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VALUE CHAIN ASSESSMENT REPORT: SHEA

Contract No.: AID-624-C-13-00002-00

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DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

AAK	AarhusKarlshamn AB
ACTE	Africa Competitiveness and Trade Expansion Initiative
ADM	Archer Daniels Midland
ARSO	Africa Regional Standards Organization
CBI	Cocoa Butter Improver
CECI	Centre for International Studies and Cooperation
CRIG	Cocoa Research Institute of Ghana
ECOWAS	Economic Community of West African States
EU	European Union
FFA	Free Fatty Acids
FAOSTAT	Food and Agricultural Organization Corporate Statistical Database
FDA	Food and Drug Administration
FOB	Free On Board
FTF	Feed the Future
GRAS	Generally Recognized As Safe
GSA	Global Shea Alliance
ICRAF	International Centre for Research in Agroforestry (World Agroforestry Centre)
MT	Metric Tons
NGO	Non-Governmental Organization
SNFS	Shea Nut Farmers Societies
SNV	Netherlands Development Organization
UEMOA	West African Economic and Monetary Union
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VSLA	Village Savings and Loan Association
WATH	West Africa Trade Hub

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I. INTRODUCTION AND BACKGROUND

SHEA VALUE CHAIN

A nutritional and economic resource for women across Africa, the shea butter tree (*Vitellaria paradoxa*) provides an annual bounty of fruit, food-oil and cash income for an estimated 10 million households ranging from eastern Senegal to northern Uganda. For centuries, shea has been traded across the West African region. Today, shea butter is a global commodity, and its derivate fractions appear all types of consumer products, from edible confectioneries to high-end skin care and cosmetic products. This report describes a value chain that has already received substantial investment. Prospects remain favorable over time, yet not dramatically so, with consolidation of previous investments by the United States Agency for International Development (USAID) and other donors. In support of the shea products value chain of West Africa, the Trade Hub and African Partners Network (Trade Hub) will work primarily, if not exclusively, in partnership with the Global Shea Alliance (GSA), an established regional apex organization.

VALUE CHAIN ASSESSMENT

Following from the Selection Report, the Value Chain Assessment Reports are the second step in planning activities for the Trade Hub.

The assessment phase took place during May 2014. Assessments were carried out for each value chain recommended for targeted for partnership with and support from the Trade Hub.

The Value Chain Selection Reports provide brief overviews of each value chain; the Assessment Reports offer deeper perspectives about the current status, structure, performance, and challenges of the value chain. They update previously available information where possible. Based on this information and analysis, they recommend a vision and upgrading strategy for each value chain, and outline possible support roles for the Trade Hub in helping value chain stakeholders achieve their strategy.

As the first opportunity for the Trade Hub team to resume interacting with industry stakeholders and begin identifying lead firms and areas where the project can have a positive impact, the value chain selection and assessment process also provides an initial basis for dialogue and brainstorming/planning with key sector and value chain stakeholders.

The phase, nonetheless, provides only a brief glimpse at each value chain and serves as a vehicle to commence discussion and share ideas with partners. The assessment is not a detailed value chain analysis.

ABOUT THE TRADE HUB AND AFRICAN PARTNERS NETWORK

USAID/West Africa's strategic goal is to support the emergence of a politically stable and economically prosperous West Africa. The Trade Hub's goals are to promote increased regional trade in key

agricultural commodities (a goal of Feed the Future, or FTF) and to reduce poverty through value-added exports (a goal of the Africa Competitiveness and Trade Expansion Initiative, known as ACTE).

The overall objective of the Trade Hub is to increase the region's share of world trade by increasing exports at a faster rate than the rate of growth in overall trade, and by improving West Africa's international private sector competitiveness in targeted value chains other than extractive industries.

The project will achieve two intermediate results: 1) improve the private sector capacity of the region's farmers and firms by addressing constraints to targeted value chains; and 2) improve the business enabling environment by addressing economy-wide constraints such as the transport and trade barriers that affect the efficiency of the region's ports, corridors, and borders.

At its heart, USAID/West Africa's Trade Hub and African Partners Network is a capacity building effort that will entail working with several key groups of African partners. The project's focus will be on developing associations and regional alliances that can act independently from donor support and take on a greater leadership role in promoting reforms, attracting buyers and investors, and adopting improved practices. The project will also work with individual companies that have a regional scope and could serve as lead firms in targeted value chains.

The Trade Hub will achieve its objectives by improving the private sector competitiveness of certain value chains. Based on the initial assessments made in USAID/West Africa's Feed the Future Multi-Year Strategic Plan, five value chains were pre-selected for the project: rice, maize, millet/sorghum, livestock (cattle), and livestock (sheep and goats). They were selected based on the following criteria: importance to intra-regional trade, high potential for value addition, production by a large number of stakeholders, and synergies with other supported value chains.

The Trade Hub team also examined the development potential of other value-added value chains and selected several for inclusion in the project's set of targeted value chains. This selection was based on six high level criteria:

- Potential to increase trade
- Potential to create jobs
- Potential to attract investments (including from the U.S.)
- Number of households participating
- Extent of geographic dispersal in West Africa
- Current level of exports to global markets

The assessment phase thus focuses on the following value chains:

FTF Regional Value Chains

- Maize
- Millet-Sorghum
- Rice
- Cattle
- Small ruminants

Value-added Global Value Chains¹

- Apparel
- Cashew
- Honey
- Mango (and possibly other cut fruits/vegetables)
- Sesame
- Shea

West Africa is on the verge of a transformative change—if it can create a new dynamic for intra-regional and export trade. At present, intra-regional trade is inefficient, characterized by unpredictable distortions and uncompetitive practices, and subject to overly restrictive regulatory regimes. West African exports have limited success in the global marketplace due to poor product quality, inconsistent supply, and high delivery prices, which can be traced back to the absence of economies of scale, high transaction costs, and a poor enabling environment.

The Trade Hub and African Partners Network aims to promote broader, more sustainable growth by improving private sector capacity and the policies, rules, and practices that govern regional and external trade. This will achieve sustainable and measurable increases in regional and international exports, jobs, and investment by strengthening vertical and horizontal integration within value chains, assisting representative associations to become more effective and inclusive, and improving the enabling environment for trade. The project will also mount a cross-cutting effort to increase the professionalism of all major participants by providing role-specific competency training, facilitating access to modern technologies, and improving market linkages.

The Trade Hub will:

- Leverage and strengthen already-identified or new private sector and public sector partnerships for commercial and development activities.
- Target the highest-impact opportunities in the value chains and policy regimes, to alleviate specific constraints hindering private sector growth. The cornerstone of our structured approach to value chain development is identifying, in collaboration with our for-profit value chain partners and our public and nongovernmental organization (NGO) partners, where high-impact change can be achieved to maximize the return on project resources. Our trade and transport enabling environment staff will target specific policy and regulatory constraints which, once changed, will open up regional and external markets, reduce seasonal blockages, lower supply chain friction, and encourage trade-based investment and growth. They will work closely with stakeholders to advocate and enforce reforms.

The Trade Hub’s higher-level results targets are summarized in Table I below.

¹ The home décor value and fashion chain was handled differently. A limited Trade Hub initiative is recommended for home décor and fashion. An assessment was not conducted for this value chain as it was no longer considered for a core Trade Hub focus.

Table 1: Highest Outcome-Level Results

Results	Through Year 3	Through Year 5
Increase in the value of global and regional transactions, on average, in targeted sectors of livestock, grains, and value-added products in West Africa	30%	50%
Creation of new jobs in Trade Hub-assisted West African firms	15,000	23,000
Facilitation of new investment in targeted sectors	\$62.5m	\$102.5m

Because different partners have different needs and levels of maturity, the project will tailor upgrading activities to each partner. We have recommended and will select value chains that offer opportunities to substantially contribute to achieving these objectives. We will choose value chains that can benefit from Trade Hub-supported activities such as:

- Improved buyer-seller intermediation
- Expanded use of grades and standards
- Increased access to and use of market information
- Increased access to and use of financial services
- More competitive transport and logistics enabling environment
- Reduced legal and regulatory barriers to trade

2. METHODOLOGY

This Value chain assessment is the second of three phases that will lead to agreement on the Trade Hub’s targeted value chains:

1. Phase I: Select (recommend) value-added value chains
2. Phase II: Assess selected value chains
3. Phase III: Vet and obtain feedback, leading to confirmed selection

Eleven separate value chain reports present the findings of each value chain assessment.

