

# Shea (*Vitellaria paradoxa* C.F. Gaertn.) – the emergence of global production networks in Burkina Faso, 1960–2021<sup>1</sup>

D.A. WARDELL<sup>a</sup>, A. TAPSOBA<sup>b</sup>, P.N. LOVETT<sup>c</sup>, M. ZIDA<sup>d</sup>, K. ROUSSEAU<sup>e</sup>, D. GAUTIER<sup>f</sup>, M. ELIAS<sup>g</sup> and T. BAMA<sup>h</sup>

<sup>a</sup>Corresponding author. Value Chains, Finance and Investments Team, Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF), Montpellier, France

<sup>b</sup>Institute of Environment and Agricultural Research/Department of Environment and Forests (INERA/DEF), 04 BP 8645 Ouagadougou 04, Burkina Faso

<sup>c</sup>Eco Restore Ltd., P.O. Box TL 1465, Tamale, Ghana

<sup>d</sup>Governance, Equity and Wellbeing Team, Centre for International Forestry Research (CIFOR) & World Agroforestry (ICRAF), 06 BP 9478 Ouagadougou 06, Burkina Faso

<sup>e</sup>Agence Française de Développement, 5 rue Roland Barthes, 75012, Paris, France

<sup>f</sup>CIRAD, UPR Forêts et Sociétés, Univ Montpellier, Montpellier, France

<sup>g</sup>Multifunctional Landscapes, Alliance of Bioversity International and CIAT, Rome, 00153, Italy

<sup>h</sup>Independent consultant, P.O. Box 381 CAGC, Tamale, NR, Ghana

Email: a.wardell@cgiar.org, aicha\_taps@yahoo.fr, shea.expert@gmail.com, m.zida@cgiar.org, rousseauk@afd.fr, denis.gautier@cirad.fr, marlene.elias@cgiar.org, bamatheo@gmail.com

---

## HIGHLIGHTS

- During the post-Independence era several state-led efforts aimed to regulate and control the international shea trade through stabilization funds and parastatal marketing boards. These were abandoned after 1984, when cocoa prices collapsed and shea markets were liberalized.
- After 2003, leading Trans-National Corporations that manufacture Cocoa Butter Equivalents are increasingly involved in sourcing shea kernels to meet the growing demand for Speciality Fats in the confectionary, food and cosmetic industries,
- Women shea producers have also harnessed new market opportunities to produce 'hand-crafted' shea butter for the cosmetics industry and niche edible markets following regulatory changes.
- Women shea producers have clearly demonstrated their capacity to respond to new global markets and to meet customer demands for sustainability whilst maintaining shea kernel and butter supplies to local periodic, national, and regional markets.
- A critical new challenge is how to strengthen current efforts to restore shea agroforestry parklands as a key source of livelihoods and ecosystem services by harnessing both ancient and modern farming techniques.

## SUMMARY

After Burkina Faso's independence, shea butter continues to be the key staple edible oil used by Burkinabe households although alternatives are now being placed in local markets. Shea (*Vitellaria paradoxa* C.F. Gaertn.) is primarily managed as a food tree crop for African consumers but has been promoted as a wild and abundant crop which gives African women cash and empowerment. New international demand for edible Cocoa Butter Equivalents (CBEs) from the 1960s onwards led to the introduction of several state-led efforts to regulate and control the shea trade through stabilization funds and parastatal marketing boards. These were abandoned after 1984, when cocoa prices collapsed and shea markets were liberalized. Increasingly since 2003, several leading Trans-National Corporations that manufacture CBEs are involved in sourcing shea kernels to meet the growing demands of the multi-billion-dollar confectionary and cosmetics industries. Burkina Faso and Ghana are two of the main exporting countries producing 60–75% of all international shea offtake. West, Central and East African women shea collectors and their associations have also managed, more recently, to meet the growing demand for 'hand-crafted' shea butter for the global personal care sector and new niches in the edible oil industry. Attempts to explain the radical transformation of shea supply chains in West Africa have focused on relatively recent events and actions detached from the broader historical context in which they are embedded. This paper adopts a broad periodization, stemming from the formulation of CBEs incorporating shea and palm stearin in the 1960s, and using a Global Production Network approach to understand the role and position of women shea producers and their associations at the intersection of global, regional, and local periodic markets. It challenges the assumption that global markets are necessarily a more viable alternative to reliance on local, domestic, or regional markets. The growth of global trade in shea kernels and shea butter has been accompanied by significant land cover and land use changes which has led to the progressive loss of trees, biodiversity, and other ecosystem services such as pollination and carbon sequestration. This presents new socio-economic challenges, including threats to local food and nutrition security, tenure rights and the livelihoods of local communities.

Keywords: Burkina Faso, shea kernels and shea butter, gender, Cocoa Butter Equivalents, global production networks, regenerating gendered landscapes

---

<sup>1</sup> This paper should be read in conjunction with another paper 'Shea – a peripheral commodity in French West Africa, 1894–1960' in this issue, which outlines the long history of trading networks in West Africa empire and the largely unsuccessful French colonial efforts to develop the shea trade with the metropole.

## Karité (*Vitellaria paradoxa* CF Gaertn.) – l'émergence de réseaux mondiaux de production au Burkina Faso, 1960–2021

D.A. WARDELL, A. TAPSOBA, P.N. LOVETT, M. ZIDA, K. ROUSSEAU, D. GAUTIER, M. ELIAS et T. BAMA

Après l'indépendance du Burkina Faso, le beurre de karité continue d'être la principale huile comestible de base utilisée par les ménages burkinabés, bien que des alternatives soient désormais mises en place sur les marchés locaux. Karité (*Vitellaria paradoxa* CF Gaertn.) est principalement gérée comme une culture arboricole vivrière pour les consommateurs africains, mais a été promue comme une culture sauvage et abondante qui donne aux femmes africaines de l'argent et de l'autonomisation. La nouvelle demande internationale d'équivalents de beurre de cacao comestibles (CBE) à partir des années 1960 a conduit à l'introduction de plusieurs efforts menés par l'État pour réglementer et contrôler le commerce du karité par le biais de fonds de stabilisation et d'offices de commercialisation parapublics. Ceux-ci ont été abandonnés après 1984, lorsque les prix du cacao se sont effondrés et que les marchés du karité ont été libéralisés. De plus en plus depuis 2003, plusieurs sociétés transnationales de premier plan qui fabriquent des CBE sont impliquées dans l'approvisionnement en amandes de karité pour répondre aux demandes croissantes des industries de la confiserie et des cosmétiques de plusieurs milliards de dollars. Le Burkina Faso et le Ghana sont deux des principaux pays exportateurs produisant 60–75% de tous les prélèvements internationaux de karité. Les collectrices de karité d'Afrique de l'Ouest, du Centre et de l'Est et leurs associations ont également réussi, plus récemment, à répondre à la demande croissante de beurre de karité «artisanal» pour le secteur mondial des soins personnels et de nouvelles niches dans l'industrie de l'huile comestible. Les tentatives pour expliquer la transformation radicale des chaînes d'approvisionnement du karité en Afrique de l'Ouest se sont concentrées sur des événements et des actions relativement récents détachés du contexte historique plus large dans lequel ils s'inscrivent. Cet article adopte une périodisation large, issue de la formulation de CBE incorporant le karité et la stéarine de palme dans les années 1960, et en utilisant une approche de réseau mondial de production pour comprendre le rôle et la position des femmes productrices de karité et de leurs associations à l'intersection des processus mondiaux, régionaux, et les marchés périodiques locaux. Il remet en question l'hypothèse selon laquelle les marchés mondiaux sont nécessairement une alternative plus viable à la dépendance vis-à-vis des marchés locaux, nationaux ou régionaux. La croissance du commerce mondial des amandes et du beurre de karité s'est accompagnée d'importants changements dans la couverture végétale et l'utilisation des terres qui ont entraîné la perte progressive d'arbres, de biodiversité et d'autres services écosystémiques tels que la pollinisation et la séquestration du carbone. Cela présente de nouveaux défis socio-économiques, notamment des menaces pour la sécurité alimentaire et nutritionnelle locale, les droits fonciers et les moyens de subsistance des communautés locales.

## Karité (*Vitellaria paradoxa* C.F. Gaertn.) – el surgimiento de redes de producción globales en Burkina Faso entre 1960 y 2021

D.A. WARDELL, A. TAPSOBA, P.N. LOVETT, M. ZIDA, K. ROUSSEAU, D. GAUTIER, M. ELIAS y T. BAMA

Tras la independencia de Burkina Faso, la manteca de karité sigue siendo el principal aceite comestible utilizado por los hogares burkineses, aunque ahora se están introduciendo alternativas en los mercados locales. El karité (*Vitellaria paradoxa* C.F. Gaertn.) se aprovecha principalmente como un cultivo arbóreo alimentario para los consumidores africanos, pero se ha promocionado como un cultivo silvestre y abundante que proporciona dinero en efectivo y empoderamiento a las mujeres africanas. El aumento de la demanda internacional de productos comestibles equivalentes a la manteca de cacao (EMC) desde la década de 1960 llevó a la introducción de varias iniciativas estatales para regular y controlar el comercio de karité mediante fondos de estabilización y consejos reguladores paraestatales. Estas iniciativas se abandonaron después de 1984, cuando los precios del cacao se desplomaron y los mercados del karité se liberalizaron. Desde 2003, varias empresas transnacionales líderes en la fabricación de EMC participan cada vez más en el aprovisionamiento de almendras de karité para satisfacer la demanda creciente de las industrias multimillonarias de confitería y cosmética. Burkina Faso y Ghana son dos de los principales países exportadores y producen entre el 60 y el 75% del consumo total internacional de karité. Las recolectoras de karité de África Occidental, Central y Oriental y sus asociaciones también han conseguido, más recientemente, abastecer la demanda creciente de manteca de karité 'artesanal' para el sector mundial de los productos de belleza y los nuevos nichos de la industria del aceite comestible. Los intentos de explicar la transformación radical de las cadenas de suministro de karité en África Occidental se han centrado en acontecimientos y acciones relativamente recientes, desvinculados del contexto histórico más amplio del que forman parte. Este artículo adopta una amplia periodización, partiendo de la formulación de los EMC que incorporan el karité y la estearina de palma en la década de 1960, y utiliza un enfoque de Red Mundial de Producción para comprender el papel y la posición de las productoras de karité y sus asociaciones en la confluencia entre los mercados periódicos globales, regionales y locales. Se pone en tela de juicio la suposición de que los mercados mundiales son por descontado una alternativa más viable que la dependencia de los mercados locales, nacionales o regionales. El auge del comercio mundial de almendras de karité y de manteca de karité ha ido acompañado de cambios importantes en la cobertura y el uso del suelo, lo que ha provocado la pérdida paulatina de árboles, biodiversidad y otros servicios ecosistémicos, como la polinización y el secuestro de carbono. Esto plantea nuevos retos socioeconómicos, como las amenazas a la seguridad alimentaria y nutricional locales, los derechos de tenencia de la tierra y los medios de vida de las comunidades locales.

## INTRODUCTION

West Africa's agroforestry parklands provide a broad range of goods and services at the local, national, and regional levels throughout the region. They constitute part of a complex mosaic of different land uses in landscapes characterised and managed by many resource users. Their extent and composition have been moulded for centuries by the complex interactions between humans and their biophysical environment. Humans and livestock use land and forest resources, and by doing so they become an integral component of the parkland system, influencing the patterns and processes of change. Human-induced processes have a strong 'random' element as people tend to adapt continuously to changing conditions and priorities in an unpredictable way (Berry 1993).

Shea fruits, kernels and butter are Non-Timber Forest Products (NTFPs) of the shea tree (*Vitellaria paradoxa*), the most commonly occurring species in the parklands of West Africa (Bonkougou 1987, Boffa 1999 and 2015). The fruits and butter extracted from its kernels serve as important ingredients in the diet of rural communities, and surpluses sold provide a critically important source of income to women (Becker 2001, Elias and Carney 2007, and Pouliot 2012). Shea is collected, processed, and marketed by an estimated 18.4 million women across a 3.4 million km<sup>2</sup> belt of sub-Saharan Africa (Naughton *et al.* 2015). Growing global demand for shea as an ingredient in Cocoa Butter Equivalents (CBEs), personal care products, and niche edible products, coupled with pressures to intensify local agricultural production of food and energy needs pose new threats to the sustainability of shea parklands and women and community livelihoods (Lovett 2015, and Lovett and Phillips 2018).

Shea parklands occur across the Sahelian, Sudanian and North/South Guinea Savannah ecozones of West Africa. They have been managed for centuries but are no longer regenerating. Parkland degradation is due to a composite of factors including demographic pressure, growing demand for food and unsustainable farming and grazing practices, shorter fallow periods, increased mechanization, fires, felling of trees for firewood and charcoal and changes in the functioning of local governance customary institutions (Boffa 2015, Rousseau, Gautier and Wardell 2017a and 2017b, Lovett and Phillips 2018, and Lovett, Issahaku and Kpelly 2020). Agroforestry parklands are being degraded in Burkina Faso with an estimated 17.5% decline in forest and tree cover between 1990–2010 (Fischer *et al.* 2011). The degradation of parklands has led to a significant reduction in parkland flagship tree species populations, especially shea trees, from an estimated 230 trees per ha in the 1940s to fewer than 11 trees per ha by 2011 (Boffa 2015, Wardell and Zida 2021).

Local African markets continue to perform a vital role in the economic and social life, particularly of rural women throughout West Africa (Bromley 1971, Hodder 1971,

Meillassoux 1971, Smith 1971, Pouliot 2012, Elias 2015 and Rousseau *et al.* 2015). In Burkina Faso, a hierarchy exists linking periodic three-day village markets to larger foci of trade in places such as Leo, Tenkodogo, Bittou and Koudougou and Bobo Dioulasso (Rousseau, Gautier and Wardell 2015) which, in turn, are linked to centres of consumption and export across the West Africa littoral, across East-West and North-South, traditional and modern trade routes. The aggregation of the periodic market system facilitates northern trade in surpluses of agricultural food and cash crops such as millet, yams, onions, tomatoes, livestock, shea kernels and shea butter (Hill 1970, Clark 1994, House-Midambe and Ekechi 1995, and Chalfin 2004a).

The key change in West African shea markets was linked to the growing demand for so-called Cocoa Butter Equivalents (CBE) which form part of the global 'Speciality Fats' market (Campbell 2004, Loh 2008 and Talbot 2015). CBEs were originally developed more than a century ago in South-East Asia using coconut oil. Further improvements were made in the 1960s and 1970s although significant increases in demand for CBEs only occurred after 2003. Shea now provides an important ingredient to the multi-billion-dollar confectionary, niche-edible and personal care markets. This market was spurred by an EU decision to level the playing field by regulating that only 5% non-cocoa butter fats are allowed to replace cocoa butter in products legally defined as chocolate in the EU marketplace (European Commission 2000). By combining stearic rich asymmetrical Tri-Acyl-Glycerides (TAGs) (from 'EU-legal sources of exotics fats: shea, sal, illipe, mango and kokum) see (Campbell 2004) with palmitic rich asymmetrical TAGs (palm stearin), CBEs can be formulated with matching properties to cocoa butter. With the major ingredient being palm stearin, these CBEs can be manufactured more cheaply than typical cocoa butter (CB) prices. Since CBs have a narrow range of melting points, even from different geographic sources, CBEs also offer more versatility in western confectionery products, functionality in different climates and can help to moderate CB price fluctuations. Although other economic markets have different legal definitions for chocolate and allow differing percentages of non-cocoa butter fats, the CBE market growth has been further driven by emerging BRICS (Brazil, Russia, India, China and South Africa) markets. West Africa accounts for almost all bulk exports of shea with Burkina Faso being one of the main exporters.

The potential for shea butter to replace, or be combined with, other vegetable oils in the edible sector (due to the functionality of its tri-acyl-glyceride (TAG) composition) is expected to result in continued growth in demand for shea in the future (Lovett 2015, and Stapleton 2021). There are now even pure-shea CBEs such as Karibon™ and shea-based bakery ingredients gaining exposure in western confectionery markets (Bunge Lodders Croklaan 2021)<sup>1</sup> as well as

<sup>1</sup> See, for example, <https://www.foodingredientsfirst.com/news/bunge-loders-croklaan-unveils-karibon-a-shea-based-premium-cocoa-butter-equivalent.html> and <https://www.foodingredientsfirst.com/news/bunge-loders-croklaans-new-shea-ingredient-given-nod-by-fda.html> (both accessed 21 August 2021).

rapidly-expanding global markets for plant-based meat and dairy alternatives (AAK 2021).<sup>2</sup>

The paper adopts a broad periodization and Global Production Network (GPN) approach to trace the changing governance of shea supply chains in Burkina Faso after independence in August 1960. These supply chains were initially distinguished by state-led efforts to regulate and control the shea trade for margarine manufacture in European markets. The Sankara crisis and the collapse of cocoa prices in 1984 led to ‘official’ liberalization in 1991, and the subsequent emergence of an oligopolistic global production network. The paper is structured as follows. Following this Introduction Sections II and III present the analytical framework and methods used in the analysis respectively. Section IV provides the analysis of post-independence state-led efforts to regulate and control the shea trade. Section V presents the strengthening of an oligopolistic global production network of shea kernels after 2005. We show that, in parallel, women shea producers and their associations have also managed, more recently, to meet growing demand for ‘hand-crafted’ shea butter for the global cosmetics industry. Section VI summarizes recent initiatives in the country and West African region. Section VII interprets the main findings in terms of the continuity and change in the governance of the shea nut and shea butter supply chains. Finally, Section VIII offers some concluding remarks and suggests future research directions.

The paper should be read in conjunction with another paper ‘Shea – a peripheral commodity of empire in French West Africa 1894–1960’ (Wardell *et al.* 2021) which outlines the long history of trading networks in West Africa, and the largely unsuccessful French colonial efforts to develop the shea trade.

## ANALYTICAL FRAMEWORK

Complex processes of differentiation and primitive accumulation have characterised West African production systems for centuries (Hopkins 1973, Lovejoy 1985). However, processes of commoditization in African farming systems have often been ignored as an explanatory variable to help explain environmental change (Bernstein and Woodhouse 2001). The globalization of commodity supply chains, consolidation of retail power and growing quality-based competition have transformed how global agri-food systems operates and the role of smallholders in the production of large-scale commodities such as palm oil, rubber, coffee and cocoa (Gereffi and Korzniewicz 1994, Gereffi, Humphrey and Sturgeon 2005, Lee *et al.* 2012). The Great Recession of 2008 and the more recent COVID-19 pandemic, which emerged in 2019 have both highlighted the vulnerability of neoliberal

capitalism to fundamental crises (Tooze 2018, and Buscher *et al.* 2021).

