

Market Study Overview

This annex is relevant for the shea value chain, and timber and charcoal from sustainably managed community forests and plantations.

1. Shea

Summary

The private sector will wish to access good quality shea from communities in the NSZ as trends demonstrate that demand will continue and increase over the long term:

Globally, 90% of all shea export is used in the confectionary industry mostly as cocoa butter equivalent/improver to manufacture chocolates. The global growth in chocolate consumption is increasing the demand for shea-based ingredients utilized in the production of chocolate for improved benefits including an improved melting profile, consumer preferred textures, reduced bloom, and improved shelf life. Shea is used in chocolate spreads, hazelnut and chocolate fillings, coatings, extrusion, and moulding. The number of confectionary product launches using shea as an ingredient has increased from only 200 products in 2012 to more than 1,400 products in 2019. This growth is mostly driven by Europe (800 products launched in 2019) and Asia (400 products). Following confectionary, shea is mostly used in bakery (pastry dough, margarine etc.) and snacking products. Shea use will continue to grow in the food industry for the following reasons: 1/ a growing CBE demand which has had a 6.4% compound annual growth rate (CAGR) since 2002; 2/consumer preference for palm-oil free products; 3/demand for healthy and natural ingredient—shea stearin does not increase LDL cholesterol.

In the cosmetic industry, shea use is driven by consumer trends focused on functionality, sustainability, as well as natural and traceable ingredients. Shea is the most frequently used natural ingredient in skincare. It ranks number 1 in the US, France, United Kingdom, Japan, and Germany and number 2 in Brazil, India, and China (Mintel Data – average 2014-2016).

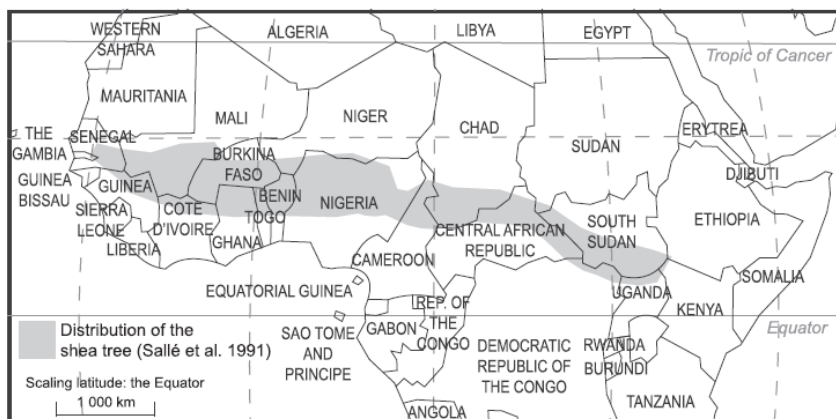
Based on our model which seeks to de-risk the shea value chain (restoration of shea trees and long term supply, aggregation, storage and direct purchasing) which enables women farmers and the communities they live in to benefit directly, GSA have approached other private sector actors (apart from those that have provided private sector co-financing currently) measure their interest in supporting community supply of shea over the long term. This is described in the executive summary and the exit strategy sections.

Other private sector companies have been approached and are interested in the project. The project proposal was announced on GSA website and through a newsletter with a reach of more than 3,000 stakeholders. Since the proposal's development, there has been a one-on-one engagement with multiple private companies in the food and cosmetics sector. In addition, the proposal has been discussed and proposed at several forums, including the GSA Sustainability Working Group in November 2017, 2018, and 2019, as well as in other conferences such as Beating Famine and the Land Degradation forum. There are therefore numerous possibilities to leverage and actualize more private sector finance once the actors can see evidence on the ground, as proposed through the project activities.

Shea production

Nearly 2 billion shea trees grow naturally in parklands in 21 African countries stretching from Senegal to South Sudan. The trees are integrated with crops on smallholder farms, creating an agroforestry landscape more resilient to climate change. An estimated 16 million women living in the rural communities individually collect the fresh fruits. The kernel is processed to extract a healthy vegetable oil known as “shea butter.”

Map 2: Shea tree distribution across Africa



Source: Salle', Boussim, Raynal-Roques, & Brunck, 1991

Production has been dominated by Burkina Faso, Mali and Ghana accounting for over 60% of production over the last three years.

