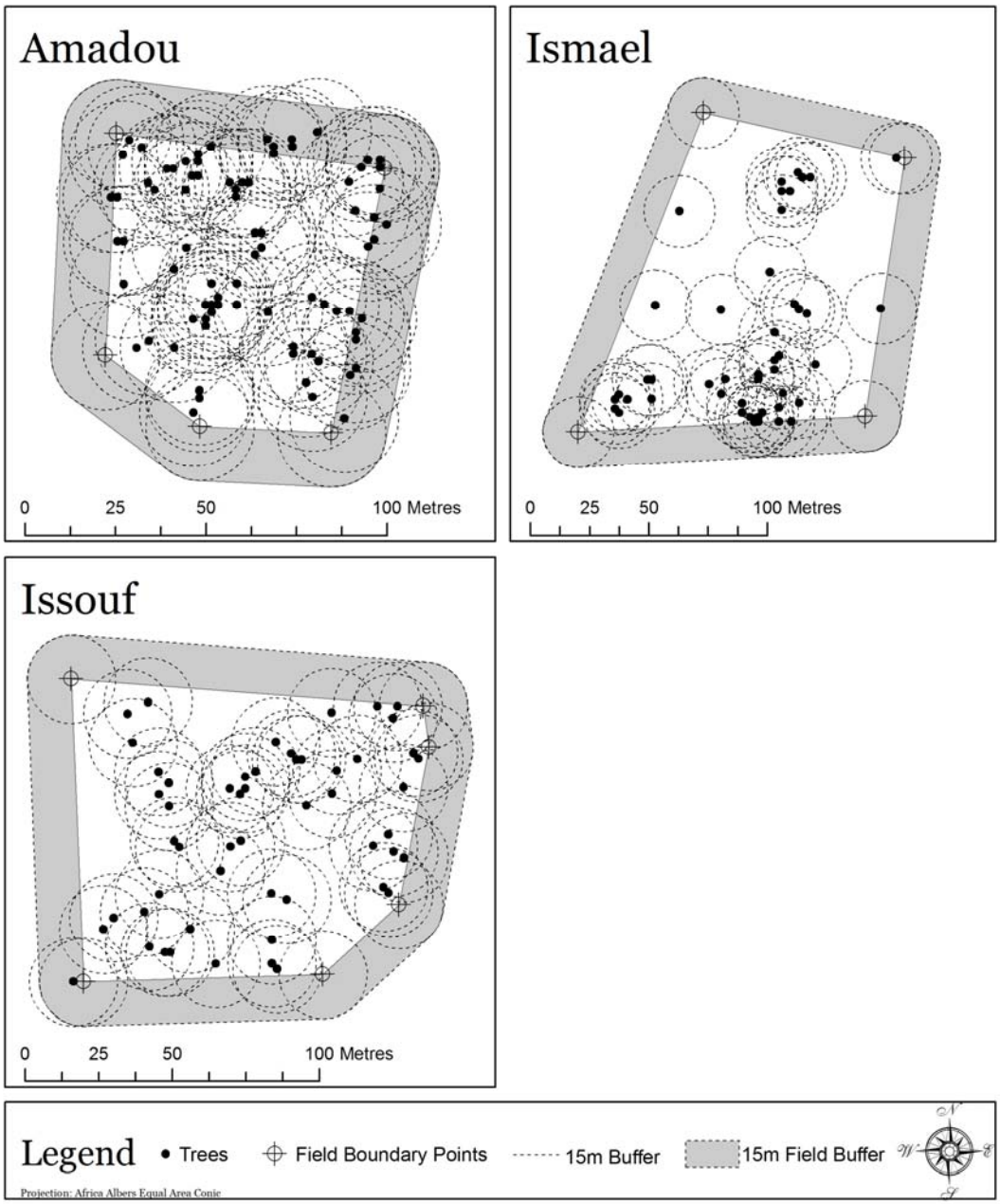


Fallow Fields -- Gurunsi

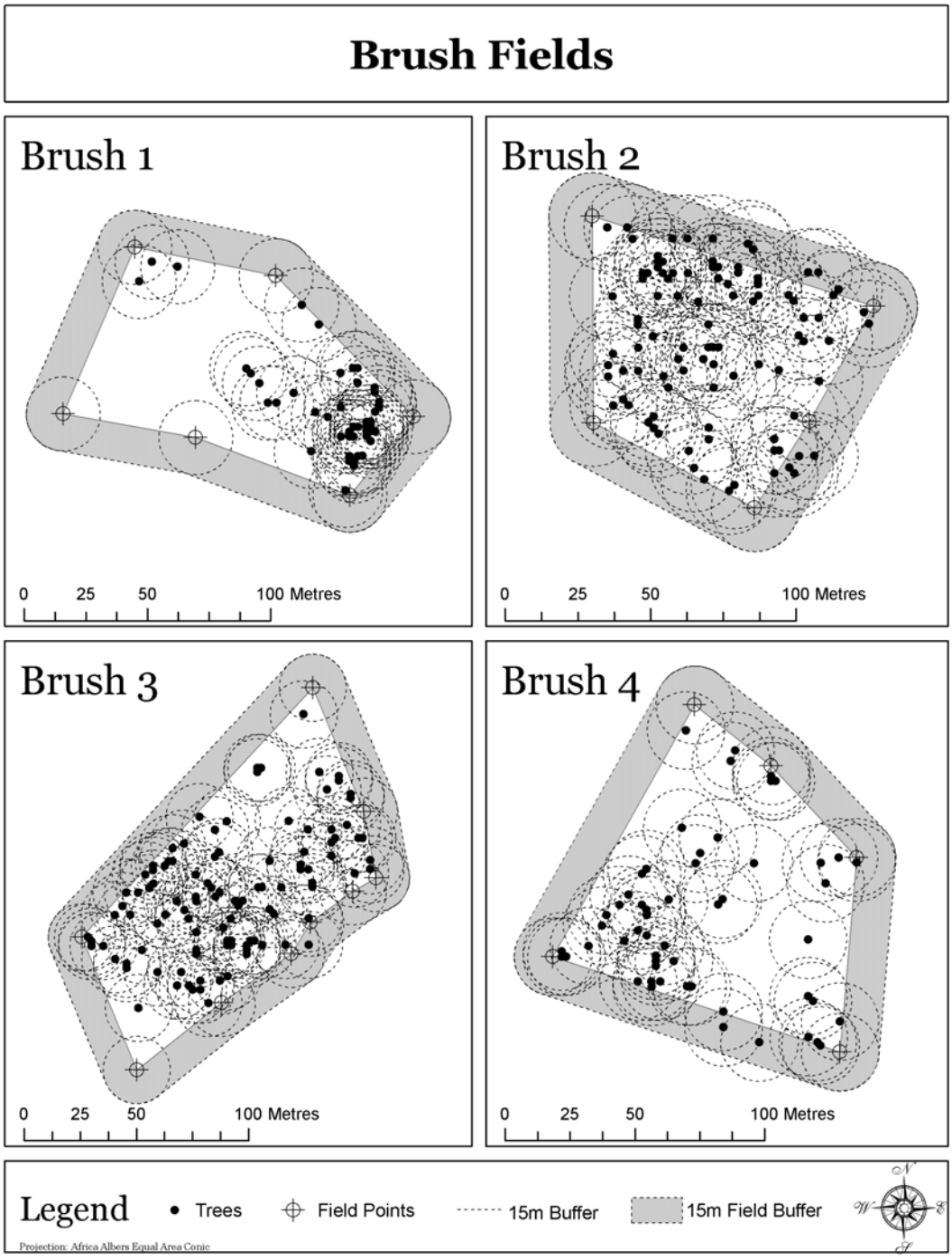