Approaches to global commodity chains (GCCs) and global value chains (GVCs) moved away from earlier long-term world-historical perspectives on commodification (Hopkins and Wallerstein 1977, and Hopkins and Wallerstein 1986). Emphasis was frequently given to quality regulation, restructuring processes, standard-setting, upgrading and the institutional ‘rules of the game’ (Humphrey and Schmitz 2000 and 2002, Raikes and Gibbon 2000, and Raikes, Jensen and Ponte 2000), and more short-term and industry- and firm-centred analyses (Bair 2008, Grewe 2019).<sup>3</sup> In contrast, scholarship on Global Production Networks (GPN) emphasizes the multi-scalar dynamics of globalization particularly in terms of the embeddedness of global networks in national, regional, and local contexts, encompassing both state and non-governmental actors (Coe, Dicken and Hess 2008). Commodities have led to the consolidation of a globalized economy and societies, but this has been forged out of distinctive local experiences of cultivation and production, and regional circuits of trade (Curry-Machado 2013, Hazareesingh and Curry-Machado 2009: 1–5, and Landsteiner and Langthaler 2021).

Most recent scholarship on the shea trade in West Africa has focused on relatively recent events and actions, detached from the broader historical context in which they are embedded. This, “at a time when short-term horizons constrict the views of most of our institutions, whether governments, non-governmental organizations (NGOs), corporations, or increasingly universities” (Armitage and Guldi 2015: 221). History matters. It matters not just because we can learn from the past, but because the present and the future are connected to the past by the continuity of a society’s institutions (North 1990, and Huillery 2009). Little scholarly work has been published on the history of shea as a colonial commodity. By adopting a Global Production Network approach to the evolution of the shea trade in Burkina Faso, the paper emphasizes the emergence of globalized trade but which was forged out of distinctive local experiences of production and transformation and local and regional circuits of shea trade controlled by women. Women were instrumental in sustaining rural livelihoods by using local periodic markets to trade in shea kernels and shea butter on both sides of the new borders separating Upper Volta from its neighbouring territories. The paper aims to help explain the gendered nature of the contemporary shea economy in Burkina Faso by understanding the patterns of pre-colonial, colonial and post-independence trade in the commodity. By focusing on a francophone colonial backwater, this paper is also a corrective to the focus in much environmental history on both anglophone ‘settler colonies’ and the timber-producing regions of West Africa.

<sup>2</sup> Unilever has set an annual global sales target of US \$ 1.2 billion from plant-based meat and dairy within the next 5–7 years (AAK 2021).

<sup>3</sup> The GVC typology evolved to recognize five governance structures (hierarchy, captive, relational, modular and market) determined by three key variables: the complexity of transactions; the ability to codify transactions and the capabilities of the supply base (Gereffi, Humphrey and Sturgeon 2005, Lee, Gereffi and Beauvais 2012).

## METHODS

This paper was prepared based on a literature review, some archival research, key informant interviews and two case studies: one of a national Multi-Stakeholder Initiative, the Table Filière Karité during the period 2000–2020,<sup>4</sup> and the other on the impacts of insecurity and the COVID-19 pandemic on shea supply chains in Burkina Faso.<sup>5</sup>

Archival research was primarily conducted at the i. Archives Nationales in Ouagadougou (Burkina Faso); ii. Centre National des Archives Outre-Mer, Aix-en-Provence (France); iii. the Institute of Forestry, Agricultural and Environmental Engineering in France, Nancy (France); and iv. Archives Nationales in Abidjan (Cote d'Ivoire). Additional research was conducted in some anglophone colonial archives, notably the Public Records and Archives Department (PRAAD), Tamale (Ghana), and Rhodes House, University of Oxford (United Kingdom). The majority of the colonial archives consulted covered the period after the creation of the Gouvernement General de l'Afrique Occidentale Française (GGAOF) in 1895 and prior to Upper Volta's independence in 1960. Anglophone archives were for the Protectorate of the Northern Territories of the Gold Coast Colony during the period 1901–1949 when a pan-territorial forest policy was adopted for the Gold Coast Colony.

In general, better archival records exist for commodities such as cocoa and palm oil given the larger quantities and, hence greater values traded with European metropolises (Kotey *et al.* 1998, Lynn 1998, and Acquah 1999).<sup>6</sup> The comparative lack of historical data regarding the shea trade also reflects the complexities of unrecorded international trade with shea products moving south *and* north across new international borders after colonial boundaries were first defined (see Figure 2 below) (May 1985, Ellis and MacGaffey 1996, Fold and Reenberg 1999, Chalfin 2001, and Wardell *et al.* 2003).

The reconstruction of when and how, for example, colonial conservationist ideologies were encountered in a particular territory – using written archival records – can help to delineate timeframes during which particular events, such as the gazetting of forest reserves, occurred. The triangulation of different types of evidence is still needed to read and understand how forested landscapes have changed. Hence, the use of archival materials complements the “...memory and land management practices of current land users ...to help understand past land use” (Fairhead and Leach 2001). The use of multiple archival and contemporary sources

facilitated the understanding of shea today as a critically important but threatened food tree-crop. Throughout the belated encounter with forest conservationism in Upper Volta and subsequent post-Independence efforts to ‘modernize’ the forest sector, shea has been an ‘institutional misfit’: neither a conventional agricultural crop nor an orthodox forest species. This is explored further in the Discussion.

## POST-INDEPENDENCE STATE-LED EFFORTS TO REGULATE AND CONTROL THE SHEA TRADE

The initial interest of the independent Republic of Upper Volta was to secure greater state regulatory control of the shea trade. Margarine manufacturers in Europe were the primary outlet for shea exports prior to the 1960s (Wardell *et al.* 2021b). A parastatal marketing board and a new price stabilisation fund were established between 1960–1964. Cocoa Butter Equivalents (CBEs) were first introduced in the 1960s<sup>7</sup> but with the key international shea buyers, Aarhus United (Denmark) and Unilever (UK) (and later Fuji Itoh and Mitsu Bishi from Japan), all then based outside the country. A Group of Exporters (GEX) representing the interests of 60 Voltaic traders, challenged, and progressively replaced colonial trading firms such as Compagnie Française d’Afrique Occidentale (CFAO) and Société Commerciale de l’Ouest Africain (SCOA) with support from the foreign CBE manufacturers. State regulation of the shea value chain collapsed six years before ‘official’ economic liberalization in 1991, following the collapse of cocoa prices and the Sankara crisis in the mid-1980s, and the subsequent bankruptcy of the second Caisse de Stabilisation des Prix des Produits Agricoles CSPPA, described below (Dronne and Gurtler 1991, see also Wardell *et al.* 2021b).<sup>8</sup>

State-led forestry activities in the 1960s initially focused on establishing large-scale forest plantations for wood-fuel production using exotics (mainly *Eucalyptus* species, *Gmelina arborea*, *Tectona grandis* and *Senna siamea*). The response to the Sahelian crisis of the 1970s and 1980s continued to emphasize tree planting with progressively greater engagement with local communities, and the planting of native species. A paradigm shift occurred in the early 1980s as natural forest management models were introduced, albeit with wood-fuel production still as the primary objective (Kabore 2005). The first wave of land tenure reforms initiated in 1984 led to a growing awareness amongst both government agencies and

<sup>4</sup> The case study of the Table Filière Karité was conducted as part of the IDRC/CGIAR Forests, Trees and Agroforestry-financed research project ‘Globalizations in a nutshell – Opportunities and risks for women shea producers in West African shea parklands’ (IDRC Project: 108 978), March 2019–August 2021.

<sup>5</sup> The case study of the impacts of insecurity and the COVID-19 pandemic on shea supply chains in Burkina Faso was conducted as part of the IDRC/CGIAR Forests, Trees and Agroforestry-financed research project ‘Globalizations in a nutshell – Opportunities and risks for women shea producers in West African shea parklands’ (IDRC Project: 108 978), March 2019–August 2021.

<sup>6</sup> Paul Lovejoy noted that “There is virtually no information on shea butter, used as fuel for lamps and as cooking oil in the savanna before groundnuts became common” (Lovejoy 1985: 653).

<sup>7</sup> The development of butter substitutes started much earlier in the twentieth century in South East Asia using (then) primarily coconut oil. See Anon, 1902, Anon 1936 and Lovett, 2015: 134–135.

<sup>8</sup> Changes in shea prices are closely linked to fluctuations in prices for cocoa butter (Fold, 2001) and demand for Cocoa Butter Equivalents.

development/Non-Governmental Organisations of the critical need to understand customary land and resource tenure arrangements and the critical role of women in shea processing. It ushered in an era of multiple project-based interventions from the 1980s to the present-day. For example, l'Occitanie identified an early opportunity for shea butter as an ingredient in personal care products and started buying hand crafted shea butter from Burkina Faso in the early 1980s. These projects, largely financed by international donors and Non-Governmental Organisations (NGOs), focused on capacity building of women shea producers and their federated structures, technological improvements in shea processing and facilitating access to new markets. Most early initiatives were focused on the extraction process although the importance of nut collection and post-harvest processing stages on ease of extraction and final butter quality emerged in the early 2000s. Little attention was given to either the questions of regenerating or restoring the agroforestry parklands or to addressing the tenure rights of women to shea trees or the agricultural land on which shea trees occur.

#### **Growth in state regulation to control the shea trade (1960–1984)**

In 1956, in an attempt to put an end to marked fluctuations in shea prices in French West Africa, a first price stabilization fund (*Caisse de Stabilisation des Prix*) was created by the (then) French colonial administration. Given poor shea production in the late 1950s and that women shea collectors and transformers preferred to use the nuts and processed butter for their own domestic consumption, and/or for sale in local periodic markets, the fund was liquidated in 1959 (Pehaut 1976). Shea was still primarily an edible staple oil in Burkinabe diets. Scientists continued to discuss shea nomenclature (Aubreville 1966) although some research was also conducted on land tenure (Boutillier 1964).

The new government of the independent Republic of Upper Volta made another attempt to control the shea nut value chain. In 1960, a marketing board (OFCOM – Office for the Commercialisation of Products from Haute Volta), and in 1964, a second stabilization fund (CSPPA, Fund for the Price Stabilization of Agricultural Products) were created.<sup>9</sup> The primary objective of these parastatal companies was to guarantee maximum exports to the main markets in France, Germany, Belgium, the Netherlands, the United Kingdom, and Japan.<sup>10</sup> In the 1960s and 1970s, OFCOM and CSPPA set the prices to be paid to shea producers (and other commodities),

and the margin of traders. They also provided authorizations for traders. The CSPPA supply system, nevertheless, relied on the supply organization established by the colonial trading firms. Registered traders working with a hierarchical network of retailers continued to supply the CSPPA.<sup>11</sup> Up to 150 traders were authorized by the CSPPA, among whom 15 were able to export larger quantities of shea.

The colonial trading firms were still powerful in the 1960s despite the country's independence (OFCOM 1965).<sup>12</sup> In response, a group of 60 Voltaic traders created an association GEX (Group of Exporters) with the aim of replacing the colonial trading firms and exporting directly. Progressively the new national trading firms supported by foreign shea trading firms replaced the former colonial trading firms. By the mid-1970s, colonial trading firms had almost all withdrawn from the shea trade in the Republic of Upper Volta.

Controlling the supply chain of shea was not easy for the parastatal organizations. The CSPPA was responsible for a. the assessment of the potential annual shea nut harvest; b. collection of information enabling it to assess prices for shea kernels based on international market prices; c. approval of exporters; d. checking contracts signed by exporters; and e. price guarantees for both producers and traders.

In 1965, OFCOM noticed that many traders were functioning outside its formal authorization system and were paying prices above those that had officially been set (OFCOM 1965). It was eventually acknowledged that the shea quality management system had failed. The premium from the bonus/penalty system based on quality criteria remained in the traders' pockets and did not reach the shea producers. Although buying sesame and groundnuts became a parastatal monopoly in 1968, the government chose to let Voltaic traders buy shea directly from the producers.<sup>13</sup> The monopoly of the CSPPA was further weakened in 1974 as traders were allowed to sell their surplus outside the CSPPA once their CSPPA quota had been filled. Traders' representatives also participated in price fixing and in monitoring the marketing activities of the CSPPA. The CSPPA system of controlling contracts (1974–1975) was replaced by a CSPPA monopoly on shea exports (1976–1978) and, after opposition by exporters, a modified monopoly (1978–1991) (Badini *et al.* 2011a: 7–8). Total traded production (dotted line) and exports (solid line) of shea kernels during the CSPPA era is presented in Figure 1 below.

In the 1960s, the first successful cocoa butter equivalents (CBEs) were introduced and spread across the chocolate manufacturing market (Lovett 2015: 135). Until then, the main buyers of shea kernels had been Aarhus United (Denmark)

<sup>9</sup> Decree No. 506/PRES/MFAEP/AE of 8 December 1960 on the organisation of the OFCOM) and Decree No. 081/PRES/CIM/DCI of 4 February 1964 creating the CSPPS.

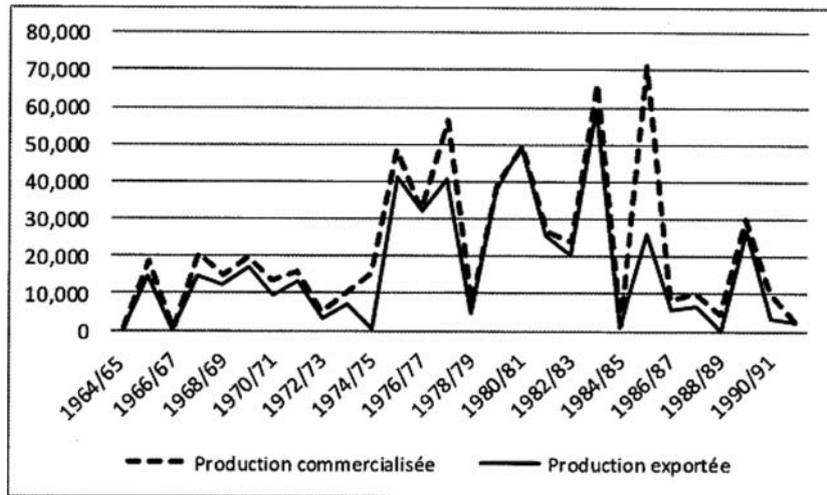
<sup>10</sup> Letter from M. Bernard Drissa Boni, Minister of Trade, Industry, Economic Affairs and Mining to divisional commanders, 7 January 1963. National Archive Centre, Ouagadougou (Class # 17V104).

<sup>11</sup> Letter from B. Mathurin, Head of administrative constituency of Tanguin-Dassouri Division, Ouagadougou to the Minister of Trade, Industry, Economic Affairs and Mining, 14 January 1964. National Archive Centre, Ouagadougou (Class # 17V104).

<sup>12</sup> Letter from M. Bernard Drissa Boni, President of the Central Council of OFCOM to the heads of administrative constituencies, 4 November 1962. National Archive Centre, Ouagadougou (Class # 17V104).

<sup>13</sup> Report by the select committee after examination of the report of the working group on agriculture and trade concerning problems related to the marketing of cash crops in Upper Volta, 7 June 1968. National Archive Centre, Ouagadougou (Class # 31V113).

FIGURE 1 Production and exports of shea kernels during the CSPPA period



Source: Badini et al. 2011a: 9

and Unilever (UK). This oligopoly locked the shea market in West Africa until the arrival of Japanese firms (Fuji Itoh and Mitsu Bishi) in the early 1960s (Terpend 1982).<sup>14</sup> During this period, international shea exporters in West Africa operated through their representatives in the ports of Abidjan, Tema, and Lome, but were not present in the Republic of Upper Volta. They relied on international and regional traders, such as Kagnassy, Kassardjian, and AFRICO, and preferred to pay an additional margin rather than being involved in direct sourcing of shea themselves. This arrangement enabled CBE manufacturers to maintain low prices, even in the period of the state monopoly, since state prices were pegged to international prices. The network of traders created by colonial trading firms remained in place after the departure of the firms and the closer intervention of OFCOM and CSPPA. Throughout the 30 years of CSPPA efforts to control the chain, a small number of national and regional traders acquired the power to directly export their products, reinforcing the pyramidal supply system. The CSPPA failed to control the prices fixed by the wholesalers, or their margins and organization, while the wholesalers took full advantage of the funding provided by the CSPPA to purchase and bulk-up shea nuts.

#### The “Sankara crisis” and the liberalization of the shea market (1983–2000)

The fall in cocoa prices in 1983–84 (Fold 2001 and 2004) had a pronounced negative effect on the CBE market which was no longer as financially attractive for chocolate manufacturers (see Figure 2 below). As a result, shea prices also fell in 1984–85<sup>15</sup> and trade in shea slowed down. It was in this context that the revolutionary government of President Thomas Sankara tried to alter the terms and conditions of official aid and

international trade to secure better conditions for national shea traders. This triggered a shea crisis as international traders withdrew from the shea trade and no outlet was found for the accumulating stocks of shea kernels. Shea kernels from two or more marketing seasons were mixed and led to a decline in the quality of Burkinabè shea kernels. Sankara’s government tried to reallocate shea kernels stocked by wholesalers and forwarders to supply Burkinabè crushing plants. In 1987, poor stocks of shea kernels were burnt in an attempt to restore international traders’ confidence in Burkinabè shea kernels. The government paid for the burnt stock at low prices, and traders suffered major losses. Confidence was not restored and in the following years the shea market remained depressed.

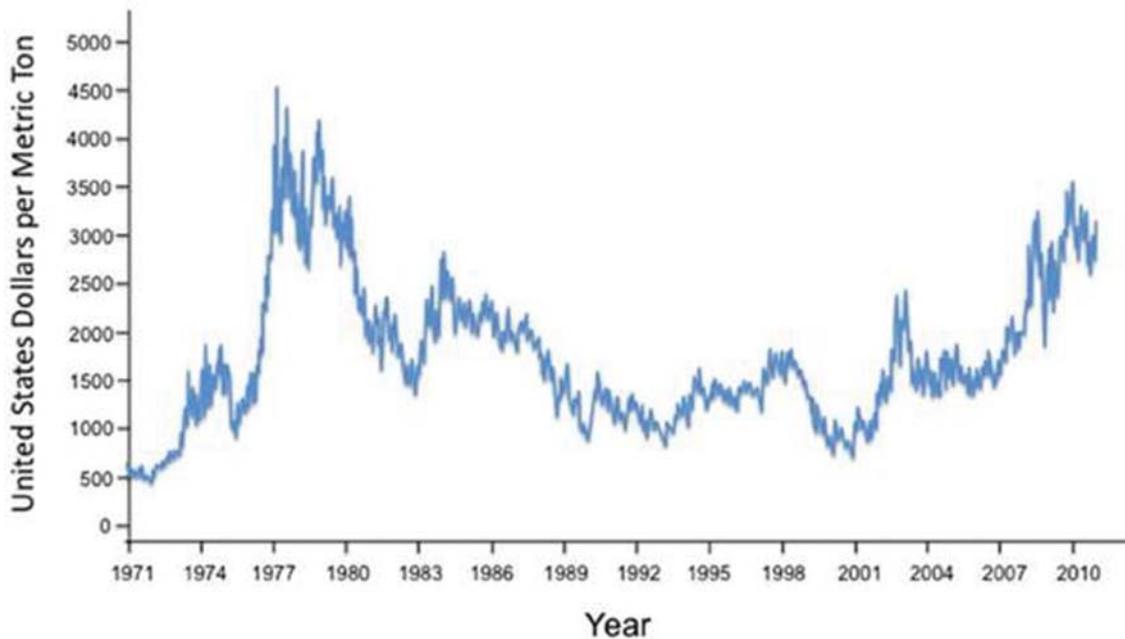
The crisis resulted in the bankruptcy of the CSPPA, which stopped buying shea nuts and ultimately led to the collapse of state regulation of the shea value chain, six years before ‘official’ economic liberalization in the country. The shea crisis at this time resulted in new wholesalers emerging, but often from the same families. The depressed market for shea kernels also left Burkinabe traders facing difficulties to supply exporters. Attempts at smuggling shea were largely unsuccessful but led to the disorganization of the supply chain. Such effects were compounded during the negotiation of the country’s second Structural Adjustment Programme for the Agricultural Sector (PASA II) in 1995, when the oil-seed crops value chain was diversified to include sesame and, to a lesser extent, cashew nuts. Henceforth, the relative importance of shea in the regional traders’ activities decreased.