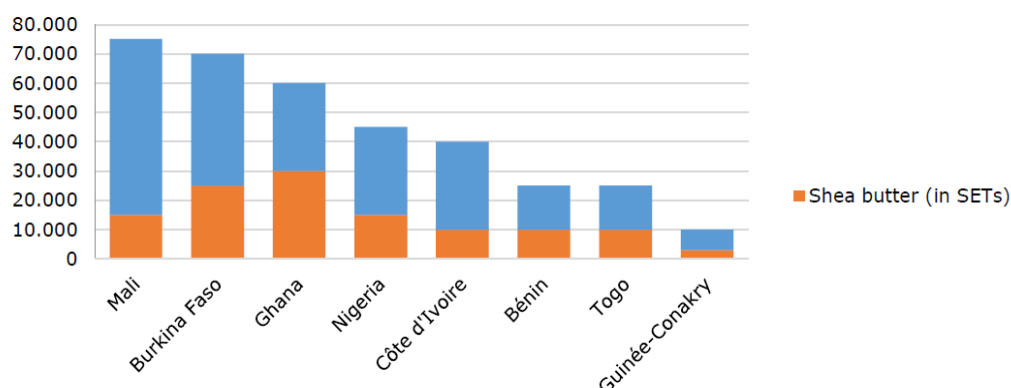


Figure 1: Estimated total shea production by main exporting countries in Africa, in SETs, estimated share of shea butter converted pre-export*, in 2011

Source: Dr. Peter Lovett in The Shea Industry's Economic Impact in Africa, Global Shea Alliance, 2011. ^{*}Figures given as dry kernel equivalent, i.e. 1 ton butter exported requires 3 tons of shea nuts and so butter export is given as kernel (shea nut) equivalent. Shea demand: total shea consumption amounts to an estimated 800,000 metric tonnes (mt) of shea kernels per year. About 450,000mt are used locally for food, personal care, and cultural activities, while shea exports represent 350,000mt of shea kernel equivalent¹. In the global market place, shea competes with other oil and fats, such as palm oil or petroleum jelly, on a variety of aspects, including functionality and prices. Recently markets have opened up in China.

¹ Global Shea Alliance



Figure 2: Shea Export Growth - Source: LMC

90% of exported shea is used in food products and 10% in cosmetics. Global demand for shea has increased by 600% over the last 20 years, and this trend is expected to continue, with a further 50% increase forecasted by industry players for the next 5 years. Exports of shea kernels are used as ingredient in confectionary, bakery, and cosmetic products². Shea-based ingredients are used in chocolate bars, confectionary coatings and fillings, bakery products, and margarine. Demand has grown thanks to the European Union cocoa directive in 2003 (200/36/EC) effectively standardizing the use of non-cocoa butter fat use in chocolate.³

Shea-based ingredients are used for their functionality and capacity to improve consumer experience such as milk chocolate that has a creamier feel, does not 'bloom' when exposed to higher temperatures, a dark chocolate with more of a 'snap' or a premium filling. Shea is gaining popularity to produce healthier products as contains a unique saturated fat that is cholesterol-neutral and can even be blended with liquid oils to create cholesterol-reducing confectionery ingredients. International shea demand for cosmetics originated in the late 1980s with L'Occitane and in the mid-90s with The Body Shop. Today, products include moisturising body butter and formulations that use shea-based ingredients obtained from both stearin or olein via chemical derivatisation. Shea is increasingly popular in skin care products and cosmetics formulations in part due a rich fatty acid composition and a variety of non - glyceride constituents including triterpene alcohols, alpha and beta amyryns, lupeol and butyrospermol. The naturally occurring triterpene alcohols and their derivatives are reported to exhibit a variety of biological activities including anti - inflammatory, chemo - preventive, and antimicrobial activities (Akihisa et al., 2010).

Shea Processing: To process shea kernels into cosmetic or food ingredients, four main processing steps are crushing which extracts the fat from the kernels; fractionation, which separates the oleic and stearic acid; refinery and blending with other oil and fats to create a shea-based ingredient, and product formulation to obtain the final food or cosmetic product. Although about 50% of the first processing step (crushing) takes place in Ghana, as of today, only 5% of the remaining stages take place in the country. Adoption of improved shea kernel processing methods are also expected to result in potentially significant environmental benefits and a reduced production footprint (i.e., reduced use of firewood and water). Higher yields are related to processing methods, handcrafted, mechanical and semi-mechanical.⁴