As part of the research for the assessment reports, subject matter experts collected and updated data and trend information relevant to each of the value chains. The value chain assessments use a common set of criteria to describe the short-listed value chains and update information about them. In contrast to the selection process (which used subjective measures of only certain criteria based on expert opinion), the assessment utilizes the full set of criteria, quantifying them as much as possible. Based on this analysis, the report discusses strategic approaches that could be supported by the Trade Hub to achieve the “vision” of the value chain.

The existing value chain studies and their conclusions were strongly considered in the assessment, and meetings and phone/internet discussions were held with knowledgeable stakeholders. (Given time constraints, the team did not collect primary market data from the field or hold extensive interviews with a full roster of key informants.)

During the assessment, the team also began to analyze and discuss with stakeholders the opportunities and challenges for each value chain and make initial proposals for an upgrading strategy. If the stakeholders and the Trade Hub are able to identify a clear path for upgrading the value chain, it is more likely that the value chain will be ultimately included in the Trade Hub’s set of focus value chains.

2.1 VALUE CHAIN ASSESSMENT PROCESS AND SUBSEQUENT STEPS

Table 2: Steps in Value Chain Assessment and Final Selection

Task	Method
Assess short-listed value chains	Assess the five preselected value chains and the other selected value chains against a full set of criteria through desk studies, review of existing value chains studies, and key informant interviews with partner network
Obtain USAID/West Africa’s feedback on Value Chain Selection Report	Review Value Chain Selection Report; meet with value chain Development Specialist and value chain team
Submit Value Chain Assessment Report	Assess all value chains, obtaining data and information through value chain studies, desk research, and key informant interviews; include discussion of potential value chain vision, upgrading strategy and Trade Hub intervention

Prepare facilitation guide for value chain stakeholder vetting	Based on the assessments, prepare summary presentation and process for vetting value chains
Vet value chain selection and assessment with stakeholders	Hold session within Project Partners Kick-off Workshop with Trade Hub stakeholders
Refine value chain selection and assessment, based on stakeholder feedback and suggestions	Continue interacting with key stakeholders and USAID as required

The final selection will only take place after the official Project Launch event, which will take place on or shortly after July 15, 2014. Immediately following the Launch the Project will engage individual value chain partners to discuss and vet the Assessments and come to a common vision of the value chain and how the Project will work with them. The final action plans for each value chain will be set after the engagement meetings, and will take into account the stakeholder feedback.

2.2 SOURCES OF INFORMATION

This report was written primarily from the knowledge of the author, who has worked very actively on technical and market issues in the shea value chain for well over two decades. Trade data has been drawn from secondary studies and publications including grey literature, and from interviews conducted over the past several years with key informants of the private sector in West Africa. In addition, the author benefited from attendance at the recent GSA conference in New York City on May 12, 2014, at which relevant presentations were made by a number of GSA members.

2.3 DATA LIMITATIONS

Though shea appears in the Food and Agricultural Organization Corporate Statistical Database (FAOSTAT) as 'Karite Nuts (Sheanuts)' there is limited trade data available. Because of this the 'production' data is neither very meaningful nor relevant. Data are often based on estimates of natural production, which in many cases remain consistent year to year. However, these estimates do not take into account natural variability in the yield and the proportion of the total annual production that is harvested.

Available trade estimates quoted in secondary literature are often cited to an individual 'expert' and not on actual trade records, recognizing that a significant proportion of cross-border trade is undocumented.

3. DESCRIPTION OF THE VALUE CHAIN

3.1 PRODUCTS INCLUDED IN THE VALUE CHAIN

The shea butter tree (*Vitellaria paradoxa*, syn. *Butryospermum paradoxum*) is a slow-growing fruit tree indigenous to the Sudanic savanna of sub-Saharan Africa. The tree occurs in a narrow band of vegetation extending some 5,000 km, from Senegal in the west to Uganda and Ethiopia in the south and east of the range. The shea tree provides an annual bounty of nutritious fruit to rural communities during the annual 'hungry season'. The seeds of the shea fruit are large kernels with a high percentage of edible oil, known as shea butter, which is a very important nutritional and economic resource for households and communities across the shea parkland savanna. Shea has been documented as a trade commodity – both an inedible oil and skin care treatment locally, and a unique luxury item of considerable value in regional trade – as far back as the 14th century.

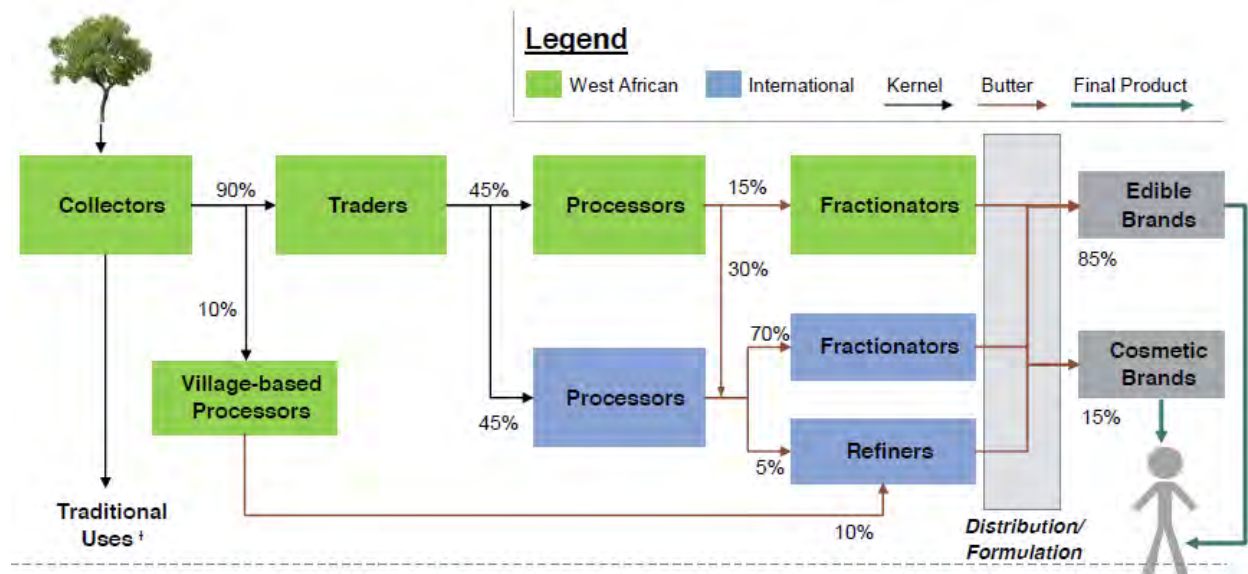
Products included in the value chain are shea kernel and its derived lipid fraction; shea butter, consisting of oil and fat components; as well as a non-lipid (unsaponifiable) fraction, including bioactive compounds such as triterpene alcohols. Though the tree is endemic to 16 countries across Africa, well over 90% of globally traded shea products originate in Ghana, Mali, Burkina Faso, Ivory Coast, Togo and Benin. Though the Nigerian shea parkland is vast, however only shea from the western side of the Niger River Valley has an adequate stearin (fat) content. Shea from the east of the river is unwanted by exporters since it has a much lower stearin content and is not sought by international buyers.

The stearin component of shea butter, isolated by a process of industrial fractionation, is the main value-added product traded internationally - constituting about 90% of global trade in shea products. Shea stearin is used primarily in confectionery as a 'cocoa butter equivalent' or 'cocoa butter improver'. Unrefined shea butter also contains bioactive unsaponifiable (non-oil/fat compounds), which have high-value applications in skin-care.

Throughout much of Africa, shea butter is extracted and sold in bulk at low prices and without regard for quality. In Ghana, where product quality control and quality assurance is emphasized, a well-established production chain exists. Ghana has become a preeminent exporting nation for shea products over the past 15 years, and the country serves as a conduit for regional shea exports from neighboring countries (Mali and Burkina Faso in particular). The Ghanaian market share for shea kernel in particular rose dramatically, accounting for an estimated 86% of all shea kernel exports from West Africa. Throughout the rest of the region, shea butter is extracted and sold in bulk at low prices and without regard for quality.

