# Could Shea be the next gold for Ghana?

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## Graphical Abstract

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**Abstract**

In numerous shea producing regions of Ghana, rural women benefit significantly from the gathering, initial processing, and eventual selling of shea-based goods for their cash income. On a global scale, shea butter has emerged as a trendy ingredient in premium beauty products, due to its healing qualities, moving away from its traditional role as a cost-effective replacement for cocoa butter. International development organizations have focused on the shea value chain in Ghana as a component of their efforts to support private sector growth and decrease rural poverty. The shea value chain gives Ghanaian women the ability to take control of their financial, social, and entrepreneurial well-being, provide opportunities to earn money, enhance skills, and have more influence in their families and communities. Shea butter production in Ghana has the capacity to boost the productivity of shea butter enterprises, create employment opportunities for marginalized groups, particularly women, and ultimately support women's empowerment by reducing poverty. Shea ecological zones contain a diverse range of plants and animals and play a key role in storing carbon. In addition to the ecological significance, the shea parklands and ecological zones hold significance as vital resources and symbols of identity, spirituality, and tradition for Ghanaians, contributing significantly to the nation's cultural heritage. Shea butter from Ghana is highly desirable in global markets because of its superior chemical composition, derived from quality shea nuts. This means that Ghana can grow its shea industry, which will also increase foreign earnings. Therefore, shea could become the next gold for Ghana. In this regard, nature-based solutions and innovations can be employed to agronomically facilitate the supply of quality shea nuts to the shea industry. In alignment with this vision, a new open-access journal called "Journal of Nature-based Solutions and Innovations" has been launched. This journal is targeted to inspire and communicate imaginative research and innovations in the intersection of nature, sustainability, and novel technology. It is aimed at targeting global challenges such as depletion of resources, loss of biodiversity, climate variability, and environmental degradation through encouraging and disseminating new perspectives that leverage the power of nature and human creativity to provide informed decisions. We welcome impactful submission of impactful papers. Come explore the intricacies of using nature-based

solutions and innovations to solve societal and environmental problems.

**Keywords:** good health; journal of nature-based solutions and innovations; poverty alleviation; shea value chain; socio-economic transformation; women empowerment

# 1 Introduction

Shea butter is derived from the kernels of the shea tree (Vitellaria paradoxa), which is native to Africa (Seghieri, 2019). The shea tree is primarily located in the Sahel Region of Africa. Shea trees live for 200 years and begin bearing fruit when they are 15 years old. Traditionally, women have been responsible for gathering shea nuts and producing shea butter, with the knowledge being handed down from one generation to the next. The procedure is very demanding in terms of labor and continues to be so even now, despite the implementation of some technology. Shea butter has long been known as 'women's gold" because of its golden hue and purported ability to help countless impoverished women improve their financial status through employment opportunities. In 2020, the global shea butter market was estimated at approximately USD 690.1 million, with a projected increase to USD 849 million by 2027 as per the 2022 Cosmetic Shea Butter Market report (Mensah and Turvey, 2023). In West Africa, exports bring about annual revenue of USD 90 million to USD 200 million. Shea is one of the top export products in Ghana. Recent reports suggest that the worldwide shea butter market is valued at 2.75 billion, with predictions showing an increase to 5.58 billion by 2033 (UNDP, 2024). In West Africa, more than 16 million women earn a livelihood by farming and processing shea nuts (https://globalshea.com). Ghana is one of the top producers of shea butter globally, and reports indicate that shea nut exports are currently worth 66 million, and approximately 1 million rural women are employed in this sector (UNDP, 2024). Shea butter is a precious resource that is extensively utilized for cooking, making cosmetics, producing food and medicines, and, especially, as a replacement for cocoa butter in making chocolate. Despite the significant influence and numerous stories on the matter, there has been minimal investigation into how the industry benefits Ghana and how shea could possibly become the next "brown gold" for Ghana. This editorial piece sheds light on how shea could become the gold for Ghana.