Two international traders, Olam and Kagnassy (L’Aiglon Holding SA), entered the fray offered by the post-1991 liberalization process. Olam managed to become a key trader between regional and national wholesalers and the final buyers, who were (then) Lodors (Unilever group), Karlshamn

<sup>14</sup> Analysis of trade exchanges in Upper Volta 1962–63–64, undated. National Archive Centre, Ouagadougou (Class # 1V477).

<sup>15</sup> Between 1986–1987 the price of shea kernels in international trade fell from 70 francs CFA/kg to 15 francs CFA/kg (Caisse de Stabilisation des Prix des Produits Agricoles, 1988; *Données d’exportation du karité* (non-publiées), cited in Elias and Carney, 2004: 87).

FIGURE 2 World market prices for cocoa, 1971–2010 (US \$/tonne)



AB, Aarhus United and Fuji.<sup>16</sup> Olam, and to a lesser extent Kagnassy, leveraged the situation with high margins until 2003. Olam and Kagnassy relied on the same pyramidal system used by CSPPA and the colonial firms. The wholesalers' sourcing system recovered from the crisis with the arrival of Olam and Kagnassy, who relied on the system to source shea. Trends in the production and export of shea kernels from Burkina Faso between 1961–2001 are presented in Figure 3 below. The 'hollowing-out' of the state after liberalization reinforced the pyramidal supply chain that had been established in western Upper Volta, controlled by wholesalers from Bobo-Dioulasso (Figure 4). This remains, in essence, the organization of shea sourcing to the present-day.

#### **Proliferation of non-state initiatives to support women shea producers (1991–2008)**

The first wave of land tenure reforms initiated in Burkina Faso in 1984 led to a growing awareness of the critical needs to understand both customary land and resource tenure arrangements, and the role of women in shea supply chains. It ushered in an era of multiple project-based interventions by non-state actors to support capacity building of women shea producers, the emergence of new associations and federated structures, technological improvements in shea processing and access to new markets including organic and fair trade niche markets, with better quality products. After an initial trickle in the 1980s, a proliferation of 'women in development' and later 'gender-based' shea projects between 1991–2008

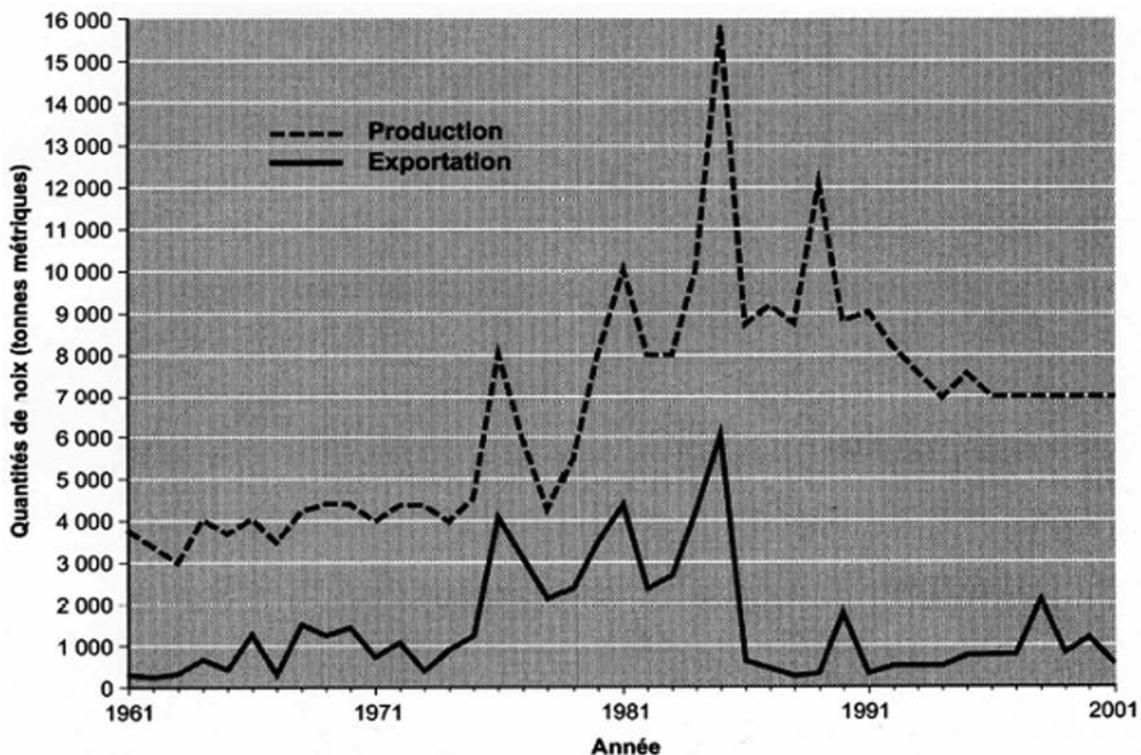
were largely financed by international bilateral donors, often accompanied by Non-Governmental Organisations (NGOs) from the same donor country (Badini *et al.* 2011a). By 2010, the former National Agency for the Promotion of Non Timber Forest Products (APFNL) estimated there were more than 10,000 women's shea producer groups across the country (APFNL 2015).<sup>17</sup> The Canadian and Dutch governments, represented by the Centre d'Etude et de la Cooperation Internationale (CECI) and the Netherlands Development Organisation (SNV) played particularly significant roles in the initial Projet National Karite (PNK) and Projet Filiere Karite (PFK), and the multiple iterations of these pioneer projects that followed.

These projects often aimed to increase the revenues, and reduce the workloads of rural women, whilst providing improved extraction technologies (for the pressing, crushing and torrefaction of shea kernels) and modified processing methods to produce better quality shea kernels and shea butter (Elias and Carney 2007, Pouliot 2012, Elias and Arora-Jonsson 2017, Naughton, Deubel and Mihelcic 2017 and Hammond *et al.* 2019). The rise of such projects was also associated with growing demand from Western consumers for traceable, fairtrade exotic products. They also helped to establish and strengthen producer groups and associations, and to improve access to credit and subsidized participation in national and international shea markets (Saussey, Moity-Maizi and Muchnik 2008). Some shea producer associations such as Songtaab Yalgre emerged from earlier national literacy efforts. Particular interest was shown in the development

<sup>16</sup> Production, processing and industrial use of the shea nut value chain in the West African sub-region. Sub-regional workshop, Abidjan, 1995. National Archive Centre, Ouagadougou (Class # 11V91).

<sup>17</sup> The APFNL was later transformed into a directorate to promote and value Non Timber Forest Products (DPV-PFNL) within the Direction Générale de l'Economie Vert et du Changement Climatique (DGEVCC).

FIGURE 3 Total production and exports of shea kernels from Burkina Faso, 1961–2001



Source: FAO 2004 cited in Elias and Carney 2004: 74

of hand-crafted shea butter for the cosmetics filament of the shea supply chain (Ansbaek 2005, Elias and Carney 2007, Saussey 2011a and 2011b, Elias and Saussey 2013) as this was perceived to link “traditional African women producers with female green consumers in the West” (Elias and Carney 2004: 71). The attention given to shea processing and marketing during this period as a means of enhancing rural women’s incomes (FAO-CFC 2004) may, inadvertently have resulted in the comparative neglect of questions related to the regeneration of the parklands.<sup>18</sup>

Concerns were also raised about the impacts of new processing requirements and fixed delivery schedules established by international buyers on the seasonal workloads of rural women, and of new technologies on women’s long-standing control of shea production (Carney and Elias 2006). Early efforts sought to improve the traceability of shea butter in niche Fair Trade and organic markets with assumed price premiums for a standardized, high quality product (Elias and Carney 2007: 55–57). These trends may have reduced the need for the specialized gendered knowledge that informs diverse and place-specific shea butter processing practices (Biquard 1992). Furthermore, the low returns shea butter producers earn for their product cast doubts on the ‘fairness’ of so-called Fair Trade (Elias and Saussey 2013, and Sourabie 2021, see also Kent 2018). To date, most steps in the shea

butter extraction process are still performed according to labour-intensive traditional methods harnessing the differentiated knowledge of older and younger women, and which require large volumes of water and firewood (Noumi, Dabat and Blin 2013) with a significant carbon footprint, particularly during the post-harvesting stage of transforming shea nuts into shea kernels (Glew and Lovett 2014).

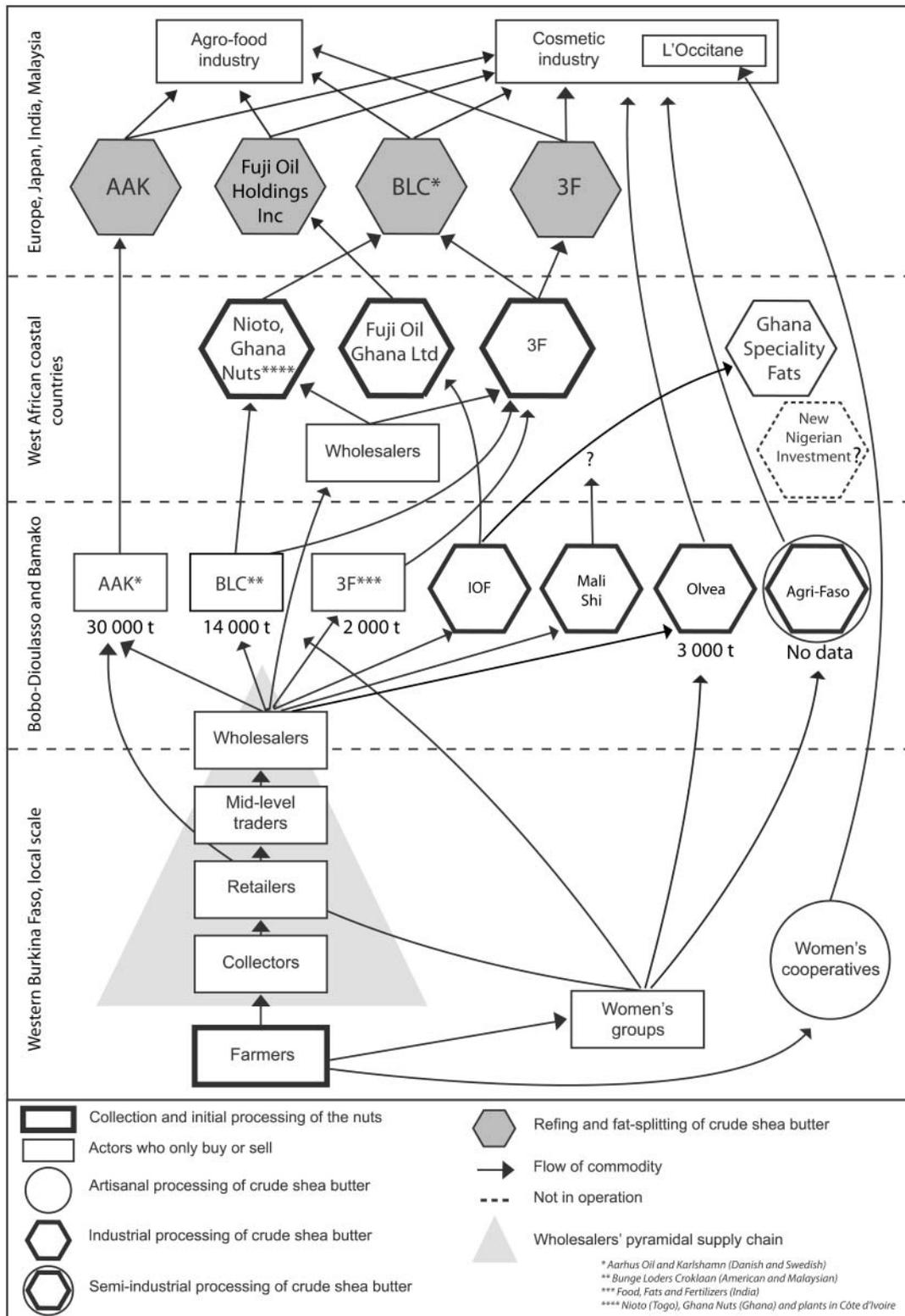
Neo-liberal economics, access to new technologies and the opening of new international cosmetic markets helped to stimulate the production and exports of both shea kernels and shea butter in Burkina Faso (Compaore 2000, Badini *et al.* 2011b: 17, Greig 2006, and GRET 2017). Some scholars have highlighted the potentials of information and communication technologies to improve quality, market access and women’s livelihoods (Bello, Lovett and Pittendrigh 2015, and Ouedraogo *et al.* 2018) but also the continued need to improve access to the results of existing research on shea (Ganabe and Bastide 2019).

There is some evidence which suggests a decline in domestic consumption of shea butter as an edible oil as alternative sources of cheap cooking oil, such as soy and groundnut oil produced locally, and palm oil from Indonesia, are increasingly available in local markets (Hall *et al.* 1996, and Schreckenber 2004). The elephant in the room throughout this period was the atypical shea nut supply chain<sup>19</sup> which

<sup>18</sup> Colonial and post-independence efforts to protect and regenerate shea parklands are explored in a separate article under preparation (Wardell *et al.* 2022).

<sup>19</sup> Typical buyer-driven supply chains associated with agricultural commodities are usually achieved through vertical integration and/or direct sourcing and frequently involve higher quality standards, shorter timeframes for delivery, larger volumes of trade, social and environmental certification requirements and greater control of supplies.

FIGURE 4 The pyramidal shea nut supply chain in western Burkina Faso



Source: Adapted and updated from Rousseau, Gautier and Wardell 2015: 418

still represented 90% of the total volume of annual exports of unprocessed shea kernels from the country.<sup>20</sup> The ambition of increasing value addition within the country has only been partially achieved with the growth of small-scale hand-crafted shea butter given the “limited capacity to mass-produce high-quality bulk shea-based cosmetics” (Lovett 2015: 139).

*The establishment of a Global Shea Alliance and emergence of a fledgling national Multi-Stakeholder Initiative – the Table Filière Karité – in Burkina Faso*

During the period after 2004, a series of shea supply chain studies commissioned by the USAID West Africa Trade Hub (WATH), as well as international conferences and trade shows and legislative changes in the European Union chocolate industry in support of CBEs (Timms and Berger 2003) led to a significant growth in interest, and investments in shea processing in the region (Lovett 2004 and Lovett 2015: 136).<sup>21</sup> In spite of early optimism that “there will soon be the capacity to process the entire current export crop of shea nuts” (Lovett 2015: 139), AAK (which resulted from the merger of Danish and Swedish, companies in 2005) became, and remains to this day the largest single buyer of unprocessed shea kernels from Burkina Faso. AAK’s shea nuts are shipped as breakbulk from Tema, Abidjan and Cotonou to Aarhus in Denmark following road transport from Bobo Dioulasso to the ports. Several processing facilities were established in the region with the first fractionator built by Ghana Speciality Fats Industries Ltd (GSIL) with ADM/Wilmar investments in 2006.<sup>22</sup> Other investments followed<sup>23</sup> including the recent International Finance Corporation (IFC) investment in Mali-Shi (a crushing plant with hexane extraction) in 2019.<sup>24</sup>

Several of these plants are not fully functional or operate below capacity. There are still no facilities in the region which are capable of producing food grade fractionated olein or refining shea butter to the same standard as competitors in Europe.

A series of shea-related events were held in West Africa and USA during the period 2004–2009 and culminated in a Global Shea event in March 2010 in Mali attended by 300 people.<sup>25</sup> The Global Shea Alliance (GSA) was established in 2011 after a founders meeting in October 2010 in Accra. GSA aimed to help build a more competitive, sustainable and profitable shea industry at a time of unprecedented growth in demand for shea kernels, and ‘hand-crafted’ shea butter. This reflected a stakeholder decision to join forces to better organize the industry, advocate for it and support its growth through specific services for members. USAID through its West African Trade Hub (WATH) was instrumental in supporting the establishment of GSA.<sup>26</sup> These USAID and other donor-financed projects have been critical in sustaining the GSA Secretariat.<sup>27</sup>

The first GSA General Assembly was held in April 2011 and elected 7 people to office. Over 400 people attended Shea 2011 ‘Sustainable Solutions’ in Accra, Ghana where GSA is headquartered. Annual conferences have been held every year in West Africa, USA, and Europe between 2012–2021. Virtual conferences were held in 2020 and 2021 due to the COVID-19 pandemic. African Cosmetic Exhibitions (ACE) have also been held in West Africa since 2014. An inaugural European conference was held in Brussels in 2016. GSA currently boasts 706 members from 36 countries. Additional details are presented in Wardell and Cheyns 2022.

<sup>20</sup> It is not clear, however, what quantities of shea kernels were being processed at crushing and/or fractionation facilities along the West Africa coast.

<sup>21</sup> ADM and Wilmar initially established a crushing and fractionation facility in Tema – Ghana Speciality Fats Ltd – which was followed by 3FI Ltd, Ghananuts, as a combined oilseed business and a joint venture with Fuji Oils (International Oils and Fats Ltd). These plants have a range of mechanical crushing, solvent extraction and fractionation facilities at Techiman, Ghana and Bobo Dioulasso, Burkina Faso (Lovett 2015: 136). See also <https://www.ghanaweb.com/GhanaHomePage/business/Ghana-Nuts-establishes-refinery-in-Tema-377430>

<sup>22</sup> See <https://www.modernghana.com/news/102214/adm-wilmar-to-process-shea-nuts-in-ghana.html> (Accessed 22 August 2021)

<sup>23</sup> For example, after 2001 the Sheabu factory in Savelugu was operational (supplying then Loders Croklaan), 3Fs Ltd invested in Tema; Ghananuts invested in a plant in Techiman (later Fuji setup their fractionator there), then Bunge Loders Croklaan added their fractionator in Tema. Obed of Ghananuts also set up a refinery capable of shea refining in Tema.