3.2 VALUE CHAIN MAP

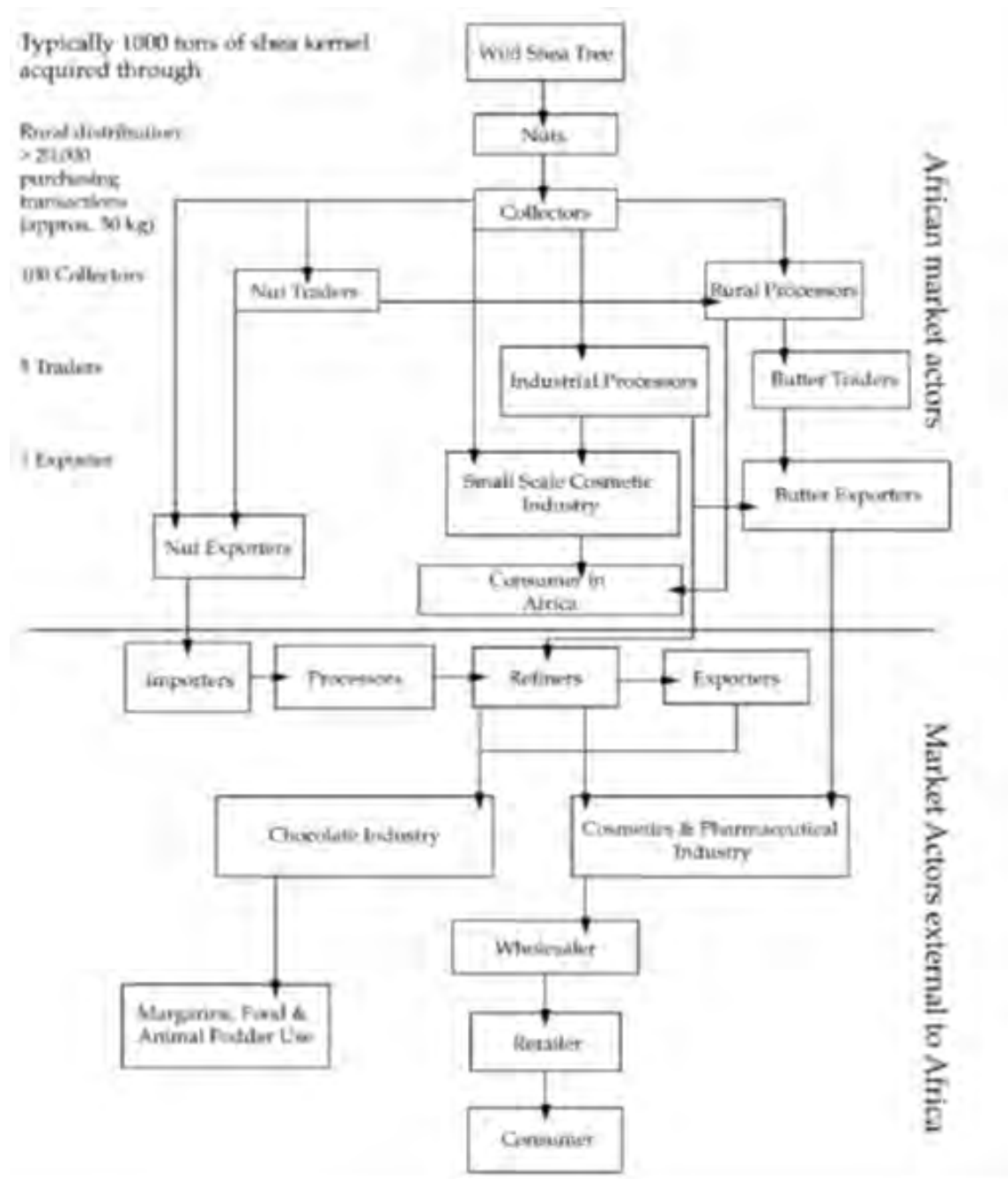
Figure 1. Value Chain Map: Shea



Source: Global Shea Alliance (2013)

3.3 PRODUCT FLOW MAP

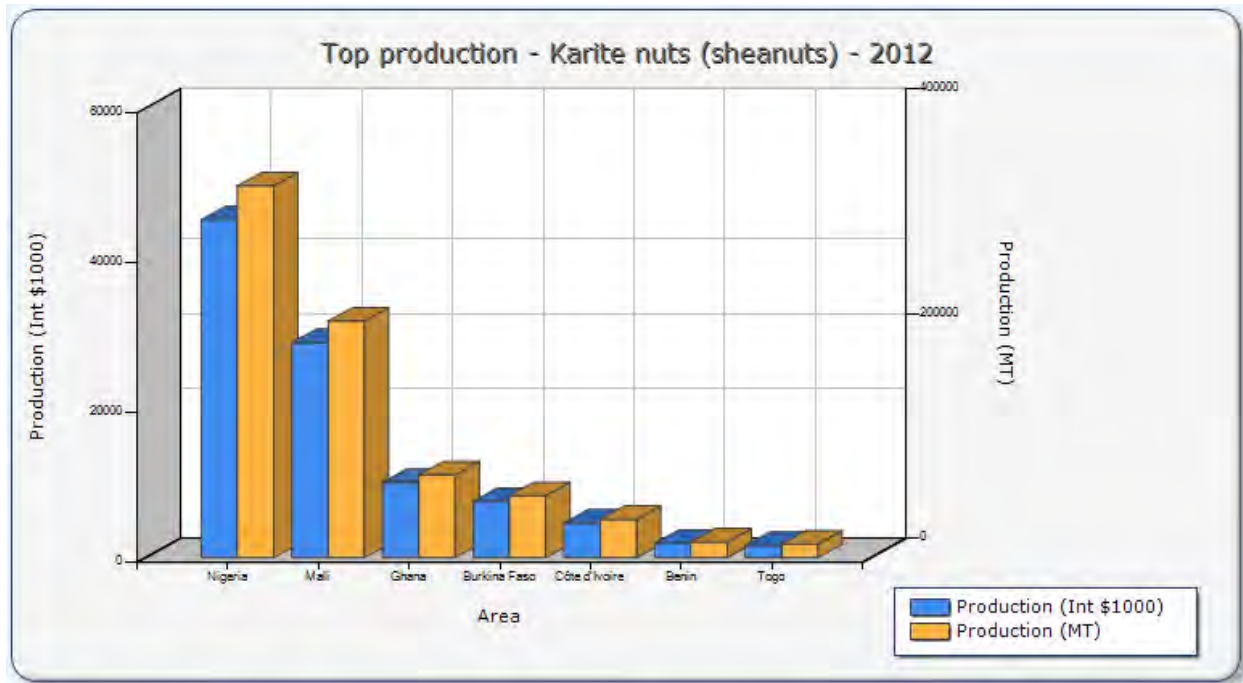
Figure 2. Product Flow Map: Shea



Source : Scholz (2010) after Derks and Lusby (2006)

3.4 SHEA DATA AND INFORMATION

Figure 3. Current Data and Information: Shea



Source : Food and Agricultural Organization Corporate Statistical Database (FAOSTAT) (2014)

Shea kernel exports are mostly sent for industrial extraction and fractionation into olein and stearin, of which the latter is used as a cocoa butter improver (CBI) for chocolate sold in the (EU). The specific countries that allow its manufacture include the United Kingdom, Denmark, Sweden, Portugal, Ireland, Russia and Japan (3F 2010). While shea kernel has historically comprised some 95% of shea exports from the African continent, prior to establishment of the Archer Daniels Midland (ADM) complex at Tema, current trends point to an increasing export share of shea butter (and its fractions, as more finished products) to serve global markets. Brazil is a fairly new shea-consuming country; its chocolate industry allows for admixture of shea butter as a cocoa butter improver, and several cosmetics companies currently use shea butter in their product lines.

Unrefined shea butter has defined a distinct and growing market niche on the global cosmetics market. According to West Africa Trade Hub (WATH) estimates, the natural cosmetics segment comprises about 5% of the \$200 billion global cosmetics sector. Growth of this segment has been fairly consistent at 15-25% per annum: From an estimated \$3.9 billion in 2006, the figure is 'expected to exceed US\$10 billion [in] 2010' (WATH 2010).

While export figures are notoriously unreliable, in 2013, the GSA estimated that 350,000 MT of shea kernel are exported from Africa annually, with a market value of approximately \$120 million (based on current prices of about \$450 MT free-on-board (FOB) and used for the preparation of around 60,000 MT of stearin (the solid fat fraction). Major exporting countries include Ghana, Burkina Faso, Côte d'Ivoire, Mali, Benin, Togo, and Nigeria.