# 2 Socio-transformative Impact of Ghana's shea industry

According to the Global Shea Alliance, approximately 16 million women in 21 African nations, ranging from Senegal to South Sudan, rely on the shea tree for income (https://globalshea.com). Women in Ghana are essential to every step of the shea value chain, from collecting nuts in rural regions to producing and selling shea butter in local and international markets. Engaging in the shea industry gives Ghanaian women the ability to take control of their financial, social, and entrepreneurial well-being, provide opportunities to earn money, enhance skills, and have more influence in their families and communities. Adams et al. (2016) emphasized that shea butter has the ability to improve the Ghanaian economy and the quality of life in rural communities, especially for women. It can act as a more affordable option compared to other items, highlighting its considerable value and acknowledgment globally. Shea butter processing is a prominent traditional

business in the northern parts of Ghana, being the main source of income for numerous rural women. Nevertheless, despite their vital role, women in the shea industry frequently encounter barriers that hinder their economic potential and uphold inequality, such as scarce resources, meager earnings, difficulties in market entry, and discrimination based on gender. Starting and supporting women's cooperatives is essential for tackling these difficulties. Women can secure quality permits and access the global market when they join cooperatives. The shea nut industry plays a crucial role in improving economies, particularly in rural regions of developing nations where poverty is widespread, especially in regions where the shea tree grows naturally (Adams et al., 2016). It acts as an important source of earnings and support for numerous local communities, particularly rural women involved in gathering, processing, and selling shea nuts. This activity offers them chances for both employment and starting their own businesses. The income created from the production of shea butter aids in reducing poverty and enhancing living standards in these regions, backing education, healthcare, and other crucial necessities (Ayelazuno and Yaro, 2024). Economic empowerment has a positive influence on different aspects of their lives, such as social and political, and also improves food security (Pouliot, 2012). In the northern part of Ghana, more than six hundred thousand women rely on earnings from the sale of shea butter and other shea-related items to support their everyday expenses (Ayelazuno and Yaro, 2024). Ibrahim et al. (2016) emphasized that shea butter is an important export commodity to Europe and the United States, which helps boost foreign exchange earnings. The monetization of shea items is an important revenue stream for many people, and the shea sector has played a significant role in the economic growth of northern Ghana. The consistent market for shea butter is guaranteed by the global demand from industries like cosmetics, food, and pharmaceuticals. This, in return, encourages economic development at the country level and offers governments a source of income through taxes and tariffs on exports. The economic importance of shea butter extends beyond the areas where it is produced, highlighting the value of this natural resource for both local and global economies. Furthermore, aside from the earnings of rural families, the shea sector employs more than three thousand individuals involved in gathering, refining, and marketing shea nuts and butter in northern Ghana (Ayelazuno and Yaro, 2024). Ghana has the capability to supply up to ninety percent of the global shea nuts. WATH (2004) states that shea butter from Ghana and Burkina Faso is highly desirable in global markets because of its superior chemical makeup, derived from quality shea nuts. This means that Ghana is capable of growing its shea industry, which will also increase foreign earnings. Hence, shea butter could become the next gold for Ghana.

# 3 The role of shea in empowering women economically

The shea tree (Vitellaria paradoxa) is a significant source of income for many women across Africa. Naughton et al. (2015) provides a comprehensive analysis of the shea tree's distribution and its potential for income generation, estimating that 18.4 million women collectors are involved in the shea industry across 23 countries. This figure slightly exceeds the number provided by the Global Shea Alliance, indicating the extensive role of shea in rural livelihoods. Naughton et al. (2017) further emphasizes the importance of shea butter to women's empowerment and household economy, aligning with the Global Shea Alliance's focus on the socio-economic impact of shea on women. The shea tree's