<sup>24</sup> IFC and the Private Sector Window of the Global Agriculture & Food Security Program (GAFSP) provided a loan of €2.5 million in 2019 to Mali Shi – a shea nut processing company based on the outskirts of Bamako in Mali. The financing will enable Mali Shi to build the country’s first modern shea butter processing plant, increasing incomes for the 120,000 shea producers who supply kernels to the company. Over 95 percent of these producers are women, for whom the secure livelihood is critical, as it pays school fees for children and household expenses. IFC will offer training in business skills, finance, and management to members of 100 women-led cooperatives that work with Mali Shi. IFC will also help the company improve energy efficiency, environmental and social management, traceability of its products, and international food safety standards. IFC’s financing and technical assistance will help the company meet international standards in an industry where international quality requirements are high (<https://www.gafspfund.org/projects/malis-shea-nut-industry-takes-root>, accessed 28 July 2021).

<sup>25</sup> Two other preparatory international conferences were held - Shea 2006 in Abuja and Shea 2009 in Ouagadougou before the GSA founders meeting in October 2010 in Accra.

<sup>26</sup> An initial USAID WATH grant of USD 240K was used to pay for technical consultants, staff, trade shows, travel and overhead expenses in 2012. In 2016, USAID provided a USD 6.5 million grant as part of a 5-year USD 18m Sustainable Shea Initiative project. This was extended in 2020 with an additional grant of USD 2m (as part of a total of USD 8.7m) to 2024.

<sup>27</sup> These include PRADCIFK funded by the Enhanced Integrated Framework; Improving Women’s Collectors Capacity in Ghana funded by GIZ; Developing a Resilient Shea Agroforestry Farm Model funded by the European Union; and the shea component of the Ghana Shea Landscape Emission Reduction project funded by the Green Climate Fund and led by the Forestry commission.

After the effective withdrawal of the state in 1991, the subsequent proliferation of shea projects by non-state actors in Burkina Faso (see above) required guidance and coordination. After multiple studies, a first *Cadre National de Concertation* (CNC) was established in June 1998 which became the short-lived *Fédération Nationale des Associations et Professionnelles de la Filière Karité* (FENAO) in 2000. A new *Projet d'Appui aux Filières Bio-Alimentaire* (PAF), financed by the Canadians, precipitated the dissolution of FENAO and the creation of the *Table Filière Karité* (TFK) in the same year. Dutch and Canadian NGOs were particularly active in supporting the shea sector and the establishment of TFK. TFK operated with an initial five-year strategic plan for the period 2000–2004. Initial efforts to establish a *Fédération Nationale des Unions Karité* (FENUK) were unsuccessful. TFK has since evolved as the legal framework governing producer groups and their associations has changed. It now represents the production, transformation and marketing of shea kernels and shea butter by more than 10,000 women's groups and their multiple associations and federated structures. TFK was registered in accordance with Law No. 050-2012/AN governing inter-professional organisations on 22 September 2013. TFK renewed its executive office to comply with the Uniform Act of the Organisation for the Harmonisation of Business Law in Africa (OHADA) in February 2019.<sup>28</sup> TFK now comprises three 'maillons' (chapters) which represent the specific interests related to production, processing and marketing of shea nuts and shea products. Additional details are presented in Tapsoba *et al.* 2021a.

In contrast to GSA in Accra, TFK has been relatively poorly resourced and dependent on project-based financing. It is still confronted with the challenge of securing a sustainable source of financing. A recent government proposal to introduce a *Contribution Forfaitaire Obligatoire* (CFO), to apply differential tariffs on shea exports, is pending given earlier problems in applying CFOs to other supply chains (Anon 2020), and the potential risk of reducing the competitiveness of the shea sector in Burkina Faso vis a vis other neighbouring producer countries which do not apply similar levies. The government is currently exploring the creation of a para-statal entity with a board comprising representatives of all inter-professional organizations (including TFK) as a way of strengthening their financial autonomy. A draft bill has already been prepared.<sup>29</sup> The CFO if applied, will be levied on exported products hence will not fall under tariff barriers targeted in the Africa Continental Free Trade Agreement's (AfCFTA) Protocol on Trade in Goods. AfCFTA aims to increase levels of intra-African trade in goods to 50% by 2030 (it currently represents 16–18%).<sup>30</sup> This is to be achieved

through the progressive elimination of tariffs and non-tariff barriers, the liberalisation of service sectors and strengthening regulatory cooperation (Ogo 2020).<sup>31</sup> The Government of Burkina Faso ratified the AfCFTA on 27 May 2019. A technical committee under the Ministry of Commerce is currently working out the transcription of this treaty in the national regulations. Additional AfCFTA protocols on Dispute Settlement, Intellectual Property Rights and Competition Policy and Investment were agreed in mid-2021. A third phase of negotiations is currently focused on electronic commerce.

## STRENGTHENING AN OLIGOPOLISTIC GLOBAL PRODUCTION NETWORK

Shea nut sourcing in Burkina Faso is still largely controlled by an oligarchy of wholesalers in Bobo Dioulasso even after international CBE manufacturers established their own trading bases and/or crushing facilities inside the country after 2003. This was, in part, facilitated by limited preparation after the withdrawal of the state after 1991, and stimulated by the launch of the USAID-financed West African Trade Hub which led to the establishment of the Global Shea Alliance (GSA) based in Accra, Ghana shortly after the emergence of the national *Table Filière Karité* (TFK). The recent significant increase in the volumes and value of trade in shea kernels and shea butter (350,000 tonnes in 2008, and annual sales of 34 billion F CFA in 2019) has heralded the progressive return of the state given the prospects of larger potential sources of government revenues (Figure 5). The development of the country's first *Stratégie Nationale de Développement Durable de la Filière Karité du Burkina Faso 2015–2019* by the Ministry of Commerce, Industry and Artisans, with support from the International Trade Centre, has also challenged the formerly pre-eminent role of the Ministry of Environment, Green Economy and Climate Change in the shea sector. The Strategy was accompanied by an African Development Bank Group financed project (PADIFK) approved in 2016 with the aim of building the capacity of the umbrella organisation of the shea sector, and to support development of 100 of the most functional (shea) organisations (African Development Bank 2020).

### Dominance of CBE manufacturers in sourcing shea after 2005

The global CBE market has experienced enormous growth since the early 2000s. Exports of shea kernels increased three-fold during the period 2000–2005 and seven-fold during the

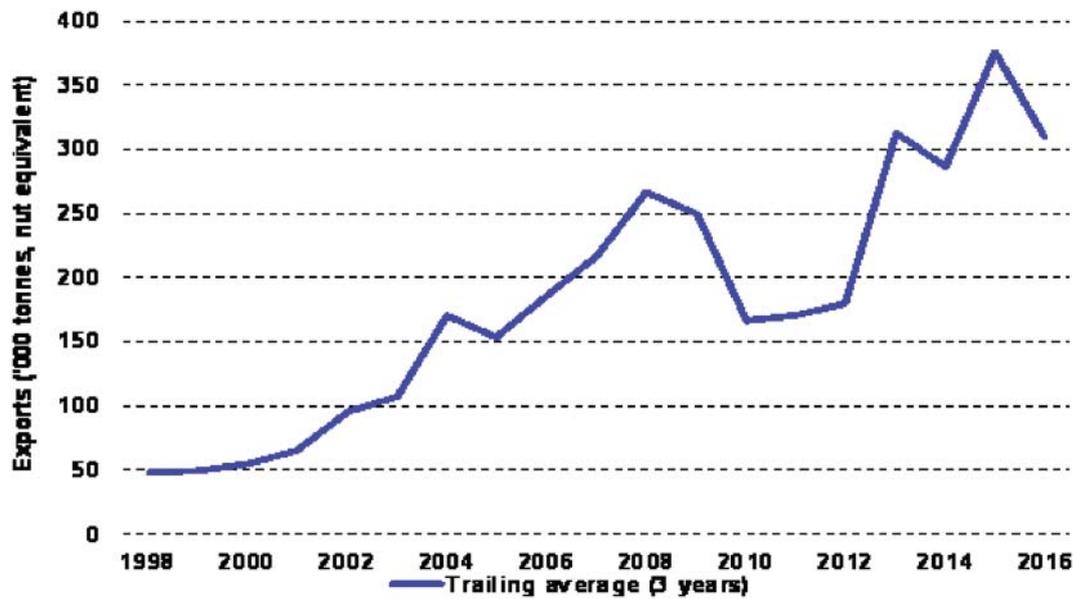
<sup>28</sup> The Organisation for the Harmonization of Business Law in Africa (OHADA) was created on October 17, 1993 in Port Louis, Mauritius, and revised in Quebec on 17 October 2008. The OHADA Treaty currently comprises 16 African states. The *Acte Uniforme revise relative au droit des sociétés commerciale et du groupement d'intérêt économique* comprising 920 articles was adopted by Burkina Faso on 30 January 2014.

<sup>29</sup> Many thanks to Maturin Zida for additional information on the current status of the CFO in Burkina Faso shared on 10 November 2021.

<sup>30</sup> The Union Economique et Monétaire Ouest Africaine (UMEAO) is part of the Economic Community of West African States (ECOWAS) which is a Regional Economic Community and subset of AfCFTA.

<sup>31</sup> Current tariffs on raw shea butter range from 10 to 40% in African countries (Ogo 2020).

FIGURE 5 Growth in exports of shea nuts 1998–2016



Source: LMC International [www.lmc.co.uk](http://www.lmc.co.uk)

period 2005–2012 whilst prices also increased significantly (Rousseau, Gautier and Wardell 2015). Several large Trans-National Corporations (AAK,<sup>32</sup> Bunge Loders Croklaan, Fuji Oil, 3F Ltd and Ghana Speciality Fats Industries Ltd) set up in the key shea-producing region with the desire to reduce the number of middlemen in the supply chain, whilst maintaining links to their port offices on the West African coast. They also sought to better control the supply. CBE manufacturers wanted to maximize performance in the sourcing of shea because the margins of other activities in the shea nut supply chain had been reduced (Fold 2000 and 2004). Some invested in new crushing and/or fractionation facilities. They initially deposed Olam and worked directly with national and regional wholesalers.<sup>33</sup> Instead of decreasing the size of the pyramid to better control production quality and prices, CBE manufacturers strengthened the pyramidal network controlled by the wholesalers. With the increase in the price of shea kernels and the arrival of several CBE manufacturers, many new actors also entered the shea nut value chain. The shea market was not as sensitive to price fluctuations as originally thought. Increasing the price was not synonymous with increased amounts of shea kernels sold because traders in the first stages of the chain, the wholesalers, kept any price increase largely to themselves (Fold 2002, Rousseau, Gautier and Wardell 2015). As the increase in price did not reach the farmers, it was not an incentive to collect more shea kernels. Few local traders were adding value into the supply chain, apart from upstream financing and aggregation. Information about prices and

quality of shea kernels did not reach the producers either. Later, the introduction of mobile phone technology provided the biggest breakthrough for shea collectors by enabling them to have instant access to market prices.

The changing context and the new rules of trade with CBE manufacturers upset long-established shea traders. Margins in the shea trade changed. As a consequence, the wholesalers' network of traders became less stable since wholesalers were working with new traders but trusted them less. The arrival of CBE manufacturers reshuffled the hierarchical order between wholesalers. Some long-standing traders were edged out but others managed to continue under these new conditions. CBE manufacturers mainly strengthened the vantage point of wholesalers who were already working directly with international traders (Olam, Kagnassy) but they also empowered some other wholesalers. Nevertheless, the wholesalers who now enjoy a privileged position in the supply chain are not newcomers. They belong predominantly to old regional traders' families who used to work with powerful wholesalers, but at a lower level. In some cases, former and current officials of the *Table Filière Karité* are key wholesalers for AAK, BLC and other international buyers. The pyramidal supply chain of shea survived the recent upheaval of shea globalization (Rousseau, Gautier and Wardell 2015). The same organization of shea nut sourcing controlled by wholesalers in Bobo-Dioulasso during the colonial period largely continues today (see Figure 4 above).

<sup>32</sup> AAK emerged in 2005 after the merger of a Danish company, Aarhus Olie and a Swedish company, Karlshamn. AAK has recently made significant investments in a research centre (CRAAK) in south-west Burkina Faso which aims, primarily to stimulate efforts to replant shea parklands in the country.

<sup>33</sup> After attempts to enter the Ghanaian market were unsuccessful, Olam decided to move downstream, and then acquired Britannia, a major CBE formulator. Olam continues to source stearin from existing supply chains. <https://www.olamgroup.com/news/all-news/press-release/olam-acquire-britannia-food-ingredients-britannia-storage-distribution.html>

In contrast, the progressive emergence of a typical buyer-driven shea butter supply chain for the cosmetics industry has been accompanied by higher quality standards, shorter timeframes for delivery, larger volumes of trade, meeting new social and environmental certification requirements and greater control of supplies through direct sourcing. The emergence of whole shea butter refineries in the Netherlands was key to accessing the cosmetic mass market, as hand-crafted shea butter is better quality and therefore cheaper to refine than mechanically crushed butter. New investments in crushing and extraction facilities in Bobo Dioulasso were made by IOF (Fuji Oil and Ghana Nuts) and Olvea which built an organic shea extraction plant. Less attention was given during the shea ‘project era’ to the development of either domestic or regional markets. Nevertheless, the well-established domestic, transboundary and regional trade in shea butter remained and some Burkinabe producers, such as PHYCOS and the Association Rimtereb Som, preferred to focus on production for a ‘fair trade’ national market (Nacoulma 2002, Jones 2002, Fold 2002, and Grandval and Dibia 2012).

There has been a noticeable recent trend of direct sourcing by CBE manufacturers to meet new market standards and/or CSR/ESG requirements (Wardell *et al.* 2021a) but this is estimated to represent only 5–10% of total shea nut purchases (Lovett and Phillips 2018). There has also been growth in the certification of organic shea butter (Sourabie 2021).

## RECENT INITIATIVES IN BURKINA FASO AND THE WEST AFRICAN REGION

### A first National Shea Strategy 2015–2019

Following an ‘Etude Diagnostique sur l’Intégration Commerciale’ published in November 2014, and cognizant of the growing global demand for shea, the Government of Burkina Faso led by the Ministry of Industry, Commerce and Artisans (MICA), and with assistance from the International Trade Centre (ITC), launched a process in January 2014 to develop the first ‘*Stratégie Nationale de Développement Durable de la Filière Karité du Burkina Faso 2015–2019*’ (hereinafter,

‘National Shea Strategy’ – Government of Burkina Faso 2015).<sup>34</sup> The National Shea Strategy was adopted by the Council of Ministers in June 2015, and comprised a detailed Plan of Action comprising 133 prioritized activities in accordance with 35 operational objectives, and 5 specific objectives.<sup>35</sup> The implementation of the National Shea Strategy was poorly funded and executed, and a recent evaluation identified, in particular, the failure of MICA to ensure the ‘sustainable management of the parklands and the environment’ (Strategic Axe # 1): only 300,000 seedlings were planted (MCIA 2020) during the five years of the National Shea Strategy.<sup>36</sup> Further details are presented in Lovett and Bama 2022.<sup>37</sup>

### A first National Shea Forum

In 2011, Burkina Faso had an estimated 305 million shea trees with an average density of 11 trees per hectare (Fischer *et al.* 2011). The production potential of shea kernels is estimated at 1.250 millions tonnes, and is the major source of vegetable oil and incomes for rural communities, particularly women (APFNL 2015). The added value of all NTFPs in the country is estimated at 114 billion Franc CFA or 3.4% of GDP. Growing global demand for shea kernels and shea butter and pressures to intensify local agricultural production systems to produce more food and to meet traditional energy needs pose new threats to the sustainability of shea parklands and women’s livelihoods. Many tree species in these parkland systems show poor natural regeneration due to demographic pressure, overgrazing, unsustainable farming practices no longer based on farm-fallow rotations, fires and felling of trees for firewood, and charcoal, changes in the functioning of customary institutions, and few policy or fiscal incentives to plant trees on farms. The evaluation of the National Shea Strategy underlined the poor performance in terms of the protection and regeneration of shea parkland resources (MICA 2020). Faced with this situation, the Ministry of Environment, Green Economy and Climate Change (MEEVCC) in collaboration with the Center for International Forestry Research (CIFOR) co-hosted a first National Shea Forum on 24–25 June 2021 to identify ways to address the degradation of

<sup>34</sup> The National Shea Strategy was developed by a team of five ITC consultants coordinated by a three-person team representing MICA and the Cadre Intégré Renforcé (CIR). It was supported by a 21-person technical advisory group representing different actors of the shea value chain in the country.

<sup>35</sup> *Stratégie Nationale de Développement Durable de la Filière Karité du Burkina Faso 2015–2019*: 77–96.

<sup>36</sup> This can only be considered a poor performance in the face of the estimated annual loss of 8 million shea trees across West and Central Africa. However, the political and tenure context in Burkina Faso are still not favourable to planting trees on farms.

<sup>37</sup> The National Shea Strategy was accompanied by an African Development Bank Group financed project (PADIFK) with a US\$ 1m grant approved in 2016. The aim of PADIFK, implemented by the Enhanced Integrated Framework (CIR) of MCIA, was to build the capacity of the umbrella organisation of the shea sector, and to support development of 100 of the most functional (shea) organisations. Emphasis was to be placed on strengthening the regulation of inter-professional organisations in the agricultural and forestry sectors (Law No. 050/2012/AN) and alignment with the Uniform Act relating to the OHADA Law on cooperative societies and access to finance. The implementation of the PADIFK Project was considered a success given that shea exports increased to F CFA 34 billion in 2019, and business plans were developed for 65 shea producer organizations although only 7 (10%) benefited from financing from national financial institutions (African Development Bank Group 2020). A database of banking institutions was also established by CIR. The post-2008 growth in exports of shea kernels probably better reflected growing global demand for CBEs and hand-crafted shea butter rather than an outcome of the PADIFK project *per se*.

parklands with representatives of all actor groups in the shea supply chain. A call to action was adopted by 178 participants and included 10 key recommendations.<sup>38</sup> Further details are presented in MEEVCC 2021.

### GSA's Parkland Restoration Fund

A recent FAO-GSA analysis estimates that approximately 8 million shea trees across West and Central Africa are lost every year due to tree removal for firewood, increasing populations, loss of fallows and areas for shea regeneration and clearing of land for commercial agriculture (FAO/GSA 2020, see also GSA 2021).<sup>39</sup> If the industry does not act now, shea supply may not be able to meet demand by 2034. The parklands also provide critical benefits to the savannah ecosystem by sequestering carbon and reducing the effects of climate change on local communities. To address and mitigate these challenges, GSA launched the Action for Shea Parklands Initiative in 2020 and the creation of the Parkland Restoration Fund (PRF). The PRF is a pool of financial resources to be invested in activities aimed at restoring the shea parklands. Resources will be invested through an annual grant program that mobilizes public and private funds to undertake activities aimed at restoring the shea parklands across Africa. As a fund, the PRF Management Team – acting as a fund manager – and experienced PRF Board of Directors will solicit, evaluate, distribute, support, and monitor projects that contribute to the restoration of shea parklands. The grant program will follow the standard format of an annual competitive call for proposals, while the funds will mobilize resources year-round.