Regulatory Aspects: The shea sector was privatized in Ghana during the cocoa sector reforms in the 1990s. Since then, internal and export marketing of shea is through licensed private companies. The Ghana Cocoa Board (through the Shea Unit) sought to maintain a regulatory role by vetting and approving application of private buyers seeking to purchase shea kernels. However, in practice the sector has no effective government presence and the Cocoa Board relaxed its rules and regulations.⁵ The Shea Unit was created in 2009 together with a national steering committee. Regulatory aspects, including the institutions or platforms to be created, will be decided upon through a multi-stakeholder

² Global Shea Alliance

³ See CBI Product Factsheet (2015). It should be noted that the EU has restricted use of Cocoa Butter Alternatives (Equivalents, CBEs and Improvers, CBIs) to a maximum of 5% of the chocolate product. Shea is one of the 6 species currently allowed.

⁴ See [Shea Butter Market - Global Industry Analysis, Size, Share, Growth, Trends, and Forecast 2017 – 2027](#) and Bello-Bravo, J. and P. Lovett and B. Pittendrigh (2015) "The Evolution of Shea Butter's "Paradox of paradoxa" and the Potential Opportunity for ICTs to Improve Quality, Market Access and Women's Livelihoods across Rural Africa" Sustainability 2015, 7(5)

⁵ Stakeholder engagement notes –Annex VII- Ghana Cocoa Board, 2018.

consultation. A key sustainability factor for the project is the ability of the Ghanaian shea industry to remain competitive, from a cost and efficiency point of view, as shea competes with other oils and fats in the global market place.

Key Industry Actors: The majority of the players in shea market in Ghana are members of the Global Shea Alliance.

2. Timber

Generally, timber harvests are largely carried out in the southwestern and southeastern parts of Ghana, except for Rosewood (*Pterocarpus erinaceus*), and a few other timber species which are harvested from the northern savannah regions of the country. There is currently a ban on the harvesting and ban of Rosewood in order to try to protect the few remaining trees. According to the 2016 annual report on the export of timber and wood products from the FC, the exports of wood products from January to December 2016 was approximately Euros 225 million in terms of value equivalent to wood volume of approximately 400,000 cubic meters, involving increases of 20% and 8% in value and volume respectively compared with figures from January to December 2015. Notably, Rosewood accounted for the second highest share in volume of wood exports (25%) after Teak (32%) to Asian and Far East destinations. This was due mainly to the increase in illegal and legal harvests in the past few years. In terms of value however, Rosewood accounted for more (28%) than Teak (24%). While tackling the issue of degradation relating to Rosewood harvests will invariably lead to reduction in the volumes and value of wood export earnings for the country, at least in the short term, interventions to ensure community management of savannah forests, fire management and creation of MTS plantations will, in the medium to long term, restore the share of volumes and an increase in foreign income for the country.

3. Wood fuels

Ghana's wood fuel consumption is 20.6 million m³. Wood fuel provides 71% of Ghana's total annual energy demand. Charcoal consumption is predominant (about 70%) in many urban and peri-urban communities and an important energy source in rural communities. In the Accra alone, about 38.9% households use charcoal as their primary cooking fuel. The per capita charcoal consumption had remained stable at an average of 143 kg in the last decade (2001-2012). Annual average charcoal production is estimated at 1,625 kt, the bulk of which comes from Northern, Eastern, Brong Ahafo and Ashanti Regions, with Brong Ahafo as the lead region in terms of production. Charcoal production also occurs in the Upper East and Upper West Regions, though not as much as in the leading regions. Parts of Northern Ghana also supply Ouagadougou in Burkina Faso. It is envisaged that the future demand of charcoal will be driven by factors including income rise, availability of alternative cooking fuels, price changes and changing lifestyles and urbanization. It is estimated that the consumption of charcoal will likely rise from the 1,350 kt in 2015 to 2,350 kt by 2040 at an annual growth rate of 2.6%. The projected demand will result in huge increase in pressure on remaining forest resources.

The charcoal industry is mostly informal but makes an important contribution to the Ghanaian economy through taxes and employment. The industry employs about 440,000 people and with an annual market value of USD 70 million. However, due to its informal nature, the state rarely gets maximum benefits from the industry. Charcoal is produced by small and medium scale producers mostly on subsistence or commercial basis using traditional technologies whose carbonization efficiency is low (less than 20%). This project will contribute to addressing these challenges through community management of savannah forests, good fire management to regenerate degraded forests, promoting reform of the fiscal regime to reward sustainable management, and through the promotion of more efficient charcoal kilns and equitable sharing of the benefits from sustainably managed forests.