3.5 MAIN ACTORS IN THE VALUE CHAIN

3.5.1 DESCRIPTION OF THE VALUE CHAIN ACTORS

3.5.1.1 Lead Firms

Historically the shea value chain was characterized by bulk exports of shea kernel for extraction, refining and fractionation on a tolling basis at one of two European-owned facilities by one of three major European buyers (Karlshamns AB of Sweden; Aarhus United A/S of Denmark; or IOI/Loders Croklaan, a Netherlands-based subsidiary of IOI Corporation of Malaysia). These firms accounted for more than 90% of African shea exports. Ghana has long been favored by these buyers as the origin of highest quality (including the high fat content of Ghanaian provenances) as well as for the reliability and ease of commerce. Since the early 2000s, Burkina Faso has also become a source, with procurement centered in Bobo Dioulasso; shea kernel is also drawn from the Sikasso region of Mali.

In 2005, Aarhus and Karlshamns merged to form AarhusKarlshamn AB (AAK), a Swedish-Danish company, thus narrowing the shea supply chain to two major suppliers. More recent entries to the West African shea market include 3F Africa, the West African subsidiary of the Indian Foods, Fats and Fertilizers group of companies, which exports large volumes of shea kernel to India for extraction, fractionation and re-export as shea stearin for confectionery. A year after the AAK merger, the West African shea market was further rocked by the sudden entry of the Ghana Specialty Fats facility at the Ghanaian port of Tema, a \$20 million joint venture between Archer Daniels Midland and Singapore's Wilmar Holdings, with an annual processing capacity of 25,000 MT of shea kernel. This development also contributed to the spike in shea prices in 2008. ADM/Wilmar produces shea stearin for export as a food ingredient destined mainly to the European confectionery industry, with some sales of shea olein as a food or cosmetic ingredient.

Developments over the past decade include a consolidation of the three industry leaders in European export to two companies, and an increase in industrial extraction within the West Africa region – particularly in Ghana, which serves as the de-facto supply depot for West Africa given the quality of its shea kernel (a ‘trickle over’ effect of quality systems and infrastructure invested in the cocoa value chain). Further investments in regional extraction capacity will be leveraged, but also investments in secondary processing such as neutralization, fractionation and deodorization, working with industry leaders within West Africa such as Ghana Nuts (Ghana), Fludor (Benin) and Nioto (Togo) and tolling extraction facilities such as the Shebu facility at Savelugu (Ghana), formerly serving Lodgers Croklaan. Industrial processing capacity is limited elsewhere in the region, with derelict or underutilized facilities in Senou (outside of Bamako, Mali) and in Ouagadougou (Burkina Faso).

Given their decades-long implication in the shea industry, AAK and Lodgers Croklaan hold indomitable market knowledge and access.

3.5.1.2 MSMEs

Given the dynamics of its production, there are many hundreds if not thousands of micro-enterprises based on shea across Africa, from women’s groups which collect and process shea to formulators of skin-care products. Under the Trade Hub project, additional micro, small and medium enterprises (MSMEs) will be encouraged to develop direct commercial relationships with national exporters and international buyers; the Trade Hub can play an important role in building such commercial relationships based on development of mutual confidence over time.

3.5.2 RELATIONSHIPS BETWEEN KEY ACTORS

Horizontal linkages exist primarily at the primary production level, including groups (usually women's groups) engaged in collection and drying of shea kernel and groups (usually women's groups) involved in extraction of shea butter for household collection and local, national or export-oriented marketing of surplus production.

Vertical linkages between these entities (and individual collectors and processors) include loose arrangements oriented around local and regional markets, as well as more formal long-term arrangements between producer groups and associations and international market leaders including the Body Shop (in Ghana) and l'Occitane (in Burkina Faso). Other, less formal vertical linkages exist between rural producers, producer groups and associations and market traders, as well as purchasing agents for industrial buyers (e.g. Ghana Nuts, as well as multinational actors including AAK, Loders Croklaan, Olam and 3F).

3.5.3 OPPORTUNITIES AND ISSUES

The market demand for shea butter of African origin is currently estimated at roughly 5,000 to 8,000 MT per year, mostly to Europe (including both the UK, where Body Shop established its global foothold, and the continental mainland, where shea butter was largely popularized by the French company l'Occitane) - and the USA, served by a broad multiplicity of suppliers. Direct shea butter exports to Canada are typified by 10,000 Villages, which sources its butter directly from the same Burkinabe producers' cooperative which supplies l'Occitane, with facilitation of the Canadian NGO Centre for International Studies and Cooperation (CECI).

Further 'upstream', traders who collect and consolidate purchase of shea kernel and shea butter from the rural production areas operate on very low margins, often fronting their own meager capital to facilitate bulk procurement serving industries and exporters. However, as detailed elsewhere in this report, recent proprietary procurement models approximating 'warehouse receipts' (including the one supported by SNV in the Upper West region of Ghana, whereby producers obtain better prices for their products under collective storage arrangements) may have scope for scaling up, with further engagement of market leaders and other firms.

Perhaps the most promising avenue for upgrading at the primary producer (including increased incomes and employment) level is the increasing recent awareness and rising market demand for unrefined shea butter as a new and growing niche product. As recently as 2005, buyers for cosmetic manufacturers and formulators were exclusively interested in refined shea butter - an odorless, hard white fat - while shea butter prior to its refining and deodorizing was commonly termed 'crude' shea butter in both French and English.

In 2005, a regional process to establish product quality grades and standards was undertaken by the World Agroforestry Centre (ICRAF) and its national partners under the ProKarité project, supported by the Common Fund for Commodities and the UN Food and Agriculture Organization. In June of 2005, these standards were adopted by the West African Economic and Monetary Union (UEMOA) of francophone West Africa. Over the next two years, ICRAF and the Ghana Standards Board (also representing ECOWAS) scaled up adoption of the standards to the inter-governmental and regional level, with approval in July 2007 by all 16 shea producing countries under the aegis of the Africa Regional Standards Organization (ARSO). An important aspect of these standards was the formal designation of 'unrefined' in place of 'crude' to define natural shea butter, which (of sufficient quality) has no inherent need of further processing to serve even the highest-value product and market applications.

Awareness (and enforcement) of these regional standards has to date been inconsistent at best – even in Ghana, which took such a lead in their development based on existing Ghana standards) never the less, the standards do provide formal, science-based quantitative grading systems for both shea kernel and butter which define quality parameters and values for use in international trade (Shea Standards 2007).

In this context, market adoption of ‘unrefined’ shea butter as a sought-after commodity shows that the global market for shea butter has evolved in recent years, to recognize the quality improvements made at the village level in the producing countries – most notably in Uganda (where unrefined shea butter of the Nilotica variety was developed as a niche product in the mid-1990s), and in Ghana.

In general, issues of product traceability, quality assurance and the willingness of lead firms to offer price premiums based on product quality are key considerations – but the situation and prospects for upgrading differ widely according to country of origin.

4. DISCUSSION OF VALUE CHAIN ASSESSMENT CRITERIA

4.1 MARKET INFORMATION

Shea is a 'bifurcated commodity'² in that it is both a low-value industrial feedstock and a high-value cosmetic ingredient. Shea exhibits locally specific dynamics of supply and demand that vary widely across the production zone, and may appear paradoxical (e.g. the fact that shea is more highly valued – and thus producers receive higher unit prices – in areas most removed from global trade, where prices are negotiated directly between local producers and local consumers). The totality of shea products in global trade may be seen as a pyramid. A broad base of dried shea kernel of indifferent quality is derived from fresh shea fruit by rural women (about 620,000 MT per annum). More than half of this is consumed at the household and local level as a food oil, while the surplus (about 40% of the harvest) is traded downstream.

About 80% of the traded shea is exported to Europe, Asia and the BRIC countries as a raw commodity and subsequently processed into shea stearin and its by-products. Only about 20% of the harvest is processed in Africa and exported as shea butter. Ghana, serving as a conduit for regional shea exports from neighboring countries (Mali and Burkina Faso in particular), has become the preeminent exporting nation for shea products and the worldwide leader for 14 of the past 18 years. Ghana's market share for shea kernel accounts for an estimated 86% of all shea kernel exports from West Africa – though it should be noted that a significant proportion of Ghanaian exports originates in Mali, Burkina Faso, Togo, and Benin. Burkina Faso is significantly behind, ranking second among the other producing countries. Although Nigeria's shea parkland is vast, its shea is less globally desirable: An adequate stearin content is found only in shea kernel found in the western side of the Niger Valley; shea east of the Niger River has a much lower stearin content and is not sought by international buyers.