Much of the recent economic policy literature advocating globalized free trade as a mechanism to improve agricultural production in West Africa tends to ignore that globalization is not new in the region and has interesting historical precedents (Wardell et al. 2021b). The colonial and post-independence waves of globalization of shea are compared and contrasted in the following section.

## CONTINUITY AND CHANGE IN POST-INDEPENDENCE EFFORTS TO REGULATE THE SHEA TRADE IN BURKINA FASO

State-led forestry activities in the 1960s initially focused on establishing large-scale forest plantations for wood-fuel

production using exotic species. The Sahelian drought of 1968–1973 (Batterbury and Warren 2001, and Gautier, Denis and Locatelli 2016) reinforced the emphasis on tree growing with progressively greater engagement with local communities. A paradigm shift occurred in the early 1980s as natural forest management models were introduced over the next 25 years, albeit with wood-fuel production still as the primary objective (Kabore 2005).

The first wave of land tenure reforms initiated in 1984 led to growing awareness of the critical need to understand customary land and resource tenure arrangements and the role of women in shea processing. It ushered in an era of multiple project and gender-based interventions from the mid-1980s to 2008. These projects, largely financed by international donors and Non-Governmental Organisations (NGOs), focused on capacity building of women shea producers and their federated structures, technological improvements in shea processing and facilitating access to new markets. Little attention was given to regenerating the shea agroforestry parklands.

A national multi-stakeholder platform, the Table Filière Karité (TFK), emerged in 2000 ostensibly to represent the interests of all stakeholders in the shea supply chain. The long-term autonomy of both women shea producer groups as well as the effectiveness of TFK in protecting the interests of women shea producers and transformers against international buyers, remain elusive.<sup>40</sup> Despite the growth of a typical buyer-led shea butter supply chain to meet growing demand in the cosmetics industry, an oligarchy of shea nut exporters remains in place controlled by the world's largest manufacturers of Cocoa Butter Equivalents (CBEs), representing about 90% of total annual exports of shea kernels from Burkina Faso.

### Continuity of periodic local markets and supplying borderland economies

Periodic local markets continue to perform a vital role in the economic and social life, particularly of rural women in Burkina Faso as is the case throughout West Africa. In Burkina Faso, a complex hierarchy exists linking periodic three-day village markets to larger foci of trade in places such as Léo, Tenkodogo, Bittou and Koudougou and Bobo Dioulasso which, in turn, are linked to centres of consumption in neighbouring Ghana, Cote d'Ivoire, Bénin and Togo, and other parts of the West Africa littoral. During the colonial period

<sup>38</sup> The recommendations included in the 'Call to Action' were:

1. Increase support for efforts to regenerate agroforestry parklands across the country.
2. The domestication and genetic improvement of shea.
3. Introduction of an export tax to support the regeneration of parklands.
4. Registration of shea parklands, issuance of land possession certificates (APFF) and development of Land Management Charters.
5. Establish a dedicated research programme on shea.
6. Facilitate Public-Private-Partnerships to encourage greater industrial investments in the country.
7. Establish a National Shea Fund to help restore agroforestry parklands.
8. Introduce the *Contribution Forfaitaire Obligatoire* (CFO) on shea exports in accordance with the Law 050 on interprofessional organisations.
9. Review the effectiveness of the current integral protection of shea trees and strengthen the enforcement of regulations.
10. Accompany the interprofession, *Table Filière Karité*, by recognizing its official institutional anchoring within the Ministry in charge of the Environment (MEEVCC).

<sup>39</sup> It is not clear, however, how FAO and GSA arrived at this estimate.

<sup>40</sup> See, for example, <https://lefaso.net/spip.php?article82920> (Accessed 22 August 2021).

persistent migration to avoid the cumulative burdens of capitation tax, forced labour, military conscription, corporal punishments, and restrictive forest policies (Marchal 1999, and Wardell *et al.* 2021b) helped to create a subversive borderland economy (Donnan and Wilson 1998) between Ghana and Burkina Faso, distinguished by a ‘phantom boundary’ (Duperray 1999). The aggregation of the periodic local market system facilitates the cross-border trade in surpluses of agricultural food and cash crops such as shea kernels and shea butter (Chalfin 2000, and 2004a). Shea kernels remain a critical source of edible oil to meet subsistence needs, with women processing and selling shea kernels and processed shea butter in markets throughout southern Burkina Faso, and northern Ghana. Surplus kernels from individual households or small communities are brought by females to the markets and sold to wholesalers or forestallers who may be stationary or itinerant. These traders – in turn – sell the kernels to women in need of raw material for domestic production of shea butter or, alternatively, they may sell to agents from large-scale trading companies. Similarly, shea butter is sold as a retail good to other women or it may be sold to female wholesalers. These traders accumulate butter for resale to other retailers (forestallers) or wholesalers operating in distant markets.

Moreover, unknown, but probably significant volumes of butter – and kernels – are traded across the border zones between Cote d’Ivoire, Ghana, Burkina Faso and Togo (Fold and Reenberg 1999, and Chalfin 2001). These trade flows serve to link surplus regions with deficit regions, and enables women to benefit from price differentials between countries. Women continue to dominate this part of the chain with collectors/producers, traders, and wholesalers linked by well-developed trust and credit relationships (Chalfin 2001). Power asymmetry and exploitation is, nevertheless, still an integral component of this part of the shea supply chain. Wholesale butter traders and women’s cooperatives supply the markets in the larger towns along the West African coast. The major demand is for edible shea butter but there is also demand for shea butter used for skin protection, or as a hair restorer, during the dry Harmattan period (December to February).

### Continuity of technical solutions to restore agroforestry parklands

Although there is some evidence from remotely sensed data, shea population structures and seedling regeneration densities, the dynamics of parkland tree populations are still poorly understood. The “diverse and dynamic management practices are articulated through the differentiated knowledge of rural populations, which includes the repositories handed down through generations of women. The process of how this occurs remains under-appreciated” (Carney and Elias 2006: 259).

Many studies have expressed concern about shea tree regeneration in West Africa’s agroforestry parklands (Gijsbers,

Kessler and Knevel 1994, Saul, Ouadba and Bognounou 2003, Wardell, Reenberg and Tottrup 2003, Wardell and Reenberg 2006, Savadogo *et al.* 2007, Ouedraogo 2007, Fischer *et al.* 2011, Kaboré *et al.* 2012, Boffa 2015, Lovett and Phillips 2018, and Takenaka *et al.* 2021) including a recent comprehensive threat assessment of 16 parkland species (Gaisberger *et al.* 2017). Governments, commercial companies, and research organisations have all shown growing interest in the restoration of parklands (MEEVCC 2021). This has focused on developing planting materials grown from seed, grafting scions, or rooting cuttings, and addressing challenges related to planting and growing shea seedlings on-farm, and the promotion of so-called Farmer Managed Natural Regeneration (FMNR).<sup>41</sup> Such techniques were originally part of colonial attempts to regenerate shea parklands as shea plantations and/or managed forest reserves with the aim of increasing and rationalizing shea production and/or shea productivity for exports to Europe. Shea plantations are still conceived as a technical solution, which take little account of shea’s cultural importance and customary management practices of women or men farmers.

There continues to be a focus on simple technical solutions to rationalize and intensify shea production based on ideas first introduced by colonial scientists despite growing recognition of customary land and resource tenure arrangements, and the critical role of women and women shea producer associations in managing and regenerating the shea resource. The literate world on paper often continues to be presented as being logical, rational, civilized and scientific compared to the non-literate cosmologies and oral cultures of women shea producers. This is explored in depth in Wardell *et al.* 2022 (forthcoming). However, changes in women’s rights of access to, and use of shea trees have resulted in theft now being one of the main strategies used by women to collect shea kernels as the relevance of customary norms, practices and institutions have declined (Lund 1997, Ouan-groua 2003, Wardell and Reenberg 2006, Poudyal 2012, Rousseau Gautier and Wardell 2017a, and Bambi and Agha 2018). Furthermore, the recent boom in the shea trade has fuelled both within, and across household mechanisms of socio-economic differentiation in shea activity in western Burkina Faso (Rousseau Gautier and Wardell 2017b, and Elias 2015).

### Shea as an institutional ‘misfit’

Throughout the post-independence era, and particularly after 1984, the Ministries of Agriculture and Environment have both played alternating and/or complementary roles to provide strategic direction and technical support, as well as limited extension services, to the development of the shea sector in Burkina Faso. A first National Strategy for Non-Timber Forest Products was prepared in 2010, and led to the establishment of the National Agency for the Promotion of Non-Timber Forest Products (APFNL) by the Ministry

<sup>41</sup> There has also been some progress in developing *in vitro* systems for shea tree propagation (Lovett and Haq 2013).

of Environment. This was subsequently merged into one of three technical Directorates within the (now) Ministry of Environment, Green Economy and Climate Change.<sup>42</sup>

Shea is neither a conventional forest species nor an agricultural crop but has recently been recognized as one of many food tree crops found in the parklands across the country (Sanou, Bazié and Bayala 2020). It is, on paper, a protected species in all state-approved 20,000 ha *Chantier d'Aménagement Forestier* which aim to maintain sustainable supplies of wood-fuel to urban consumers.<sup>43</sup> In practice, this has proved difficult to enforce as shea trees continue to be cut and/or girdled particularly by male wood-fuel cutters, as the wood and charcoal have high calorific values (Kaboré 2005, Kaboré et al. 2012, Westholm 2016 and, Méda 2020). Recent efforts have been made to develop more participatory forest management plans with women producers in the Sapouy and Bounounou-Nebelianayou Communes (Traoré et al. 2020a and 2020b).

The Government of Burkina Faso supported by the International Trade Centre (ITC) and the Enhanced Integrated Framework (EIF) developed the first *Stratégie Nationale de Développement Durable de la Filière Karité du Burkina Faso 2015–2019*. This clearly demonstrated new ambitions to expand the shea nut trade as part of the state's portfolio of non-traditional agricultural export commodities. This policy is embedded within the (now) dominant orthodoxy of neo-liberalism, which privileges private over public rights, and monetized production systems. The proposed introduction of a *Contribution Forfaitaire Obligatoire* (CFO) on shea exports (see above) was promoted by TFK as a potential future source of financing for the shea interprofessional organization.<sup>44</sup> It remains unclear when, and if a parastatal will be established to collect levies from exports of shea kernels or shea butter.

The development and implementation of the Strategy added another layer of institutional complexity in the shea sector as it was implemented by the so-called Enhanced Integrated Framework within the Ministry of Commerce, Industries and

Artisans (MCIA) with negligible engagement with, or delegation to, the Ministry of Environment. This may explain the relatively poor performance of Strategic Objective No. 1 of the Strategy (to preserve and restore the parklands) following a recent evaluation (MICA 2020).<sup>45</sup> The restoration of shea parklands remains a critical challenge in Burkina Faso as current Forest Landscape Restoration (FLR) efforts are only meeting 2% of national FLR targets to be achieved by 2030 (Vinceti et al. 2020).

### Changes in the development of global production networks

The post-2000 boom in globalized demand for shea stearin as a CBE ingredient, had negligible impact on the upstream shea nut supply chain despite the significant growth in trade, shea price increases,<sup>46</sup> and the in-country presence of the largest CBE manufacturers in Bobo Dioulasso (Rousseau, Gautier and Wardell 2015). An oligarchy of Trans-National Corporations continues to function as the main source of finance for shea wholesalers based in Bobo Dioulasso. Two distinct filaments have emerged viz. the Speciality Fats market (CBEs and agri-food industries) which absorb 90% of total shea nut exports in contrast to the shea butter value chain, (to supply the cosmetics and edible niche markets), which represents only 10% of the export trade from Burkina Faso (see Table 1 below). An estimated 50% of total annual shea nut production is still consumed locally (Rousseau, Gautier and Wardell 2015, and MICA 2020) although empirical data is scarce as the local edible consumption of this staple edible oil is still largely ignored by government, donor organisations and Non-Governmental Organisations.

Shea butter has an exceptionally large healing (non-saponifiable) fraction between 7–12% compared with, for example, avocado oil (2–6%) which enables it to treat a wide variety of skin conditions.<sup>47</sup> Shea is a super-moisturiser, high in antioxidants, is a natural anti-inflammatory and possesses

<sup>42</sup> The Direction Générale de l'Economie Vert et du Changement Climatique (DGEVCC) comprises three departments viz. a directorate to promote and value Non Timber Forest Products (DPV-PFNL); a directorate to promote enterprises and green investments (DPEIV); and a directorate to promote actions in support of climate change resilience (DPARC).

<sup>43</sup> The shea tree is one of 23 species with pan-territorial protection in accordance with Arrêté No. 2004-019/MECV du 7 juillet 2004 portant détermination de la liste des espèces forestières bénéficiant de mesures de protection particulière au Burkina Faso.

<sup>44</sup> The CFO is a mechanism which allows interprofessional organizations to collect additional revenues for their operations in accordance with Law No. 50. In legal terms, the CFO is not meant to be an additional source of revenue for the government. In practice, when the cashews' interprofessional organization started to collect a CFO, the State realized this was a potentially large source of revenues since when the State is reluctant to let interprofessional organizations collect and/or manage CFOs on exports. Several interprofessional organizations (cashews, shea, mango, and sesame) have criticized a draft law which aims to create a new parastatal body which will be in charge of collecting and managing taxes on exports of agricultural commodities, including NTFPs. The interprofessional organizations fear that as soon as this parastatal body is created, the National Assembly will amend Law no. 50 to revoke the provision that institutes CFO for interprofessional organizations.

<sup>45</sup> The evaluation report was silent on the current threatened status of the shea parklands in Burkina Faso and the contribution of the National Shea Strategy to ensure "une gestion durable de la ressource, la protection de l'environnement. . ." (Axe stratégique # 1, which received the smallest budgetary allocation (23%). It was not clear what proportion, if any, of the total budget (2.248 b F CFA) was allocated by MCIA to MEEVCC.

<sup>46</sup> Shea nut price: 45 (1990s) to 130 (2003) to 250 (2013) FCFA/kg.

<sup>47</sup> Analysis of these unsaponifiables has revealed a wide range of interesting and useful bioactives – with antioxidant, anti-inflammatory, antitumor, UV-protective, and protease-inhibition properties – that include phytosterols, triterpenes, polyisoprenic hydrocarbons (karitene), tocopherols, and catechins, with dry kernels consisting up to 0.4% of the latter (see Lovett 2015).

TABLE 1 *Global Production Networks and agri-food standards*

Food retailers (supermarkets and others)	<i>Concentrated</i>	<b>Buyer-driven chains</b> Public + private/ Safety-focused standards e.g. horticultural products and <b>shea butter</b> <b>(cosmetics)</b>	<b>Bilateral oligopolies</b> Private/most comprehensive standards e.g. bananas and fresh pineapples
	<i>Fragmented</i>	<b>Traditional markets</b> Limited public standards/ Least comprehensive standards <b>e.g. shea kernels (Cocoa Butter Equivalents and agri-business)</b>	<b>Producer-driven chains</b> Public + private/ Quality-focused standards e.g. coffee and cocoa
		<i>Fragmented</i> Food production (farmers and manufacturers)	<i>Concentrated</i>

Source: Adapted from Lee, Gereffi and Beauvais 2012

anti-fungal properties (Lovett 2015). These features have attracted growing interest in shea by the global cosmetics industries as shea butter is used in lip balms, moisturising skin products, nourishing hair and body care products, anti-ageing creams, dry-skin moisturisers and sun creams. Women shea producers in Burkina Faso have responded to this new buyer-led market by increasing the production of both organic and non-organic shea butter for global markets to ensure greater value-addition (Elias and Pouliot 2013, and Ramsay 2021). The net returns to women's additional labour in transforming and certifying shea butter remain unclear (Sourabie 2021).

The vertically integrated shea butter global production network has witnessed growing demands to meet new social, environmental and food-safety standards. This has led to the development of more complex buyer-seller relationships involving extensive coordination in areas such as sourcing, product design, quality systems, logistics and production scheduling. The coordination of global shea production networks (Figure 6) involves both the vertically integrated and geographically dispersed operations of transnational companies. A key challenge to the sustainability of new 'hand-crafted' shea butter markets is how to upgrade the practices of marginalized groups such as women shea producers and transformers with access to fewer resources. As parklands degrade, more labour and time is required by women to collect shea nuts thereby further reducing their returns to labour.

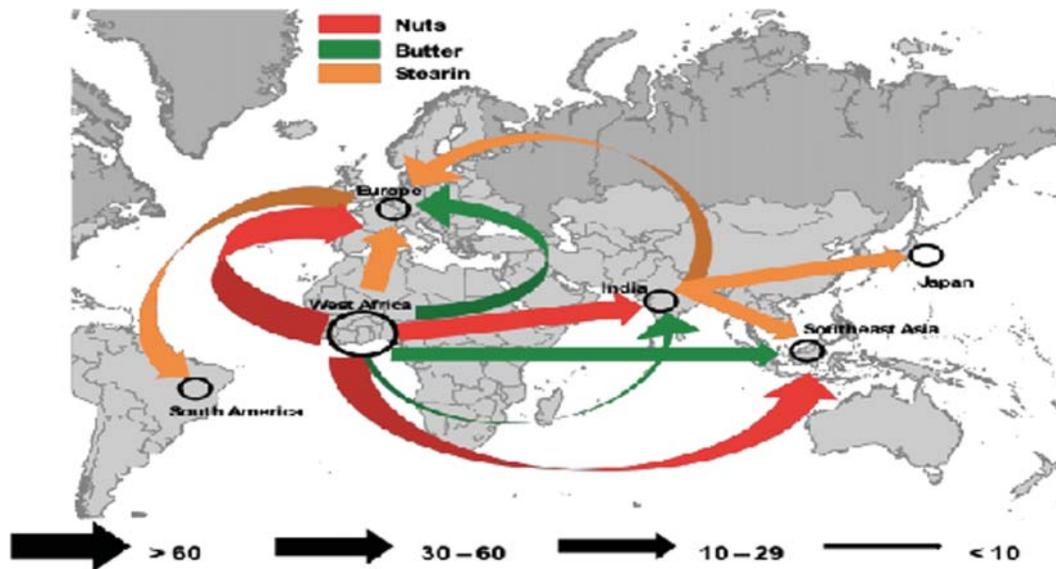
The expansion of commodity trade to meet global and domestic demand has led to growing pressure from civil society organizations, consumers in importing countries, international banks and shareholders of consumer goods companies to develop and implement a diverse array of instruments and tools to promote sustainable or deforestation-free sourcing as a way to reduce exposure to likely reputational, financial and regulatory risks (Wardell *et al.* 2021a). This has been the case particularly for some commodities with higher exposure to scrutiny by civil societies (e.g. soybean in the *cerrado*, beef in Brazil, palm oil in Indonesia, and cocoa in West Africa), although shea products for the cosmetics industry have not been exempt from this trend.