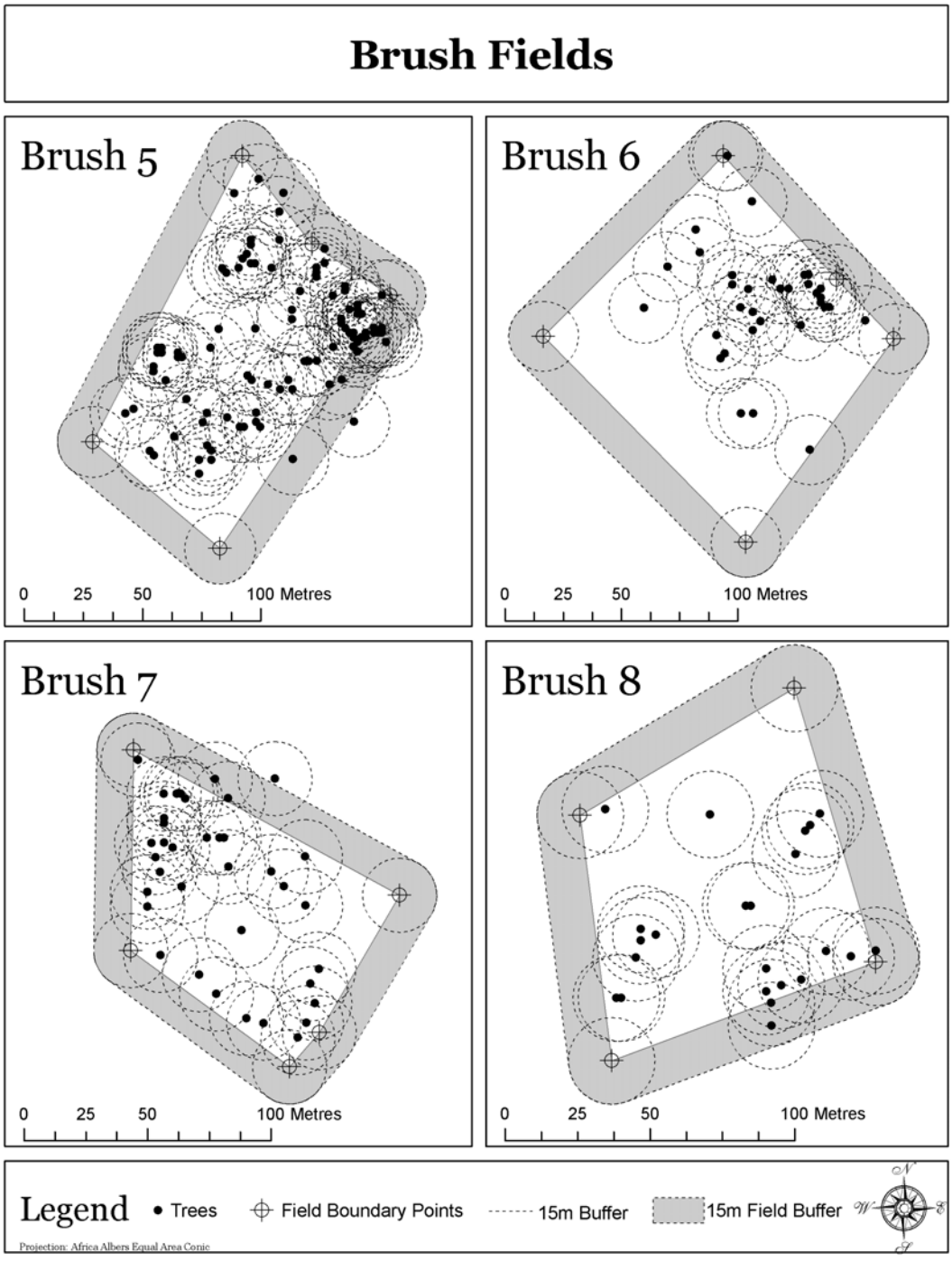

Fallow Fields -- Gurunsi
Sayouba
0 25 50 100 Metres
Sidiki
0 25 50 100 Metres
Suleyman
0 25 50 100 Metres
Abdou
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic

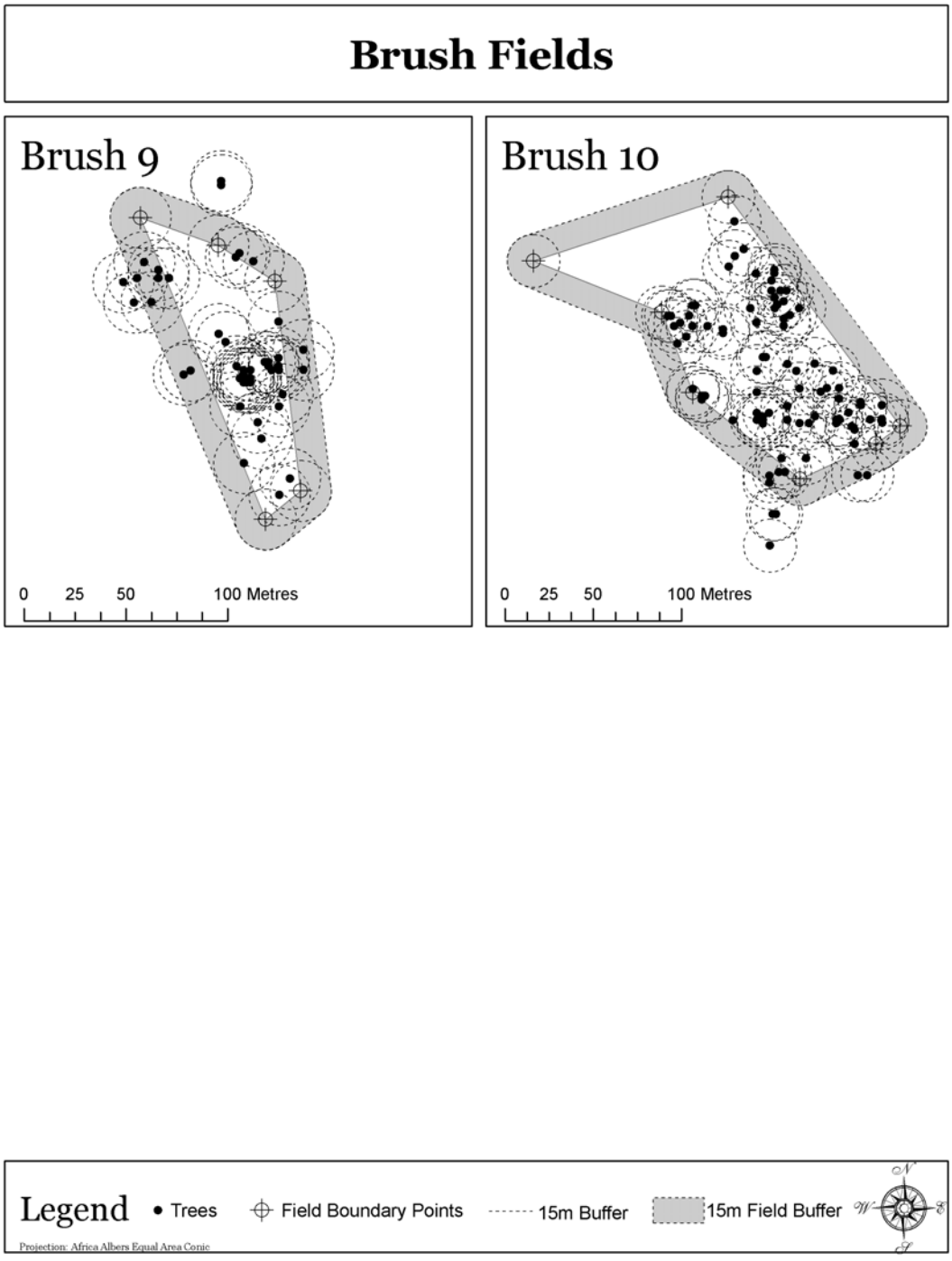
Fallow Fields -- Gurunsi



APPENDIX XVII: SPATIAL DISTRIBUTION OF SHEA TREES IN BRUSH AREAS, VILLAGE OF PRATA




Brush Fields
Brush 5
0 25 50 100 Metres
Brush 6
0 25 50 100 Metres
Brush 7
0 25 50 100 Metres
Brush 8
0 25 50 100 Metres
Legend
Trees
Field Boundary Points
15m Buffer
15m Field Buffer
Projection: Africa Albers Equal Area Conic



N.B. A handful of tree points are situated outside of the brush field boundaries. This is the result of human error during the ground surveys. As brush fields contain tall and dense vegetation and do not have clear boundaries, it was difficult to determine the exact spatial limits of our mapping exercise.