In recent years, unrefined shea butter has defined a distinct and growing market niche on the global cosmetics market. According to WATH estimates, the natural cosmetics segment comprises about 5% of the \$200 billion global cosmetics sector, but growth of this segment has been fairly consistent at 15-25% per annum in recent years, with growth from an estimated \$3.9 billion in 2006 'expected to exceed US\$10 billion [in] 2010'³ despite the global financial crisis.

² Chalfin, B. (2004). *Shea Butter Republic - State Power, Global Markets, and the Making of an Indigenous Commodity*. New York, London. Routledge.

³ WATH (2009): *The Shea Value Chain: A uniquely African industry*. USAID / West African Trade Hub (WATH): Accra.

4.2 CONTRIBUTION TO ECONOMIC GROWTH

4.2.1 POTENTIAL TO INCREASE TRADE

The market demand for shea butter of African origin is currently estimated at roughly 5,000 to 8,000 MT per year, mostly to Europe (including both the UK, where Body Shop established its global foothold, and the continental mainland, where shea butter was largely popularized by the French company l'Occitane) - and the USA, served by a broad multiplicity of suppliers. Direct shea butter exports to Canada are typified by 10,000 Villages, which sources its butter directly from the same Burkinabe producers cooperative which supplies l'Occitane, with facilitation of the Canadian NGO CECI.

Further 'upstream', traders who collect and consolidate purchase of shea kernel and shea butter from the rural production areas operate on very low margins, often fronting their own meager capital to facilitate bulk procurement serving industries and exporters. There are recent trends toward proprietary procurement networks, such as those established Loders Crokiaan in Bobo Diolasso, Ghana Nuts in the northern regions of Ghana (which includes indirect benefits such as medical insurance for traders and producers), and the warehouse receipt system and village savings and loan association (VSLA) model of AK (with SNV) in the Upper West region of Ghana. There is scope for bringing these traders together more formally as a trade association, possibly to be integrated with other professional platforms supported by the GSA.

An effort was made to complete a Revealed Comparative Advantage analysis for the shea sector. Unfortunately, this was not possible as the available data is too old and unreliable for this purpose.

4.2.2 POTENTIAL TO CREATE JOBS

As of 2009, it was estimated that 3 million West African women are involved in shea export (WATH 2009 in Scholz 2010), with a host of mostly male intermediaries serving as aggregators of shea kernel for industrial procurement, regional trade and export. Employment is likely to be generated by investment in rural collection and processing enterprises, which rely on hundreds or thousands of collectors (nearly all women) and dozens or hundreds of artisanal processors, according to the processing technology used to obtain the end product. Generally speaking, purchase of unrefined shea butter from rural producers is more remunerative to primary producers (and generates more employment, mostly female) as compared to aggregated trade of the raw material for industrial processing. As women's processing groups average between 25 and 50 members, it can be estimated that increased employment through investment in processing in support of direct purchase arrangements will result in considerable (if seasonal) employment.

4.2.3 POTENTIAL TO ATTRACT INVESTMENTS

The scope for large-scale investments in the shea value chain is closely linked to potential for increased demand for shea kernel as a United States Department of Agriculture (USDA)-approved ingredient in US chocolates. Tangible progress about this may not be forthcoming not in the short term as the United States Food and Drug Administration (FDA) approval process takes from 3-5 years, and the application for consideration was submitted in December 2013⁴.

⁴ Torrey Cope, personal communication 2014

4.2.4 POTENTIAL TO GENERATE VALUE ADDITION

Shea kernel exports are largely destined for industrial extraction and fractionation into olein and stearin, of which the latter is used as a CBI for chocolate sold in the EU. Though there is very little scope for value addition in the shea kernel trade, there is considerable scope for value addition in shea butter trade through improved processing methods - primarily for high-quality shea butter.

Demand for natural cosmetics is projected to rise exponentially during the coming decade despite global economic woes (somewhat counter-intuitively, demand for expensive cosmetics is positively linked to economic uncertainty). The demand for shea butter can only be expected to follow suit. Global consumer awareness of and demand for shea butter in skin care has shown spectacular growth since 2000 (mostly prior to the global financial crisis of 2008). It is doubtful if this trend can reasonably be expected to continue at quite the startling rates of 10% per annum, however. Moreover, companies engaged in production of cosmetic formulations using shea butter often formulate using very small quantities of shea butter to reduce costs.

There is however clear scope for aggregation of smaller-scale production models. This would include investment in supply chains linking rural producers with bulk and industrial buyers as well as investment in higher-value niche markets for high-quality locally-processed unrefined shea butter of specific origins

While sourcing arrangements for locally-produced shea butter as a commodity have increased, there has been very little investment in small and medium production enterprises serving regional and global markets, particularly outside of Ghana. Clearly there is scope for more direct investment in small- and medium-scale production enterprises at the rural and peri-urban levels across the shea producing countries – and nowhere more so than in the ‘sleeping shea giant’ of Nigeria and also Cote d’Ivoire, two countries where the shea value chain remains largely a potential prospect.

4.2.5 POTENTIAL TO GENERATE MARKET-BASED IMPROVEMENTS IN PRODUCTION YIELDS

Not applicable. The shea tree is naturally-occurring (a wild species), and there is an overall regional surplus in supply, more pronounced in some countries of origin (e.g. Nigeria in particular).

4.3 IMPACT ON FOOD SECURITY

About 10 million households across Africa (and at least 5 million in the ECOWAS zone of West Africa) rely on shea butter as a dietary lipid (food oil) of primary importance to household food security. The majority of this is processed in the home and sold on local and regional markets, thus providing an important source of income used to meet household financial requirements. It is estimated that about 30% of household income in shea producing households derives from the sale of surplus shea products (shea kernel and/or shea butter).

4.4 SOCIAL IMPACT

Shea is the domain of rural women, including poor and vulnerable rural households and those headed by women, providing a valuable source of nutritious fruit and food-oil. Complementary to its consumption within the household, economic returns from the production and marketing of shea products also greatly enhance household food security, multiplying nutritional options for the rural poor through

increased market access to cereals, pulses and livestock. There is scope for involvement of youth (young women in particular) in collection, processing and marketing of shea products.

4.5 COMPETITIVENESS

West Africa can be expected to maintain its preeminent position as origin of global shea exports (due to production volume and pricing structures), but there is absolutely scope for increasing the competitive footing of individual countries. It is important to note that the prospects for each country vary considerably according to geography, phyto-chemistry and traceability, product quality (and national reputation thereof) and ease of doing business.

There are countries and areas of origin with particularly distinct potential for increasing global demand through increased traceability, producer upgrading and quality assurance. Across Nigeria, where the vast shea parkland lies largely underutilized, product quality is generally abysmal (and this commercial fact is well-known by exporters). Nigeria's participation in the value chain is complicated by a divergence in product composition along the Niger River basin – butter from the west is solid, with a high stearin to olein ratio, while that from the east is much softer and without value to the stearin-based confectionery market. However, certain Nigerian origins have the highest recorded levels of bioactive unsaponifiables, which should be of interest in high-value skin-care product applications. Other West African countries of origin with significant scope for increased competitiveness include Mali (where problems of product quality contribute to low unit prices to producers), Côte d'Ivoire (where cocoa exports have detracted from a supportive policy environment for shea exports), Benin (a known transit country for low-value Nigerian exports which cross the border 'informally'), and Guinea, where infrastructural and other factors have long constrained shea exports.

4.6 FACTORS THAT WOULD SUPPORT UPGRADING

The main factor that would support upgrading is the prospect of increased (global) demand, particularly for higher-quality shea kernel and unrefined shea butter which may be produced at the 'village' level. A related factor would be the willingness on the part of industry to offer a quality premium for products exceeding basic quality values, alongside existing sanctions for quality under stated quality values.

Another factor that would support upgrading within the countries of origin would be increased engagement of international companies in supply chains closer to the primary producer level. One significant example is recent investment in value-added processing in Burkina Faso, as per plans currently in development by l'Occitane⁵.

4.6.1 CHAMPIONS FOR CHANGE

AAK, Loders Croklaan and IOI/ADM have already been identified as lead firms of the shea value chain of West Africa. While shea kernel has historically comprised some 95% of shea exports from the African continent, prior to establishment of the ADM complex at Tema, current trends point to an increasing export share of shea butter (and its fractions, as more finished products) to serve global markets, as more such infrastructure becomes operational.