Building on earlier initiatives to develop geographic indicators for shea as a novel marketing strategy (Elias and Carney 2007: 55–57), several commodity roundtables, company alliances, and partnerships between NGOs and corporations emerged to deal with this challenge. Over time, multi-stakeholder processes such as the Global Shea Alliance (which emerged from the USAID-supported West Africa Trade Hub (WATH)) have provided platforms to promote learning dialogues, and advance proposals for innovative approaches, encompassing the design of legal and sustainably standards and the integration of environmental, social and governance (ESG) criteria by financial service providers.

The diverse and dynamic management practices of shea parklands articulated through the differentiated knowledge of rural populations, including the repositories handed down through generations of women have not been systematically studied. The process of how this occurs remains under-appreciated (Carney and Elias 2006: 259, and Carney and Elias 2014). The shea tree continues to be considered 'wild' by local communities (Elias 2015, and Rousseau, Gautier and Wardell 2017b) and, as such, is not perceived as a species to be planted. Theft is an increasingly common strategy to harvest shea nuts as customary norms and institutions governing rights of access to, and use of shea trees are changing (Wardell and Reenberg 2006, and Rousseau, Gautier and Wardell 2017b). Gender differences in ethno-botanical knowledge do exist (Karambire *et al.* 2017) but both women and men may be knowledgeable about, and involved in processes associated with shea tree management and conservation. Hence, the need for a more fluid conception of how traditional ecological knowledge develops and circulates within the household (Elias 2015).

Shea is a critical resource in Burkina Faso. Shea production increases food security among the rural population by providing important subsistence use products and revenues, and helps reduce rural women's poverty through sales, both local and export oriented. It is still the country's fourth most important source of foreign-exchange earnings (MCIA 2020). Although shea trees are affected by climate variability and change, the tree has certain characteristics that make it a

FIGURE 6 Global shea production networks



Source: LMC International<sup>48</sup>

resistant tree-crop, while its genetic diversity gives it an adaptive capacity and enables domestication (Allal *et al.* 2011, Lovett and Haq 2013, Dimobe *et al.* 2020 and Hale *et al.* 2021)). Shea is beneficial to the overall resilience of the agricultural parkland ecosystem (Bonde *et al.* 2019), maintaining soil fertility and the agricultural biodiversity of its flora and fauna, providing pollination, micro-climate, water regulation and carbon sequestration services, and supporting livelihoods among rural women who have few other income-generating opportunities in the country. Shea is a crucial ‘ingredient’ in local climate-smart agriculture approaches (Venturini *et al.* 2016). As agriculture becomes increasingly unpredictable under changing climate conditions, NTFPs such as shea – the most important revenue-generating tree species in rural Burkina women’s portfolio – gain in relative importance as a changing climate will accentuate the risk of crop failures.

### Impacts of insecurity and the COVID-19 pandemic

The deteriorating security situation in Burkina Faso has seen the country replace Mali at the epicentre of the Sahel’s current security crisis. This crisis has been characterized by “the increased activities of violent actors” and a “lack of effective security policies, resources and personnel, a variety of social grievances and local politics in the outlying regions that have been most affected by the insecurity, and the persistence of criminal and insurgent groups seeking to exploit these

dynamics.” (Eizenga 2019: 1). Artisanal gold mining also contributes to insecurity in the country and region.<sup>49</sup> Six of the country’s 13 regions are under a state of emergency. An estimated 700 fatalities have occurred since 2015 with several sources indicating that 2019 was the worst year since the terrorist attacks began in the country.<sup>50</sup> Since September 2019, the pace and scale of the terrorist attacks have intensified (Cann and Manson 2019, and Penny 2019).

To compound matters, the first case of COVID-19 was registered in Ouagadougou in March 2020. By 27 July 2021 more than 13,556 cases and 169 deaths had been reported (<https://www.worldometers.info/coronavirus/>). The government has introduced multiple measures to reduce the transmission of the virus including lockdowns in large towns, closure of public markets, schools, universities and religious centres, closure of international borders and limiting association to less than fifty people. The pandemic has had profound effects on the socio-economic conditions of women shea producers, and reversed earlier progress made in reducing poverty and inequalities (Thombiano and Traore 2020, and Buscher *et al.* 2021). Further details are presented in Tapsoba *et al.* 2021b.

### CONCLUDING REMARKS

The French colonial state assumed, erroneously, that little shea trade existed, and that producers would respond positively

<sup>48</sup> This figure omits stearin exports to North America. Hershey, for example, were sourcing over 2,000 tons of stearin from West Africa equivalent to 14,000 tons of shea kernels.

<sup>49</sup> See, for example, <https://www.ft.com/content/8ff4c2ca-7ac3-4f3b-96ba-6fb74bbb60d5> (Accessed on 21 August 2021)

<sup>50</sup> Insecurity escalated and during the first semester of 2019 the following figures were reported (Ministry in charge of National Defense): 97 terrorist attacks (among which 26 targeted the military and 71 targeted civilians) which caused 234 deaths (35 among the military and 199 among civilians) and 60 injuries (19 among the military and 41 among civilians). 29 persons were abducted during the same period.

to market incentives. Shea remained a peripheral imperial commodity throughout the colonial era. Women shea collectors and processors played a critical role as agents in French West Africa as “instigators and promoters” (Curry-Machado 2013: ix) in terms of their capacity to use (or not) the forces of globalization to serve their own interests of local autonomy (Wardell *et al.* 2021b).

A broad range of Non-Timber Forest Products (NTFPs) including shea kernels are still collected by women from agroforestry parklands in Burkina Faso to meet both subsistence needs as the key staple edible oil, and/or for sale in local periodic markets. After 2005, aggregated sales from a pyramidal network of retailers, mid-level traders and wholesalers have increasingly supplied global producers of Cocoa Butter Equivalents to meet growing demand for Speciality Fats in the confectionary and food industries. Women shea producers and their associations have also managed to meet growing demand for ‘hand-crafted’ shea butter for the global cosmetics industry, and the growing niche edible sector (AAK 2021).<sup>51</sup> Women shea collectors and processors have continued to demonstrate their capacity to sustain shea nut and shea butter supplies for local periodic, domestic, and regional markets whilst harnessing new global market opportunities.

The resilience of these production systems, still largely managed by women, may now be challenged, however, by the emergence of new processing technologies, additional new industrial investments to the many crushing facilities built in in West Africa over the past twenty years (Sylla 2021)<sup>52</sup> and the restructuring of global (or regional) commodity chains. The growth of global trade in shea kernels and shea butter has also been accompanied by significant land cover and land use changes in the parkland landscapes of Burkina Faso. Land use changes have contributed to the progressive loss of trees, biodiversity, and other ecosystem services such as pollination and carbon sequestration (Muthee *et al.* 2017, Lovett and Philipps 2018, FAO/GSA 2020, and Dimobe *et al.* 2020). This now presents new socio-economic challenges, including threats to local food and nutrition security, tenure rights and the livelihoods of local communities. We suggest that the historical continuity, resilience and sovereignty of women’s shea production and trade are now confronted with several risks of disintegration associated with the failure of the *Stratégie Nationale de Développement Durable de la Filière Karité du Burkina Faso 2015–2019* to arrest or reverse the degradation of agroforestry parklands across the country. This has been exacerbated by the recent impacts of insecurity and the COVID-19 pandemic on shea supply chains. Additional capacity building is needed to meet national restoration targets (Vinceti and Elias 2021), value addition needs to be pushed to rural women upstream, and shea needs to be increasingly recognized as a traditional and critically important edible tree crop which is selectively managed, owned and can be propagated. Additional suggestions for future research directions

are presented in Boffa 2015, Seghieri 2017, Tom-Dery *et al.* 2018, Ganabe and Bastide 2019 and Hale *et al.* 2021.

We suggest that important issues like food security and the dynamics of local socio-economic production systems can, and should, be integrated in the (historical) analysis of global production networks. Our intention has been to demonstrate that one way of dealing with the complexity of a globally, regionally and locally traded commodity such as shea, is to expand the period under scrutiny in order to compare the effects of present and previous waves of globalization. The separation of economic processes from social arrangements cannot easily be done, especially not in the *longue-durée* of socio-economic development (Braudel 1958). The cumulative impacts of an accelerated globalization of shea products (i.e., increasing commercialization and exports) from Burkina Faso is not unambiguously positive in the sense that 1) livelihoods are necessarily improved for the poorest individuals and households and 2) regional socio-economic and environmental systems are strengthened or adequately transformed. Land use and land cover changes associated with the intensification of agricultural systems, urbanization, planting of exotic tree crops such as cashew or mango, demand for wood-fuel, and increased use of agrochemicals have all impacted shea tree regeneration, pollination services and habitat, and pose new threats to the ecological sustainability of shea parklands, as well as to women’s livelihoods.

## REFERENCES

- AAK. 2021. AkoPlanet™ Made with love for people, plants and the planet. Presentation to the Global Shea Alliance virtual conference, 29 April 2021.
- AFRICAN DEVELOPMENT BANK (AfDB). 2020. The project to support the integrated development of the shea sector in Burkina Faso (PADIFK). Project Completion Report, RDGW/AHHD, July 2020. Abidjan, Côte d’Ivoire, AfDB.
- AGENCE POUR LA PROMOTION DES PRODUITS FORESTIERS NON-LIGNEUX (APFNL). 2015. Study report on socio-economic aspects of nine priority sectors. MEEVCC, Ouagadougou.
- ALLAL, F., SANOU, H., MILLET, L., VAILLANT, A., CAMUS-KUANDAIVELU, L., LOGOSSA, Z.A., LEFEVRE, F., and BOUVET, J.-M. 2011. Past climate changes explain the phylogeography of *Vitellaria paradoxa* over Africa. *Heredity* **107**: 174–186.
- ANON. 1902. ‘Butter substitutes’ The Straits Times, 18 November 1902: 2.
- ANON. 1936. ‘Coconut oil that makes margarine as good as butter’. The Straits Times, 9 February 1936: 6.
- ANON. 1961. Perspectives de la campagne du karité et le problème des débouchés *Marchés tropicaux et méditerranéens* 826, 9 septembre 1961: 2240–2241.

<sup>51</sup> A lot of fractionated olein is also used in the personal care sector by, for example, L’Oreal.

<sup>52</sup> IFC Invests in Mali-Shi to Boost Mali’s Shea Production and Exports <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=18482> (accessed 28 July 2021).

- ANON. 2017. Regional Standard for Unrefined Shea Butter CXS 325R-2017. Codex Alimentarius. FAO/WHO [www.codexalimentarius.org](http://www.codexalimentarius.org)
- ANON. 2020. 'Contribution forfaitaire obligatoire: Ou sont les milliards prélevés ?' L'Economiste du Faso, 25 février 2020. <https://www.leconomistedufaso.bf/2020/03/09/contribution-forfaitaire-obligatoire-ou-sont-les-milliards-prelevés/>
- ANSBAEK, K. 2005. Prices and poverty How female producers can obtain better prices for the global commodity of shea butter. Paper presented at Prices and poverty – Nordic Africa Days 30 September – 02 October 2005.
- ACQUAAH, B. 1999. *Cocoa Development in West Africa. The Early Period with Particular Reference to Ghana*. Accra: Ghana Universities Press.
- ARMITAGE, D., and GULDI, J. 2015. The return of the *longue durée*, an Anglo-American perspective. *Annales Histoire, Sciences Sociales*, 70, No. 2 (April-June 2015): 289–318.
- AUBREVILLE, A. 1966. Toujours à propos du 'Karité' Africain: *Vitellaria* Gaertn. f. ou *Butyrospermum* Kotschy? *Taxon* 15: 216.
- BADINI, Z., KABORE, M., van der MHEEN-SLUIJER, J., and VELLEMA, S. 2011a. Historique de la filière karité au Burkina Faso et des services offerts par les partenaires techniques et financiers aux acteurs. VC4PD Research Paper, No. 11, Wageningen University Research, Wageningen.
- BADINI, Z., KABORE, M., van der MHEEN-SLUIJER, J., and VELLEMA, S. 2011b. Le marché du karité et ses évolutions – Quel positionnement pour le REKAF. VC4PD Research Paper, No. 12, Wageningen University Research, Wageningen.
- BAIR, J. 2008. Global Commodity Chains. Genealogy and Review. In: Jennifer Bair (Ed.) *Frontiers of Commodity Chain Research*. Stanford, CA: 1–34.
- BAMBIO, Y., and AGHA, S.B. 2018. Land tenure security and investment. Does strength of land right really matter in rural Burkina Faso? *World Development* 111(2018): 130–147. <https://doi.org/10.1016/j.worlddev.2018.06.026>
- BASSETT, T.J., and CRUMMEY, D. (Eds.) 2003. *African Savannas Global Narratives & Local Knowledge of Environmental Change*. James Currey: Oxford.
- BATTERBURY, S.P.J., and BEBBINGTON, A.J. 1998. Environmental Histories, Access to Resources and Landscape Changes: An Introduction. Special Issue, *Land Degradation and Development* 10: 279–291.
- BATTERBURY, S., and WARREN, A. 2001. The African Sahel 25 years after the great drought: assessing progress and moving towards new agendas and approaches. *Global Environmental Change* 11(2001): 1–8.
- BAYALA, J. 2004. 'Role des institutions de recherche dans le secteur du karité: acquis scientifiques et perspectives'. In: Actes d'un Atelier International sur le Traitement, la Valorisation et le Commerce du Karité en Afrique. Centre de Suivi Ecologique, Dakar, Senegal, 4–6 March 2002. FAO, Rome and Fonds Commun pour les Produits de Base, Amsterdam: 128–148.
- BECKER, L.C. 2001. Seeing Green in Mali's Woods: Colonial Legacy, Forest Use, and Local Control. *Annals of the Association of American Geographers* 91(3): 504–526.
- BEINART, W. 1996. 'Environmental destruction in Southern Africa'. In: LEACH, M. and MEARNNS, R., (Eds.) 1996. *The Lie of the Land. Challenging received wisdom on the African environment*. James Currey and The International African Institute: London: 79.
- BEINART, W. 2000. African History and Environmental History. *African Affairs* 99: 269–302.
- BEINART, W., and MCGREGOR, J. (Eds.) 2003. *Social History & African Environments*. James Currey: Oxford.
- BELLO, J., LOVETT, P.N., and PITTENDRIGH, B.R. 2015. The evolution of shea butter's «paradox of paradoxa» and the potential opportunit for Information and Communication Technology (ICT) to improve quality, market access and women's livelihoods across rural Africa. *Sustainability* 7(5): 5752–5777.
- BERNSTEIN, H., and WOODHOUSE, P. 2001. Telling environmental change like it is? Reflections on a study in Sub-Saharan Africa. *Journal of Agrarian Change* 1(2): 283–324.
- BERRY, S. 1993. *No Condition is Permanent. The Social Dynamics of Agrarian Change in Sub-Saharan Africa*. University of Wisconsin Press: Madison.
- BIQUARD, A. 1992. Femmes et innovations technologique: pertes sans profit. L'exemple du beurre de karité (Mali). In: BISSILIAT, J., PINTON, F. and LECARME, M. (Eds.) *Relations de genre et développement: femmes et sociétés*. Paris, ORSTOM: 45–50.
- BOFFA, J.M. 1999. *Agroforestry Parkland Systems in Sub-Saharan Africa*. FAO Conservation Guide 34. Available online: <http://www.fao.org/docrep/005/x3940e/x3940e00.htm> (accessed on 8 June 2021).
- BOFFA, J-M. 2015. *Opportunities and challenges in the improvement of the shea (Vitellaria paradoxa) resource and its management*. Report submitted to the Global Shea Alliance. World Agroforestry Centre Occasional Paper No. 24. Nairobi, World Agroforestry Centre.
- BONDE, L., OUEDRAOGO, O., TRAORE, S., THIOMBIA-NO, A., and BOUSSIM, J.I. 2019. Impact of environmental conditions on fruit production patterns of shea tree (*Viteallra paradoxa* C.F. Gaertn) in West Africa. *African Journal of Ecology* 57(3): 353–362. <https://doi.org/10.1111/aje.12621>
- BONKOUNGOU, E.G. 1987. Monographie du Karité (*Butyrospermum paradoxum* (Gaertn. f. Hepper), espèce agroforestière à usages multiples. Ouagadougou, Burkina Faso, IRBET/CNRST, 67 p.
- BONKOUNGOU, E.G. 2005. Preface. In: Kabore, C., *Amenagement des forêts au Sahel Point sur vingt années de pratiques au Burkina Faso*. Ministère de l'Environnement, de l'Economie Vert et du Changement Climatique, Ouagadougou.
- BOUTILLIER, J-L. 1964. Les structures foncières en Haute-Volta. Etudes Voltaïques IFAN-ORSTOM, CNRST, Ouagadougou: 148–159.

- BRAUDEL, F. 1958. Histoire et Sciences sociales: La longue durée. *Annales. Economies, sociétés, civilisations*. 13<sup>e</sup> année, N. 4: pp. 725–753.
- BROMLEY, R.J. 1971. Markets in the Developing Countries: A Review. *Geography* 56(2): 124–132.
- BUNGE LODERS CROKLAAN. 2021. Expanding the consumer market for shea in Africa. Presentation to the virtual Global Shea Alliance conference, 29 April 2021.
- BUSCHER, B., FEOLA, G., FISCHER, A., FLETCHER, R., GERBER, J.F., HARCOURT, W., KOSTER, M., SCHNEIDER, M., SCHOLTENS, J., SPIERENBURG, M., WALSTRA, V., and WISKERKE, H. 2021. Planning for a world beyond COVID-19: Five pillars for post-neoliberal development. *World Development* 140(2021): 105357. <https://doi.org/10.1016/j.worlddev.2020.105357>
- BUTTOUD, G. 1997. The influence of history in African forest policies: a comparison between Anglophone and Francophone countries. *Commonwealth Forestry Review* 76(1): 43–46.
- CAMPBELL, I. 2004. An Exotic Tale. L'apport des oleagineux. Unpub. manus. 13pp Nioto S.A.: Nouvelle Industrie des Oleagineux du Togo. <https://www.nioto-togo.com>
- CANN, J., and MANSON, T. (dir. Alexandre Negrus) 2019. *La situation sécuritaire au Burkina Faso*. Ambassadeurs de la Jeunesse 7, Paris. December 2019. 19 pp.
- CARNEY, J., and ELIAS, M. 2014. Gendered knowledge and the African Shea-Nut Tree.' In: Hecht, S.B., Morrison, K.D. and Padoch, C. (Eds.) *The Social Lives of Forests. Past, Present and Future of Woodland Resurgence*. Chicago and London, The University of Chicago Press: 231–238.
- CARNEY, J., and ELIAS, M. 2006. Revealing gendered landscapes: Indigenous female knowledge and agroforestry of African shea. *Canadian Journal of African Studies* 40(2): 235–267.
- CHAFER, T. 2002. *The End of Empire in French West Africa France's Successful Decolonization?* Berg: Oxford.
- CHALFIN, B. 2001. Border Zone Trade and the Economic Boundaries of the State in North-East Ghana. *Africa* 71(2): 202–224.
- CHALFIN, B. 2004a. *Shea Butter Republic: State Power, Global Markets and the Making of an Indigenous Commodity*. New York, NY: Routledge.
- CHALFIN, B. 2004b. Old Commodities in New Niches: The Case of Shea. *African Economic History* 32: 51–63.
- CLARK, G. 1994. *Onions are My Husband: Survival and Accumulation by West African Market Women*. Chicago and London: The University of Chicago Press.
- COE, N.M., DICKEN, P., and HESS, M. 2008. Introduction: global production networks – debates and challenges. *Journal of Economic Geography* 8(3), May 2008: 267–269. <https://doi.org/10.1093/jeg/lbn006>
- COMPAORE, P.N. 2000. Femmes, développement et transfert de technologies. Le cas des presses à karité au Burkina Faso. Montréal, Université de Montréal, Département de sociologie, unpublished doctoral thesis.
- CURRY-MACHADO, J., (Ed.) 2013. *Global Histories, Imperial Commodities, Local Interactions*. Palgrave Macmillan, London.
- DEBRIE, J. 2010. From colonization to national territories in continental West Africa: the historical geography of a transport infrastructure network. *Journal of Transport Geography* 18(2010): 292–300.
- DEFROMONT, C., and MONTHUBERT, J.P. 1996. 'Shea nut in oils and fats manual. A comprehensive treatise: properties, production, applications.' Vol. 1 In: Karleskind, A. and Wolff J.P. (Eds.) Paris.
- DIMOBE, K., OUEDRAOGO, A., OUESDRAOGO, K., GOETZE, D., STEIN, K., SCHMIDT, M., NACOULMA, B.M.I., GNOUMOU, A., TRAORE, L., POREMBSKI, S., and THIOMBIANO, A. 2020. Climate change reduces the distribution area of the shea tree (*Vitellaria paradoxa* C.F. Gaertn.) in Burkina Faso. *Journal of Aird Environments* 181(2020): 104237. <https://doi.org/10.1016/j.jaridenv.2020.104237>
- DONNAN, H., and T.M. WILSON. 1998. The Subversive Economy. In *Borders. Frontiers of Identity, Nation and State*, Eds. H. Donnan and T.M. Wilson, 87–106. London: Berg.
- DRONNE, Y., and GURTLER, J.L. 1991. Evolution du marché mondial des oléagineux. *Revue internationale des corps gras* 46(1): 39–42.
- DUPERRAY, A. 1999. Une frontière fantôme: le 11<sup>e</sup> parallèle entre Gold Coast et Haute Volta. In: Bernault, F. *Enferme-ment, prison et châtements en Afrique du 19<sup>e</sup> siècle à nos jours*. Editions Karthala, Paris: 133–162.
- EIZENGA, D. 2019. The Deteriorating Security Situation in Burkina Faso. *Bulletin FrancoPaix* Vol. 4, no. 3 – March 2019: 1–6.
- ELIAS, M., and CARNEY, J. 2004. The female commodity chain of shea butter: Burkinabe producers, Western green consumers and Fair Trade. *Cahiers de géographie du Québec* 48(133), avril 2004: 71–88.
- ELIAS, M., and CARNEY, J. 2007. African shea butter: A feminized subsidy from nature. *Africa* 77(1): 37–62.
- ELIAS, M., and POULIOT, M. 2013. To process or not to process? Factors enabling and constraining shea butter production and income in Burkina Faso. *Geoforum* 50: 211–220.
- ELIAS, M. 2015. Gender, knowledge-sharing and management of shea (*Vitellaria paradoxa*) parklands in central-west Burkina Faso. *Journal of Rural Studies* 38: 27–38. <https://www.sciencedirect.com/science/article/abs/pii/S0743016715000157?via%3Dihub>
- ELIAS, M., and ARORA-JONSSON, S. 2017. Negotiating across difference: Gendered exclusions and cooperation in the shea value chain. *Environment and Planning D: Society and Space* 35(1): 107–125.
- ELIAS, M., and SAUSSEY, M. 2018. 'The gift that keeps giving': Unravelling the paradoxes of fair trade shea butter. *Sociologia Ruralis* 53(2): 158–179.
- ELLIS, S., and MACGAFFEY, J. 1996. Research on Sub-Saharan Africa's Unrecorded International Trade: Some Methodological and Conceptual Problems. *African Studies Review* 39(2): 19–41.

- EUROPEAN COMMISSION (EC). 2000. Directive 2000/36/EC of the European Parliament and of the Council of 23 June 2000 relating to cocoa and chocolate products intended for human consumption; *Official Journal of the European Communities* 2000, 197/19, 3.8.2000. 7pp.
- FISCHER, C., KLEINN, C., FEHRMANN, L., FUCHS, H., and PANFEROV, O. 2011. A national level forest resource assessment for Burkina Faso – A field based forest inventory combining small sample size with large observation plots. *Forest Ecology and Management* **262**(2011): 1532–1540.
- FOLD and REENBERG, A. 1999. In the shadow of the ‘chocolate war’: local marketing of shea nut products around Tenkodogo, Burkina Faso. *Geografisk Tidsskrift/ Danish Journal of Geography* Special Issue 2: 133–123.
- FOLD, N. 2000. A matter of good taste? Quality and the construction of standards for chocolate products in the EU. *Cahiers d'économie et sociologie rurales* **55–56**: 92–110.
- FOLD, N. 2001. Restructuring of the European Chocolate Industry and Its Impact on Cocoa Production in West Africa. *Journal of Economic Geography* **1**: 405–420.
- FOLD, N. 2002. Opportunities and Constraints to Local, Regional and International Trade in Shea Butter. In *Proc. of the 14th Danish Sahel Workshop, 2–4 January 2002. SEREIN Occasional Paper* 13, Eds. D.A. Wardell, et al. Copenhagen: Institute of Geography, University of Copenhagen.
- FOLD, N. 2004. Spilling the Beans on a Tough Nut: Liberalisation and Local Supply System Changes in Ghana's Cocoa and Shea Chains. In *Geographies of Commodity Chains*, Eds. A. Hughes and S. Reimer. London: Routledge.
- FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS (FAO) and COMMON FUND FOR COMMODITIES (CFC). 2004. International Workshop on processing and marketing of shea products in Africa. Seminar proceedings, CSE, Dakar, Senegal 4–6 March 2002. CFC Technical Paper No. 21. Rome, Rome and Amsterdam CFC.
- FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS (FAO) and GLOBAL SHEA ALLIANCE 5GSA, 2020. Shea Value Chain as a key pro-poor carbon-fixing engine in West Africa. February 2020. FAO, Rome and GSA, Accra. 35pp.
- GAISBERGER, H., KINDT, R., LOO, J., SCHMIDT, M., BOGNOUNOU, F., DA, S.S., DIALLO, O.B., GANABA, S., GNOUMOU, A., LOMPO, D., LYKKE, A.M., MBAYNGONE, E., NACOULMA, B.M.I., OUEDRAOGO, M., OUEDRAOGO, O., PARKOUDA, C., PEREMBSKI, S., SAVADOGO, P., THIOMBIANO, A., ZERBO, G., and VINCETI, B. 2017. Spatially explicit multi-threat assessment of food tree species in Burkina Faso: A fine-scale approach. *PLOS ONE* **12**(9): e0184457. <https://doi.org/10.1371/journal.pone.0184457>
- GANABE, S., and BASTIDE, B. 2019. ‘Etat des connaissances et lacunes en matière de recherche sur le karité au Burkina Faso’. Presentation at the National Inception Workshop, Ouagadougou, 14 May 2019 of the ‘Globalizations in a nutshell Opportunities and risks for women shea producers in West African shea parklands’, IDRC Project # 108 978. INERA, Ouagadougou.
- GAUTIER, D., DENIS, D., and LOCATELLI, B. 2016. Impacts of drought and responses of rural populations in West Africa: a systematic review. *WIREs Clim Change* 2016, **7**: 666–681. doi: 10.1002/wcc.411
- GEREFFI, G., and KORNIWICZ, M. 1994. *Commodity chains and global capitalism*. Westport, Connecticut and London, Praeger.
- GEREFFI, G., HUMPHREY, J., and STURGEON, T. 2005. The governance of global value chains. *Review of International Political Economy* **12**/1: 78–104.
- GIBBON, P. 2001. Upgrading Primary Production: a Global Commodity Chain Approach. *World Development* **29**(2): 345–362.
- GLEW, D., and LOVETT, P.N. 2014. Life cycle analysis of shea butter use in cosmetics: from parklands to products, low carbon opportunities. *Journal of Cleaner Production* **68**, April 2014: 73–80.
- GLOBAL SHEA ALLIANCE (GSA). 2020. Strategic Plan 2020–2025. Accra, GSA.
- GLOBAL SHEA ALLIANCE (GSA). 2021. GSA Annual Report 2020. Accra, GSA.
- GOVERNMENT OF BURKINA FASO. 2015. *Stratégie nationale de développement durable de la filière karité 2015–2019*. Ouagadougou, Burkina Faso: Government of Burkina Faso.
- GRANDVAL, F., and NFON DIBIE, A. 2012. Le beurre de karité à la conquête des marchés locaux. *Grain de Sel* **58**, avril-juin 2012: 33.
- GREIG, D. 2006. Shea butter: connecting rural Burkinabe women to international markets through fair trade. *Development in Practice* **16**(5), August 2006: 465–475.
- GRET. 2007. Etude de marche réalisée à Ouagadougou et à Bobo Dioulasso en 2007 dans le cadre du projet réalisé par GRET/Sicarex et 2IE. GRET, Ouagadougou.
- GREWE, B-S. 2019. Global Commodities and Commodity Chains. In: Tirthankar Roy and Giorgio Riello (Eds.) *Global Economic History*. London, Bloomsbury Academic: 215–228.
- HAGBERG, S., GOMGNIMBOU, M., and SOME, D.B. 1996. *Forêts Classées et Terres des Ancêtres au Burkina Faso*. Working Papers in Cultural Anthropology No. 3. Uppsala University: Uppsala.
- HALE, I., MA, X., MELO, A.T.O., PADI, F.K., HENDRE, P.S., KINGAN, S.B., SULLIVAN, S.T., CHERI, S., BOFFA, J-M., MUCHUGI, A., DANQUAH, A., BARNOR, M.T., JAMNADASS, R., VAN DE PEER, Y., and VAN DEYNZE, A. 2021. Genomic Resources to Guide Improvement of the Shea Tree. *Frontiers in Plant Science* **12**: 720670. doi:10.3389/fpls.2021.720670
- HALL, J.B., AEBISCHER, D.P., TOMLINSON, H.F., OSEI-AMANING, E. and HINDLE, J.R. 1996. *Vitellaria paradoxa: A Monograph*. Bangor, University of Wales, School of Agricultural and Forest Science Publication No. 8.

- HAMMOND, J., van WIJK, M., PAGELLA, T., CARPENA, P., SKIRROW, T., and DAUNCEY, V. 2019. Shea butter: A pro-poor, pro-female route to increased income. In: Rosenstock, T.S., Nowak, A. and Girvetz, E. (Eds.) *The Climate-Smart Agriculture Papers Investigating the business of a productive, resilient and low emission future*. Springer: 215–226.
- HAZAREESINGH, S., and CURRY-MACHADO, J. 2009. Editorial – Commodities, empires and global history. *Journal of Global History* Special Issue (March 2009) 4: 1–5.
- HECHT, S.B., MORRISON, K.D., and PADOCH, C. (Eds.) *The Social Lives of Forests. Past, Present and Future of Woodland Resurgence*. Chicago and London, The University of Chicago Press.
- HILL, P. 1970. *Studies in Rural Capitalism in West Africa*. Cambridge: Cambridge University Press.
- HODDER, B.W. 1971. Periodic and Daily Markets in West Africa. In *The Development of Indigenous Trade and Markets in West Africa*, Ed. C. Meillassoux. London: International African Institute, Oxford University Press.
- HOPKINS, A.G. 1973. *An Economic History of West Africa*. London: Longman.
- HOPKINS, A.G. (Ed.) 2002. *Globalization in World History*. London: Pimlico.
- HOPKINS, T., and WALLERSTEIN, I. 1977. Patterns of Development of the Modern World-System. *Review (Fernand Braudel Center)* 1/2: 111–145.
- HOPKINS, T., and WALLERSTEIN, I. 1986. Commodity chains in the world economy prior to 1800. *Review (Fernand Braudel Center)* 10/1: 157–170.
- HOUSE-MIDAMBE, B., and F.K. EKECHI, Eds. 1995. *African Market Women and Economic Power: the Role of Women in African Economic Development*. Westport, CT and London: Greenwood Press.
- HOWORTH, C. 1999. *Rebuilding the Local Landscape: Environmental Management in Burkina Faso*. Aldershot, Ashgate.
- HUILLERY, E. 2009. History matters: The long-term impact of colonial public investments in French West Africa. *American Economic Journal: Applied Economics* 1(2): 176–215.
- HUMPHREY, J., and H. SCHMITZ. 2002. How Does Insertion in Global Value Chains Affect Upgrading in Industrial Clusters? *Regional Studies* 36(9): 1017–1028.
- HUMPHREY, J., and SCHMITZ, H. 2000. Governance and upgrading: Linking Industrial Cluster and Global Value Chain Research. IDS Working Paper 120. Brighton, Institute of Development Studies.
- JONES, A. 2002. The community trade relationship with Tungteiya Shea Butter Association. In: Wardell, D.A., Reenberg, A. and Harpoth, R. (Eds.) *The Sahel Assuring the multi-disciplinary research-development continuum. The private sector local of global? Adapting to change and responding to local needs*. Proceedings of the 14<sup>th</sup> Danish Sahel Workshop, 2–4 January 2002. SEREIN Occasional Paper No. 13, Institute of Geography, University of Copenhagen, Copenhagen: 77–86.
- KABORE, C. 2005. *Aménagement des forêts naturelles au Sahel. Point sur vingt années de pratiques au Burkina Faso*. Avril 2005, 2eme édition. Projet BKF/007-PAFDK. 142 pp.
- KABORE, S.A., BASTIDE, B., TRAORE, S., and BOUSSIM, J.I. 2012. Dynamique du karité, *Vitellaria paradoxa*, dans les systèmes agraires du Burkina Faso. *Bois et Forêts des Tropiques* 313(3): 47–59.
- KARAMBIRI, M., ELIAS, M., VINCETI, B., and GROSSE, A. 2017. Exploring local knowledge and references for shea (*Vitellaria paradoxa*) ethno-varieties in Southwest Burkina Faso through a gender and ethnic lens. *Forests, Trees and Livelihoods* 26(1): 13–28.
- KENT, R. 2018. “Helping” or “Appropriating”? Gender relations in shea nut production in northern Ghana. *Society & Natural Resources*. <https://doi.org/10.1080/08941920.2017.1382626>
- KOTEY, E.N.A., FRANCOIS, J., OWUSU, J.G.K., YEBOAH, R., AMANOR, K.S., and ANTWI, L. 1998. *Falling into Place. Policy that Works for Forests and People Ghana Country Study (No. 4)*. London: International Institute for Environment and Development.
- LANDSTEINER, E., and LANGTHALER, E. 2021. Global commodities. Special Issue of the Austrian Journal of Historical Studies. *Commodity Frontiers* 2, Spring 2021: 48–53.
- LARIS, P., and WARDELL, D.A. 2006. Good, bad or “necessary evil?”. Re-interpreting the colonial burning experiments in the savanna landscapes of West Africa. *The Geographical Journal* 172(4): 271–290.
- LEACH, M., and MEARNES, R., (Eds.) 1996. *The Lie of the Land. Challenging received wisdom on the African environment*. James Currey and The International African Institute: London.
- LEE, J., GEREFFI, G., and BEAUVAIS, J. 2012. Global value chains and agri-food standards: Challenges and possibilities for smallholders in developing countries. *P. Natl. A. Sci.* 109(31): 12326–31. doi/10.1073/pnas.0913714108
- LOH, H. 2008. Speciality fats – how food manufacturers can get more out of them. *Lipid Technology* 20(2): 35–39.
- LOVEJOY, P.E. 1985. The internal trade of West Africa before 1800. In: Ajayi, J.F.A. and Crowder, M. (Eds.) *History of West Africa*. Volume 1, 3<sup>rd</sup> edition. Longman, Harlow: 648–690.
- LOVETT, P.N. 2004. The shea butter value chain: production, transformation and marketing in West Africa. USAID West Africa Trade Hub Technical Report No. 2.
- LOVETT, P.N., and HAQ, N. 2013. Progress in developing *in vitro* systems for shea tree (*Vitellaria paradoxa* C.F. Gaertn.) propagation. *Forests, Trees and Livelihoods* 23(1): 60–69.
- LOVETT, P.N. 2014. Natural butters: fractionation alternatives. Personal Care Asia Pacific, Waxes and Butters 2014: 49–52.
- LOVETT, P.N. 2015. ‘Shea butter: Properties and processing for use in food.’ In: Talbot, G. (Ed.) *Speciality Oils and Fats in Food and Nutrition. Properties, Processing and*