Buyers and industrial users of shea kernel do impose certain minimal quality standards on the shea kernel they buy (mostly from traders and consolidators, who themselves buy largely from local agents procuring directly from collectors). Procurement contracts no longer include provisions for a quality

⁵ Justine Humbert, personal communication 2014

premium, as was formerly the case (prior to the merger of Aarhus Oliefabrik and Karlshamns into AAK) – though penalties do apply beyond the bounds of 8% free fatty acids (FFA).

The implications of this fact at the producer level means simply that there is no quality premium paid to the producer to reward her efforts for producing an improved quality shea kernel; some producers thus keep the best of their kernel for home consumption, selling off the poorest quality to serve the kernel market.

For this reason, enterprises producing the finest quality butter for export generally need to work with a dedicated producer base to which a quality premium is negotiated. While one producer group interviewed stated that they were willing to pay a voluntary premium for the best quality kernel available on the West African market, it cannot be said that the open market for shea kernel rewards quality.

4.6.2 ACCESS TO FINANCE

Given the scarcity of financial instruments suited to smallholder producers, lending *per se* is probably an unlikely prospect. However, there are recent trends toward proprietary procurement networks, such as those established Loders Croklaan in Bobo Diolasso, Ghana Nuts in the northern regions of Ghana (which includes indirect benefits such as medical insurance for traders and producers), and the warehouse receipt system and village savings and loan association (VSLA) model of AAK (with SNV) in the Upper West region of Ghana. There is scope for bringing these traders together more formally as a trade association, possibly to be integrated with other professional platforms supported by the GSA.

4.6.3 PRODUCTIVE INFRASTRUCTURE

There are a wide range of possible investment thresholds, ranging from under \$20,000 for village-level artisanal unrefined shea butter production to multiple millions of dollars: For example, the Ghana Specialty Fats joint venture of Archer Daniels Midland and Singapore's Wilmar Holdings was valued at \$20 million for a processing capacity of 25,000 MT of shea kernel annually.

4.6.4 SYNERGIES WITH EXISTING PROGRAMS

The Trade Hub will be working directly with the GSA and its member entities. Another useful partner will be the ICRAF, which has conducted extensive research on the natural variation of shea butter across the Africa region (including definition of 'provenances' by geographic origin). They have also completed a detailed phytochemical research on the relationship between village-level processing methods and product quality and defined regional codes of (best) practice for shea processing. ICRAF has elaborated national and inter-governmental product quality grades and standards for shea kernel and shea butter in collaboration with ECOWAS and the standards bodies of its member countries, and developed visual training materials (later reprinted by FAO in Mali). A member institution of the GSA Sustainability Committee, ICRAF is currently developing a regional program on shea to support regeneration and sustainability of the shea resource across Africa, with direct engagement of smallholder producers and producer groups.

4.6.5 POLICY ENVIRONMENT

There is an unfortunate tendency to 'fix' price floors in some countries (notably Ghana and Burkina Faso), often with unfortunate results. In Ghana, a state-mandated system of commercial control existed until 1992, against the trend of market reform to which the Government of Ghana was obliged by multilateral finance institutions. During this time, rural producers (pickers and processors) faced low prices, delayed payment, and erratic collection schedules which obliged them to bear all risk for

deterioration of their product in storage regardless of how long they waited for their product to be taken by the licensed buyers of the Cocoa Marketing Board.

This system, in which poor, uneducated and female pickers of northern Ghana were forced by the State to sell only to a network of educated, male buyers from central and southern Ghana through a system of Shea Nut Farmers Societies (SNFSs), institutionalized disparities on three axes – class, gender and region – which disenfranchised the primary producer to an extent that the shea sector has never been able to realize its potential as a commodity of equal significance to cocoa at the policy level⁶.

After 1992, the SNFS model was eventually dismantled, and Ghana's shea sector opened to the global influence of the international market, though tensions between private sector development and state control of the shea market has continued. Rural producers of northern Ghana have never been afforded the political support required to bring shea to its rightful place as a commodity of national significance comparable to cocoa. Though the national mandate on shea research and development has long been vested in the Cocoa Marketing Board and its Cocoa Research Institute of Ghana (CRIG), neither has ever had a budget for development of the shea resource. Recent efforts (2006 to date) led by a consortium of actors convened by SNV and its partners have brought some success in raising national political awareness of shea, including key actors of the Cocoa Marketing Board, but a concerted trans-regional effort is required to consolidate these incremental gains at the national level.

4.7 CLIMATE RESILIENCE AND ENVIRONMENTAL SUSTAINABILITY

The shea tree is naturally-occurring and is neither planted nor cultivated. Its maintenance in agricultural landscapes contributes to stability and productivity by protecting against soil erosion and conserving soil moisture. Among the effects of climate change, producers identify reduced yields in recent years⁷. Particularly in the drier countries where agriculture has intensified beyond a fallow period, regeneration (and thus sustainability) of the shea resource is becoming a serious issue.

Environmental impacts of shea processing include the use of water and wood in the parboiling and drying of shea kernel as well as extraction and post-extraction processing of shea butter. Climate-smart technologies might include solar driers and possibly use of propane gas for heating (although propane gas is generally expensive and often locally unavailable). Mitigation of wood fuel use through planting of woodlots is another avenue toward resource sustainability and minimizing environmental impacts.

4.8 OTHER HURDLES TO SUCCESS

From a regulatory and legal perspective, prospects for increased demand for shea kernel are linked to the current efforts of the GSA to successfully lobby for USDA approval of shea butter as an alternative to cocoa butter in confectionery products. In 2003, shea butter was recognized as an edible ingredient “generally recognized as safe” (GRAS).

⁶ Chafin, Brenda (2004). *Shea Butter Republic: State Power, Global Markets, and the Making of an Indigenous Commodity*., Routledge: New York. 320 pp.

⁷ Masters, E. (2009). 'Looking Ahead in West Africa : Climate Change, Shea Production and Adaptive Strategies'. Fairtrade Foundation: London. 90 pp.

In the EU, demand for shea significantly increased in the 2000s following Directive 2000/36/EC of the European Parliament relating to cocoa and chocolate products intended for human consumption in June 2000. Partly as a result, global prices for shea kernel and butter closely follow cocoa prices on the world market, competing with palm stearin and more 'exotic' cocoa butter substitutes such as sal and illipe (and more recently the wild forest species *Allanblackia*, currently under development by Unilever).

4.9 SWOT ANALYSIS

SWOT Analysis

Strengths

- Shea is a naturally-occurring resource which does not require planting
- Shea is a women's resource, and thus income from shea products benefits women and the families they support to a greater extent than men's income
- Shea has gained global recognition in recent decades, particularly as a high-value ingredient in skin care and cosmetic formulations
- Increased global awareness of shea on the part of global consumers has led to greatly increased growth in demand over the past two decades

Weaknesses

- Perhaps paradoxically, prices for shea products are lowest where global market access and demand are highest, reflecting mercantilist trade histories which have led to under-valuation of shea kernel as a cheap industrial feedstock; international buyers govern the value chain, and rural women producers are classic 'price takers'
- While increased global awareness of shea on the part of global consumers has led to greatly increased growth in demand over the past two decades, this growth cannot be expected to maintain its steep trajectory, as supply falls short of demand at the regional level
- In the country where this surplus of supply is most pronounced (i.e. Nigeria), product quality remains very low, and lack of traceability means that international buyers cannot be certain of the geographic origin (and therefore the desired chemical profile, as reflected in stearin content) of shea kernel on offer

Opportunities

- The relationship between processing methods and product quality has been well-documented, according to regional codes of practice and (national and inter-governmental) product quality grades and standards for shea kernel and unrefined shea butter, making quality upgrading of smallholder producers and processors a straightforward proposition with sufficient investment in training
- Phytochemical analysis has resulted in identification of specific origins of interest as regards bioactive compounds of potential interest to skin-care formulators (e.g. the triterpene alcohols of the unsaponifiable, non-lipid fraction); branding and marketing by geographic origin may be a viable strategy if producers are supported to establish direct market linkages with international buyers
- Though shea butter is primarily a food-oil across Africa, it has not been introduced to international consumers as such, though it meets certain criteria (e.g. an unsaturated fat), and

has clear health benefits for which its fractions are already used in 'nutraceutical' formulations; marketing of whole shea butter as a 'health food' has certain commercial potential

Threats

- As a 'bifurcated commodity' shea is both high-value (as an ingredient in global skincare and cosmetics) and low-value as an industrial feedstock serving confectionery product applications. While the former has no real competition, the latter is open to competition from existing products (palm stearin, sal and illipe) as well as newly developing products (e.g. Allanblackia).
- Particularly as regards shea kernel procured for confectionery applications, current price structures do not reward producer investments in product quality, thus limiting potential for increased remuneration through producer upgrading.
- Given its limited returns as described in the above point, the shea tree has been clear-cut in some areas (notably the area south of Abuja for fuel-wood, and in northern Ghana for establishment of mango plantations). Regeneration of the shea resource is also under threat where agricultural intensification has resulted in declining or disappearing fallow periods, as in Mali and Burkina Faso.