- Applications*. Woodhead Publishing Series in Food Science, Technology and Nutrition, Elsevier: 125–158. <http://dx.doi.org/10.1016/B978-1-78242-376-8.00005-3>
- LOVETT, P., and PHILLIPS, L.D. 2018. *Agroforestry Parklands of Sub-Saharan Africa: Threats and Solutions*. Background Paper Leveraging Agricultural Value Chains to Enhance Tropical Tree Cover and Slow Deforestation (LEAVES), PROFOR, Washington, D.C.
- LOVETT, P., ISSAHAKU, Z., and KPELLE, S. 2020. Evolution of shea parklands in Ghana. Modernising the ancient through restorative agroforestry. Presentation to the Global Shea Alliance Stakeholders' Forum, Tamale, Ghana. 05 November 2020.
- LOVETT, P., and BAMA, T., 2022. Review of the Strategy National de Développement Durable de la Filière Karité 2015–2019. Working Paper (forthcoming).
- LUND, C. 1997. Land Tenure Disputes and State, Community and Local Law in Burkina Faso. Drylands Network Issues Paper No. 70. IIED: London.
- LYNN, M. 1998. *Commerce and Economic Change in West Africa: The Palm Oil Trade in the Nineteenth Century*. Cambridge: Cambridge University Press.
- MARCHAL, J-Y. 1999. Frontières et refugies en Afrique Occidentale française (1900–1950). In: Lassailly-Jacob, V., Marchal, J-Y. and Quesnel, A. (Eds.) *Déplacés et réfugiés. La mobilité sous contrainte*. IRD, Paris: 209–225.
- MAY, E. 1985. *Exchange Controls and Parallel Market Economies in Sub-Saharan Africa: Focus on Ghana*. World Bank Staff Working Papers, No. 711. Washington, DC.
- McCANN, J.C. 1999. *Green Land, Brown Land, Black Land: An Environmental History of Africa, 1800–1990*. James Currey: London.
- McMICHAEL, P. 2004. 'Empire and Food Sovereignty'. Keynote Address for the Agri-Food XI Conference, Canberra, 9–11 June 2004. unpub. manus.
- MEDA, M. 2020. Structure des peuplements de *Vitellaria paradoxa* C.F. Gaertn (karité) dans les parcs agroforestiers et les chantiers d'aménagement forestier des provinces du Ziro et de la Sissili au Burkina Faso. Mémoire de Fin d'Etude, Institut de Développement Rural (IDR)/ Université Nazi-Boni (UNB), 16 novembre 2020. Bobo Dioulasso, IDR/UNB.
- MEILLASSOUX, C., Ed. 1971. Introduction. The Development of Indigenous Trade and Markets in West Africa. London: International African Institute, Oxford University Press.
- MERCHANT, C. 1990. Gender and Environmental History. *The Journal of American History* 76(4): 1117–1121.
- MINISTÈRE DU COMMERCE, DE L'INDUSTRIE et de l'ARTISANAT (MCIA). 2020. Evaluation de la Stratégie Nationale de Développement Durable de la Filière Karité 2015–2019. Rapport final. Décembre 2020. MCIA, Ouagadougou.
- MINISTÈRE DE L'ENVIRONNEMENT, DE L'ECONOMIE VERT ET DU CHANGEMENT CLIMATIQUE (MEEVCC). 2021. Forum National de Réflexion sur la filière karité au Burkina Faso. Rôles et responsabilités des acteurs dans la préservation et la restauration des peuplements de karité pour gestion durable. Rapport Final, Juin 2021. MEEVCC, Ouagadougou.
- MUTHEE, K., MBOW, C., MACHARIA, G., and FILHO, W.L. 2017. Ecosystem base Adaptation as an adaptation strategy in Burkina Faso and Mali. In: Filho, W.L., Simane, B., Kalangu, J., Wuta, M., Munishi, P. and Musiyiwa, K. (Eds) *Climate Change Adaptation in Africa. Fostering Resilience and Capacity to Adapt*. Springer: 205–2016.
- MYLLYNTAUS, T. 2001. 'Environment in Explaining History: Restoring Humans as Part of Nature'. In: Myllyntaus and Saikku: 141–160.
- MYLLYNTAUS, T., and SAIKKU, M. (Eds.) 2001. *Encountering the Past in Nature*. Ohio University Press: Athens.
- NACOULMA, O.G. 2002. 'Les établissements PHYCOS fabrique artisanale de cosmétique à base de beurre de karité.' In: Wardell, D.A., Reenberg, A. and Harpoth, R. (Eds.) *The Sahel Assuring the multi-disciplinary research-development continuum. The private sector local of global? Adapting to change and responding to local needs*. Proceedings of the 14<sup>th</sup> Danish Sahel Workshop, 2–4 January 2002. SEREIN Occasional Paper No. 13, Institute of Geography, University of Copenhagen, Copenhagen: 87–97.
- NAUGHTON, C.C., LOVETT, P.N., and MIHELICIC, J.R. 2015. Land suitability modelling of shea (*Vitellaria paradoxa*) distribution across sub-Saharan Africa. *Appl. Geogr.* 58: 217–227.
- NAUGHTON, C.C., DEUBEL, T.F., and MIHELICIC, J.R. 2017. Household food security, economic empowerment, and the social capital of women's shea butter production in Mali. *Food Security* 9: 773–784.
- NORTH, D.C. 1990. *Institutions, institutional change and economic performance*. Cambridge University Press: Cambridge.
- NORWOOD, V. 2001. Disturbed Landscape/Disturbing Processes: Environmental History for the Twenty-First Century. *Pacific Historical Review* 70(1): 77–89.
- NOUMI, E.S., DABAT, M-H., and BLIN, J. 2013. Energy efficiency and waste reuse: A solution for sustainability in porr West African countries, Case study of the shea butter supply chain in Burkina Faso. *Journal of Renewable and Sustainable Energy* 5: 053134.
- NUGENT, P., and ASIWAJU, A.I. (Eds.) 1996. *African Boundaries. Barriers, Conduits and Opportunities*. Pinter, London.
- NUGENT, P. 2004. *Africa since independence*. Palgrave Macmillan, Basingstoke.
- OFCOM 1965. Rapport campagne 1964–1965 au 15 juin 1965. Haute-Volta: Office de Commercialisation des Produits.
- OGO, I. 2020. Highlights from the African Continental Free Trade Area beyond COVID. Presentation, Global Shea Alliance (GSA) Technical Webinar, June 2020. Accra, GSA.
- ONWUCHEKWA, V. 1982. Shea butter in cosmetics. *Drug and Cosmetic Industry* 131: 42.

- OUANGROUA, B. 2003. Burkina Faso La guerre de la terre a commencé. *Courrier International* No. 676, 16–22 octobre 2003: 38.
- OUEDRAOGO, B. 2007. Filière bois d'énergies burkinabè: structuration des prix et analyse de la répartition des bénéfiques. *Bois et Forêts des Tropiques* **294**(4): 75–88.
- OUEDRAOGO, M., BARRY, S., ZOUGMORE, R.B., PANTEY, S.T., SOME, L., and BAKI, G. 2018. Farmers' willingness to pay for climate information services: evidence from cowpea and sesame producers in northern Burkina Faso. *Sustainability* **10**(3): 611.
- PEHAUT, Y. 1974. *Les Oléagineux dans les pays d'Afrique Occidentale associés au marché commun*. La Production, Le Commerce et la Transformation des Produits. Tome I. Thèse présentée devant l'Université de Bordeaux III le 28 avril 1973. Service de Reproduction des Thèses, Université de Lille.
- PEHAUT, Y. 1976. *Les Oléagineux dans les pays d'Afrique Occidentale associés au marché commun*. Vol. 1 et 2. Paris, Éditions Honoré Champion.
- PENNEY, J. 2019. Burkina Faso has replaced Mali at the epicenter of the Sahel's security crisis. Quartz Africa, 27 November 2019.
- POUDYAL, M. 2011. Chiefs and trees: tenures and incentives in the management and use of two multipurpose tree species in agroforestry parklands in Northern Ghana. *Society & Natural Resources* **24**(10): 1063–77.
- POULIOT, M. 2012. Contribution of 'Women's Gold' to West African Livelihoods: The Case of Shea (*Vitellaria paradoxa*) in Burkina Faso. *Economic Botany* **66**(3): 237–248.
- RAIKES, P., and GIBBON, P. 2000. Globalisation and African Export Crop Agriculture. *Journal of Peasant Studies* **27**(2): 50–93.
- RAIKES, P., JENSEN, M.J., and PONTE, S. 2000. Global Commodity Chain Analysis and the French Filière Approach: Comparison and Critique. *Economy and Society* **29**(3): 390–417.
- RAMSAY, D. 2021. 'In West Africa, can organic shea become a solution?' Trade for Development News, Enhanced Integrated Framework, WTO, Geneva. 08 April 2021.
- RIBOT, J.C. 1995. 'Local forest control in Burkina Faso, Mali, Niger, Senegal and the Gambia: a review and critique of new participatory policies'. Africa Technical Division, January 1995. The World Bank, Washington D.C.
- RIBOT, J.C. 1999a. A history of fear: imagining deforestation in the West African dryland forests. *Global Ecology and Biogeography Letters* **8**: 291–300.
- RIBOT, J.C. 1999b. Decentralisation, participation and accountability in Sahelian forestry: Legal instruments of political-administrative control. *Africa* **69**(1): 23–66.
- ROUSSEAU, K., GAUTIER, D., and WARDELL, D.A. 2017a. Socio-economic differentiation and shea globalization in western Burkina Faso: integrating gender politics and agrarian change. *The Journal of Peasant Studies* <http://dx.doi.org/10.1080/03066150.2017.1401612>
- ROUSSEAU, K., GAUTIER, D., and WARDELL, D.A. 2017b. Renegotiating access to shea trees in Burkina Faso: Challenging power relationships associated with demographic shifts and globalized trade. *Journal of Agrarian Change* **17**(3), July 2017: 497–517 <http://dx.doi.org/10.1111/joac.12170>
- ROUSSEAU, K., GAUTIER, D., and WARDELL, D.A. 2015. Coping with the upheavals of globalization in the value chain of shea: the maintenance and relevance of upstream shea nut supply chain organization in western Burkina Faso. *World Development* **66**: 413–427. <http://dx.doi.org/10.1016/j.worlddev.2014.09.004>
- SANOU, J., BAZIE, H.R., and BAYALA, J. 2020. 'Treating shea trees as crops improves women's livelihoods in Burkina Faso'. In: Simelton, E. and Ostwald, M. (Eds.) *Multifunctional Land Uses in Africa. Sustainable Food Security Solutions*. Routledge/Taylor & Francis: Earthscan Food and Agriculture Series: 47–60.
- SAUL, M., OUADBA, J.-M., and BOGNOUNOU, O. 2003. The Wild Vegetation Cover of Western Burkina Faso Colonial Policy & Post-Colonial Development. In: Bassett and Crummey. *African Savannas Global Narratives & Local Knowledge of Environmental Change*. James Currey: Oxford: 121–160.
- SAUSSEY, M., MOITY-MAIZI, P., and MUCHNIK, J. 2008. Nouvelles formes de reconnaissance des femmes burkinabé dans la production collective de beurre de karité. *Cahiers Agricultures* **17**(6) novembre-décembre 2008: 582–586.
- SAUSSEY, M. 2011a. Le barattages des savoirs. Circulation des ressources et apprentissage des artisanes burkinabés dans la globalisation. *Revue d'anthropologies des connaissances* **5**(3): 551–572.
- SAUSSEY, M. 2011b. Initiatives féminines et économie sociale et solidaire dans la production du beurre de karité au Burkina Faso. *Femmes, économie et développement* (2011): 107–128.
- SAVADOGO, P., TIGABU, M., SAWADOGO, L., and ODEN, P.C. 2007. Woody species composition, structure and diversity of vegetation patches of a Sudanian savanna in Burkina Faso. *Bois et Forêts des Tropiques* **294**(4): 5–20.
- SCHRECKENBERG, K. 2004. 'The contribution of shea butter (*Vitellaria paradoxa* Gaertner) to local livelihoods in Benin'. In: SUNDERLAND, T. and NDOYE, O. (Eds) *Forest products, livelihoods and conservation. Case studies of Non Timber Forest Product systems*. Vol. 2 - Africa: 91–113.
- SEGHIERI, J. 2017. Shea tree (*Vitellaria paradoxa* Gaertn. f.): from local constraints to multi-scale improvement of economic, agronomic and environmental performance in an endemic Sudanian multipurpose agroforestry species. *Agroforestry Systems* **93**: 2313–2330.
- SMITH, R.H.T. 1971. 'West African Market-Places: Temporal Periodicity and Locational Spacing'. In *The Development of Indigenous Trade and Markets in West Africa*, Ed. C. Meillassoux. London: International African Institute, Oxford University Press.

- SOURABIE, Z. 2021. Coûts et bénéfices de la certification (biologique et autre) du beurre de karité au Burkina Faso: Etude de cas avec l'Union Nationale de Productrices d'Amandes de Karité du Burkina Faso (UNAPAK-BF) à Bobo Dioulasso'. Mémoire de Fin d'Etude (unpub. Master's thesis), UNB/IDR, Bobo Dioulasso.
- STAPLETON, G. 2021. 'Demand trends in the confectionary industry.' Virtual presentation to the Global Shea Alliance Conference, Day 3 'A Look into the Future'. May 2021. LMC International, London.
- SYLLA, S. 2021. 'Prospects for value addition in West Africa'. Presentation to the Global Shea Alliance virtual annual conference, 26–29 April 2021. Accra, GSA.
- TAKENAKA, K., IKAZAKI, K., SIMPORE, S., KABORE, F., THIOMBIANO, N., and KOALA, J. 2021. Changes in woody vegetation over 31 years in farmed parkland of the Central Plateau, Burkina Faso *Land* **10**: 470. <https://doi.org/10.3390/land10050470>
- TALBOT, G. (Ed.) 2015. *Speciality Oils and Fats in Food and Nutrition. Properties, Processing and Applications*. Woodhead Publishing Series in Food Science, Technology and Nutrition, Elsevier.
- TAPSOBA, A., WARDELL, D.A., ZIDA, M., and ELIAS, M. (2021a). Nouveaux cadres règlementaires sur le karité au Burkina Faso: Rôle naissant de la Table Filière Karité dans l'appui aux producteurs locaux. CGIAR Forests, Trees and Agroforestry (FTA) Working Paper, CIFOR, Ouagadougou. 42 pp.
- TAPSOBA, A., ZIDA, M., and WARDELL, D.A. (2021b). Insécurité et COVID-19 au Burkina Faso: Opportunités et vulnérabilités des femmes de la chaîne de valeur du karité. CGIAR Forests, Trees and Agroforestry (FTA) Working Paper, CIFOR, Ouagadougou. 32 pp.
- TERPEND, M.N. 1982. La filière karité: produit de cueillette, produit de luxe. *Les dossiers Faim Développement*, février 1982: 1–91.
- THIOMBIANO, A., and TRAORE, J.A. 2020. *Impacts socio-économiques potentiels du Covid-19 au Burkina Faso*. Rapport d'étude, CEDAM Bulletin N°002-Bis, 23p.
- TIMMS, R., and BERGER, K. 2003. Chocolate, chocolate fats and the EU chocolate directive. *J. Sci. Food Agric.* **83**(15): 1539–1540.
- TOM-DERY, D., ELLER, F., REISDORFF, C., and JENSEN, K. 2018. Shea (*Vitellaria paradoxa* C.F. Gaertn.) at the crossroads: current knowledge and research gaps. *Agroforestry Systems* **92**: 1353–1371.
- TOOZE, A. 2018. *Crushed: How a Decade of Financial Crisis Changed the World*. London, Allen Lane. 720 pp.
- TRAORE, A., ELIAS, M., MEDA, A., ZIDA, M., and WARDELL, D.A. 2020a. Plan d'Actions participatif pour un gestion inclusive des parcs a karité dans la Commune de Sapouy. SNV/CIFOR, Ouagadougou.
- TRAORE, A., ELIAS, M., MEDA, A., ZIDA, M., and WARDELL, D.A. 2020b. Plan d'Actions participatif pour un gestion inclusive des parcs a karité dans la Commune de Bougnounou-Nébiéliyanou. SNV/CIFOR, Ouagadougou.
- VENTURINI, S., HAWORTH, A. COUDEL, N., ALONSO, E.J., and SIMONET, C. 2016 *Cultivating Climate Resilience: The Shea Value Chain*. BRACED Working Paper.
- VINCETI, B., and ELIAS, M. 2021. 'Capacity-building to implement restoration commitments in Burkina Faso'. In: Ghazoul, J. and Schweizer, D. (Eds.) *Forests for the Future Restoration successes at landscape scale: What will it take and what have we learned?* Prince Bernhard Chair Reports (issue 1). Series editors Almond, R.E.A., Grooten, M. and Van Kuijk, M., WWF-Netherlands, Zeist and Utrecht University, Netherlands: 126–129.
- VINCETI, B., VALETTE, M., BOUGMA, A.L., and TURIL-LAZI, A. 2020. How is Forest Landscape Restoration being implemented in Burkina Faso? Overview of on-going initiatives. *Sustainability* **12**: 10430. doi:10.3390/su122410430
- WARDELL, D.A., PIKETTY, M-G, LESCUYER, G., and PACHECO, P. 2021a. Reviewing initiatives to promote sustainable supply chains. The case of forest-risk commodities. FTA Working Paper # 8, February 2021. CIFOR Bogor, Indonesia.
- WARDELL, D.A., ELIAS, M., ZIDA, M., TAPSOBA, A., ROUSSEAU, K., GAUTIER, D., LOVETT, P., and BAMA, T. 2021b. Shea – a peripheral empire commodity in French West Africa. *International Forestry Review* **24**(3).
- WARDELL, D.A., and ZIDA, M. 2021. 'Dégradation des parcs agroforestiers au Burkina Faso'. Keynote presentation at the National Shea Forum, Ouagadougou, 24 June 2021. Ouagadougou, CIFOR.
- WARDELL, D.A., and CHEYNS, E. 2022. Review of Multi-Stakeholder Initiatives. Forests, Trees and Agroforestry (FTA) Working Paper (forthcoming).
- WARDELL, D.A., LOVETT, P., ROUSSEAU, K., ELIAS, M., ZIDA, M., TAPSOBA, A., and BAMA, T. 2022. Review of approaches to restoring shea parklands in Burkina Faso, 1901–2021 (forthcoming).
- WARDELL, D.A., ZIDA, M., ELIAS, M., and TAPSOBA, A. 2020. Continuity and change in the governance of shea value chains; Burkina Faso, 1895–2020. Presentation to the virtual Forests, Trees and Agroforestry Science Conference, Stream: Inclusive Value Chains, Finance and Investments, 20 September 2020.
- WARDELL, D.A., TAPSOBA, A., ZIDA, M., ELIAS, M., and LOVETT, P. 2020. 'Challenges and opportunities to empower women shea producers in Burkina Faso'. Presentation, Global Shea Alliance (GSA) Technical Webinar, 02 July 2020. Accra, GSA.
- WARDELL, D.A., and FOLD, N. 2013. Globalizations in a nutshell: Historical perspectives on the changing governance of the shea commodity chain in northern Ghana. *International Journal of the Commons* **7**(2): August 2013: 367–405.
- WARDELL, D.A., and REENBERG, A. 2006. 'Framing field expansion strategies in the savanna biome – Land use

- and land cover dynamics in and around the Tiogo Forest Reserve in Burkina Faso'. In: Mistry, J. and Berardi, A. (Eds.) *Human Factors in Savannas and Dry Forests: Linking People with Nature*. Aldershot, Ashgate: 19–52.
- WARDELL, D.A., REENBERG, A., OLSEN, H., and HARPOTH, R. (Eds.) 2003. *Negotiated frontiers in Sudano-Sahelian landscapes Implications for natural resource management strategies*. SEREIN Occasional Paper 16. Institute of Geography, University of Copenhagen: Copenhagen. 162pp.
- WARDELL, D.A., REENBERG, A., and TOTTRUP, C. 2003. Historical footprints in contemporary land use systems: forest cover changes in savanna woodland in the Sudano-Sahelian zone. *Global Environmental Change* **13**(4): 234–254.
- WARDELL, D.A., REENBERG, A., and HARPOTH, R. (Eds.) 2002. *Assuring the multidisciplinary research-development continuum. The private sector – local or global. Adapting to change and responding to local needs*. SEREIN Occasional Paper 16. Institute of Geography, University of Copenhagen: Copenhagen. 185 pp.
- WESTHOLM, L. 2016. Fruits from the forest and the fields: forest conservation policies and intersecting social inequalities in Burkina Faso's REDD+ program. *International Forestry Review* **18**(4): 511–521.
- WILLIAMS, M. 2003. *Deforesting the Earth. From Prehistory to Global Crisis*. University of Chicago Press: Chicago.
- WORSTER, D. (Ed.), 1988. *The Ends of the Earth*. Cambridge University Press: Cambridge.