5. VISION AND UPGRADING STRATEGY

5.1 VISION

It is understood that the Trade Hub's engagement in the shea products value chain will primarily involve support to the GSA. Beyond this, through leverage of private- and public-sector engagement, the Trade Hub could support producer upgrading in terms of product quality (linking GSA 'standards' with existing national and inter-governmental standards for shea kernel and unrefined shea butter). In terms of marketing of specific geographic origins of unrefined shea butter, the Trade Hub should continue to engage investment and transactional engagement by US and other global companies in countries of origin seen as most promising and ready for such engagement.

In order to effectively serve the primary producers, as well as other stakeholders of the shea products value chain situated further 'downstream', a **strategy of product and market differentiation** is recommended. Simply put, producers need access to more and better opportunities to serve a variety of product and market applications, ranging from the low-value, low-input, high-volume (e.g. shea kernel to bulk buyers and their local agents) to more rarified niches for high-value, high-input opportunities of more limited volume (demand).

Objectives of such a strategy would be the establishment of formal, long-term purchasing agreements. This includes provision for quality-based price premiums between producer groups and associations and buyers and in particular, global importers of unrefined shea butter, and secondarily consolidators of shea kernel for industrial processing within West Africa.

5.2 UPGRADING STRATEGY

- a. **Strategies** Specific initiatives to be undertaken in pursuit of a diversification strategy may include support to technical training of producer groups and associations, production of visual training materials which will enable primary producers to upgrade the quality and consistency of their products, and training of producer groups and associations to enable them to better negotiate remunerative direct purchase agreements with regional exporters, global importers and industrial buyers.
- b. **Recommended role of the Trade Hub in achieving these strategies**
The Trade Hub will primarily work with and through the GSA and its members, with support to specific initiatives (such as production of visual training materials) which will enable primary producers to upgrade the quality and consistency of their products, and negotiate remunerative direct purchase agreements with regional exporters, global importers and industrial buyers.

5.3 RISKS AND MITIGATION

In addition to the general quality problems related to shortage of processing labor, a general lack of traceability to region means that exporters will generally not risk buying low-stearin product, so

Nigerian shea kernel often moves (along with black-market petroleum) across the border – to dilute the quality brand of Benin, where export prices for shea kernel are generally low as a result, or to be procured and processed by industrial operations in Benin or Togo (Fludor or Nioto, in Abomey or Lomé, respectively).

6. ADDITIONAL INFORMATION NEEDED

As noted previously, there is a conspicuous lack of trade data on shea exports, which will make determination of baseline targets a difficult prospect.

ANNEX I: BIBLIOGRAPHY

Addaquay, J. 2004. "The Shea Butter Value Chain - Refining in West Africa." *WATH Technical Report No. 3*. West African Trade Hub & USAID.

Akihisa, Toshihiro; Kojima, Nobuo; Kikuchi, Takashi; Yasukawa, Ken; Tokuda, Harukuni; Masters, Eliot T.; Manosroi, Aranya; Manosroi, Jiradej. 2010. "Anti-inflammatory and chemopreventive effects of triterpene cinnamates and acetates from shea fat." *Journal of Oleo Science* 59 (6): 273–280.

Alander, J. 2004. "Shea Butter – a Multifunctional Ingredient for Food and Cosmetics." *Lipid Technology* 6(9): 202-216.

Bail, S., S. Krist, E. Masters, H. Unterweger and G. Buchbauer. 2009. "Volatile compounds of shea butter samples made under different production conditions in western, central and eastern Africa." *Journal of Food Composition and Analysis* 22: 7-8, 738-744

Boffa, J.-M. 1999. *Agroforestry parklands in sub-Saharan Africa. FAO Conservation Guide*. FAO: Rome.

Bolwig, S.; S. Ponte; A. Du Toit; L. Riisgaard and N. Halberg. 2008. "Integrating Poverty, Gender and Environmental Concerns into Value Chain Analysis - A Conceptual Framework and Lessons for Action Research." *DIIS Working Paper*. Danish Institute for International Studies: Copenhagen.

Chalfin, B. 1996. "Market Reforms and the State: The Case of Shea in Ghana." *Journal of Modern African Studies*. 34(3): 421-440.

Chalfin, B. 2000. "Risky Business: Economic Uncertainty, Market Reforms and Female Livelihoods in Northeast Ghana." *Development and Change* 31(987-1008).

Chalfin, B. 2004. *Shea Butter Republic - State Power, Global Markets, and the Making of an Indigenous Commodity*. New York, London. Routledge.

Confectionary News. 2006. "Cocoa replacer firm hit by shea nut shortage." Retrieved at: <http://www.confectionarynews.com/Markets/Cocoa-replacer-firm-hit-by-shea-nut-shortage>

Cosmebio. 2006. "La cosmétique aussi se convertit aux produits 'naturels' " Retrieved at: <http://www.cosmebio.org/actu/doc/19.pdf>

Cosmetics Design. 2005. "Global Organic Cosmetic Market Booms." Retrieved at: <http://www.cosmeticsdesign.com/news/news-ng.asp?id=60389-global-organic-cosmetic>

Cosmetics Design Europe. 2007. "Changes in the Cosmetics Industry Expected." Retrieved at: <http://www.cosmeticsdesign-europe.com/news/ng.asp?n=71882-organic-natural-cosmetics>

D'Auteuil, C. 2008. "Improved shea butter trading through certification." *LEISA Magazine* 24(1): 12-13.

Derks, Eric. 2005. "Cost elements in Mali's shea kernel supply-chain." Action for Enterprise (AFE) Mali/USAID. 3 pp.

Derks, Eric. 2005a. "Compte Rendu de la Table Ronde: Exportateurs et Structures d'Appui 'Améliorer la compétitivité de la filière des amandes de karité du Mali.'" September 2005. AFE/USAID: Bamako. 12 pp.

Derks, Eric. 2005b. "Rapport de synthese de la rencontre entre exportateurs et importateurs: Competitivite et defis de la filiere Malienne des amandes de karité." July 2005. Action for Enterprise (AFE) Mali/USAID : Bamako. 24 pp.

Derks, Eric. 2005c. *Summary Report: Constraints and Opportunities for Exporting Good Quality Shea Kernels from Mali*. March 2005. AFE/USAID: Bamako. 5 pp.

Derks, E. and F. Lusby. 2006. *Mali Shea Kernel - Value Chain Case Study*. USAID microREPORT USAID: Washington DC.

Elias, M. and J. Carney. 2004. "La filière féminine du karité: productrices burkinabè, "éco-consommatrices" occidentales et commerce équitable." *Cahiers de géographie du Québec* 48(133): 71-88.

Elias, M. and J. Carney. 2007. "African shea butter: A feminized subsidy from nature." *Africa* 77(1): 36-62.

European Union. 2000. "Directive 2000/36/EC of the European Parliament and of the Council." *Official Journal of the European Communities* 197(19): 18-25.

European Union. 2002. *Council Regulation (EC) No 178/2002*.

European Union. 2009. *Council Regulation (EC) No 834/2007*. Retrieved at: http://ec.europa.eu/agriculture/organic/eu-policy/legislation_en

3F. 2010. "Sheanuts." Retrieved at: <http://www.3f-africa.com/sheanuts.html>

FAO. 2011. "Top Exports: Karité Nuts (Sheanuts)." FAOSTAT. Retrieved at: <http://faostat.fao.org/site/342/default.aspx>

Fintrac Corporation. 1999. "Market and Technical Survey: Shea Nuts." Report prepared under the RAISE IQC. Fintrac/USAID: Washington DC.

Fold, N. 2000. "A Matter of Good Taste? Quality and the Construction of Standards for Chocolate Products in the European Union." *Cahiers d'économie et sociologie rurales* 55(56): 91-110.

Fold, N. 2004. "Spilling the beans on a tough nut - Liberalization and local supply system changes in Ghana's cocoa and shea chains." Hughes, A. and S. Reimer (Eds.): *Geographies of Commodity Chains*. London. Routledge: pp 63-80.

Fold, N. 2005. "Global cocoa sourcing patterns." In: Fold, N. and B. Pritchard (Ed.): *Cross-continental Food Chains*. London, Routledge: New York.

Fold, N. 2008. "Transnational Sourcing Practices in Ghana's Perennial Crop Sectors." *Journal of Agrarian Change*. 8(1): 94-122.

FoodNavigator.com. 2004. "Aarhus links up for chocolate formulations in Brazil." Retrieved at: <http://www.foodnavigator.com/Financial-Industry/Aarhus-links-up-for-chocolate-formulations-in-Brazil>

Gallat, S. and C. Collinson. 2000. "The Economic Viability of Small-Scale Shea Butter Processing in Northern Ghana." *NRI Report*. Chatham.

Gati. 2009. "Wild Shea Tree Benifitting [sic] Burkina Faso: Women Engaged In Shea Sector Gain From Trade In 'Shea Butter.'". Retrieved at:
http://www.thecommonwealth.org/gtinformation/164419/164962/168885/shea_butter/

GBC 2009. "PBC To Get Into Sheanut Industry." Retrieved at:
<http://gbcghana.com/news/28552detail.html>

Glover-Men, N. 2009. "Optimizing the value of shea in poverty alleviation in the three northern regions." Retrieved at: http://www.ghananewsagency.org/s_features/r_8494/

Greig, D. 2006. "Shea butter: connecting rural Burkinabè women to international markets through fair trade." *Development in Practice* 16(5): 465-475.

Hall, J. B.; D. P. Aebischer; H. F. Tomlinson; E. Osei-Amaning and J. R. Hindle. 1996. *Vitellaria Paradoxa - A Monograph*. School of Agricultural and Forest Science Publication. University of Wales: Bangor.

Harsch, E. 2001. "Making trade work for poor women - Villagers in Burkina Faso discover an opening in the global market." *Africa Recovery*. 15(4): 6.

Holtzman, J. 2004. "The Shea Butter Value Chain - Study Synthesis and Recommendations for WATH". WATH Technical Report No. 1. USAID / West African Trade Hub (WATH): Accra.

Jaffee, S. and P. Gordon. 1992. "Exporting High- Value Food Commodities - Success Stories from Developing Countries." *World Bank Discussion Papers* (198). The International Bank for Reconstruction and Development/The World Bank: Washington, D.C.

Jaffee, S. and J. Morton (Eds.). 1995. *Marketing Africa's High-Value Foods: Comparative Experiences of an Emergent Private Sector*. Kendall/Hunt Publishing Company: Dubuque.

LMC. 2006. *The Impact of Directive 2000/36/EC on the Economies of those Countries Producing Cocoa and Vegetable Fats other than Cocoa Butter*. LMC International Ltd. 124 pp. Oxford. Retrieved at:
http://ec.europa.eu/agriculture/eval/reports/chocolate/fullrep_en.pdf

Lovett, P. 2004. "The Shea Butter Value Chain - Production, Transformation and Marketing in West Africa." WATH Technical Report No. 2. USAID / West African Trade Hub (WATH): Accra.

Masters, E. 2011. "CHF-SNV Shea Market Assessment: Pro-Poor Value Chain Analysis." *Market Study on Prospects for Shea Products of Ghana Origin*. CHF: Ottawa: 68 pp.

Masters, E. 2009. "Shea Producer Response to Climate Change in Ghana and Burkina Faso: Experience and Adaptive Measures" Results of a Field Survey, June to September 2009. Fairtrade Foundation: London.

Masters, E. 2009a. *Looking Ahead in West Africa : Climate Change, Shea Production and Adaptive Strategies*. Fairtrade Foundation: London. 88 pp.

Masters, Eliot (Ed.), A. Niang, M. Ramouch and P. Thoenes. 2006. "Consultative Regional Workshop on Shea Product Quality and Product Certification System Design, Bamako, Mali 6 - 8 October 2004: Proceedings." *CFC Technical Paper 46*, Common Fund for Commodities (CFC). World Agroforestry Centre (ICRAF): Nairobi. 130 pp.

Masters, E. (Ed.) 2005. "International Workshop on Processing and Marketing of Shea Products in Africa, Dakar, Senegal 4-6 March 2002: Proceedings." *CFC Technical Paper No. 21*, United Nations Food and Agriculture Organisation (FAO) and the Common Fund for Commodities. United Nations Food and Agriculture Organisation (FAO): Rome. 217 pp.

Masters, E., J.A.Yidana and P.N.C. Lovett. 2004. "Reinforcing Sound Management through Trade: Shea Products in Africa." *Unasylva* 219(55): 46-52.

Masters, E. 2003. *Improving Product Quality and Market Access for Shea Butter originating from sub-Saharan Africa (CFC/FIGOOF/23)*. Common Fund for Commodities (CFC): Amsterdam. 72 pp.

Masters, E. T.; J. A. Yidana and P. N. Lovett. 2004. "Trade and Sustainable Forest Management - Reinforcing sound management through trade: shea tree products in Africa." *Unasylva* 219(55): 46-52.

Perakis, S. M. 2009. *Improving the Quality of Women's Gold in Mali, West Africa: The Case of Shea*. Masters Thesis. Michigan State University.

Poudyal, M. 2009. *Tree Tenure in Agroforestry Parklands: Implications for the Management, Utilisation and Ecology of Shea and Locust Bean Trees in Northern Ghana*. PhD Thesis. University of York: York.

ProKarité. 2005. "The Vitellaria Database." Retrieved at: www.prokarite.org

Raikes, P.; M. Friis Jensen and S. Ponte. 2000. "Global Commodity Chain Analysis and the French Filière Approach: Comparison and Critique." *Economy and Society* 29(3): 390-417.

Schreckenber, K. 2004. "The contribution of shea butter (*Vitellaria paradoxa* C.F. Gaertner) to local livelihoods in Benin." In: Sunderland, T. and O. Ndoye (Eds.): *Forest Products, Livelihoods and Conservation - Case Studies of Non-Timber Forest Product Systems*. Center for International Forestry Research (CIFOR): Jakarta. pp 91-114.

Schreckenber, K. 2004a. "Shea butter: From cooking fat to cosmetics and chocolates." In: López, C. and P. Shanley (Ed.): *Riches of the forest: For health, life and spirit in Africa*. Jakarta, Indonesia. 29-32.

The Shea Project. 2008. "The Shea Project for Local Conservation and Development." Retrieved at: www.thesheaproject.org

Stathacos, Charles. 2004. "The Potential for Expanding the US Market Outlook for Shea Butter." *WATH Technical Report No. 4*. USAID / West African Trade Hub (WATH): Accra.

WATH. 2009. *The Shea Value Chain: A uniquely African industry*. USAID / West African Trade Hub (WATH): Accra.

WATH. 2008. *Improved Road Transport Governance*. USAID / West African Trade Hub (WATH): Accra.

ANNEX 2: PERSONS AND ORGANIZATIONS INTERVIEWED

Dr. Anthony S. Chan – Director, USAID Africa Bureau Office of Sustainable Development

Joseph Funt – Managing Director, Global Shea Alliance

Shannon Hess – Senior Manager, Responsible Sourcing & Sustainability, The Clorox Company

Anna Perinic – CEO, Star Shea Ltd (Ghana)

Anne Phillips, BME Concern (UK)

David Prybylowski – Sustainability Senior Manager, MARS Global Chocolate

GSA New York Event, 12th May 2014 - Attended Relevant Presentations by:

Wickham Boyle – Vice President, Just Shea (USA)

Torrey Cope – Partner, Sidley Austin LLP (on prospects for USDA approval of shea butter as CBE)

Sean Hall – VP Community Commerce and Social Development, Sundial Brands (USA)

Ray Major – Senior Manager, The Hershey Company Sustainability Initiatives (USA)

Alhassan A. Safia – Programme Manager, Pagsung Sheabutter Association (Ghana)

Owen Wagner – Senior Economist, LMC International (on CBE demand projections)

Mark Weyland – Product Manager, IOI Loders Croklaan (on confectionery product applications)