significance extends beyond economic benefits, contributing to food security, social capital, and cultural practices (Naughton et al., 2017). Therefore, the shea tree is not only a source of income but also a cornerstone of community well-being and women's empowerment in the regions where it grows (Naughton et al., 2015, 2017). Ghana has a high capacity to process shea butter. Shea butter production in Ghana has the capacity to boost the productivity of shea butter enterprises, create employment opportunities for marginalized groups, particularly women, and ultimately support women's empowerment by reducing poverty. The Ghana Export Promotion Council (GEPC) stated that the quantity of shea butter exported varied from 1,310 MT in 1998 to 2,539 MT in 2002 (Mohammed et al., 2013). Recently, shea butter has become economically significant owing to its increased presence in the global market. The shea industry's significant export potential is aiding the growth of the national economy, industrial development, and creating job opportunities for the disadvantaged. Hyman (1991) estimated that shea butter is made by more than two million women in 13 African nations for personal use and as a source of income. The shea butter sub-sector in Ghana helps reduce the movement of young people and women from rural areas in the north to urban centers, such as Sunyani, Kumasi, Takoradi, Cape Coast, and Accra. In many shea-producing areas of Ghana, the collection, initial processing, and sale of products made from shea nuts plays a significant role in providing women with additional income. Women in northern Ghana earn money from the shea business, which they use to support their families with expenses, such as children's school fees, health insurance, and food items. Therefore, financial support for the family enhances the status of the women in the community.

# 4 The role of shea ecological zones in combating climate change

The conservation and management of shea ecological zones, such as the Northern Savana Ecological Zone in Ghana, is vital for supporting local communities reliant on shea resources, combating climate change, and protecting biodiversity. Shea ecological zones contain a diverse range of plants and animals and play a key role in storing carbon (Elias and Carney, 2007). The shea trees of the West African region, totalling approximately one billion, along with the ecological zones around them, absorb approximately 1.5 million tons of carbon dioxide every year (UNDP, 2024). In addition to their ecological significance, these ecological zones hold significance as valuable assets and representations of customs, faith, and sense of identity for the people of Ghana, contributing significantly to the nation's cultural legacy. Currently, these distinctive savanna terrains are encountering numerous dangers, mainly because of the clearing of extensive agriculture and the deforestation caused by the logging of shea trees to make charcoal (Seghieri, 2019). Furthermore, they also face challenges such as soil erosion, susceptibility to climate change, and water shortages (UNDP, 2024). Rehabilitating deteriorated shea ecological zones and advocating for sustainable land management practices in order to preserve both ecological and economic well-being are recommended.

# 5 Call for Papers

The peer-reviewed, open access Journal of Nature-Based Solutions and Innovations is targeted to inspire and communicate imaginative research and innovations in the intersection of nature, sustainability, and novel technology. It is aimed at targeting global challenges such as depletion of resources, loss of biodiversity, climate variability, and environmental degradation through encouraging and disseminating new perspectives that leverage the power of nature and human creativity to provide informed decisions. The Journal of Nature-Based Solutions and Innovations aspires to be a premier platform for interdisciplinary research, fostering collaborations between scientists, policymakers, practitioners, and communities. The journal works to close the gap between research and practice by encouraging evidence-based decision-making and the wider adoption of natural solutions and technologies. The journal also seeks entries that explore nature-based solutions to environmental, social, and economic issues. This encompasses, but not limited to, ecosystem restoration, green infrastructure development, sustainable agriculture, water resource management, and disaster risk reduction. JNSI is dedicated to elevating the views and experiences of researchers and practitioners from the global south. We welcome contributions that highlight innovative ideas and best practices emerging from developing nations, promoting knowledge exchange and capacity building throughout the South. The journal accepts articles that investigate the use of artificial intelligence (AI), machine learning, and other cutting-edge technologies to address environmental and sustainability issues. We are particularly interested in research that combines artificial intelligence with natural solutions and indigenous knowledge systems. Under the leadership of Prof. Amos Kabo-Bah and Prof. Chukwuemeka J. Diji as Editors-in-Chief as well as Dr. Emmanuel Daanoba Sunkari as Associate Editor, the Journal of Nature-Based Solutions and Innovations guarantees a committed and effective peer-review system, upholding top production quality.

# 6 Conclusion

Supporting women's financial empowerment in industries like shea production in Ghana is not only about fairness but also a smart economic choice with wide-ranging advantages for society and future generations. By dismantling structural obstacles and allowing women to participate fully in value chains, we can unlock their potential as drivers of innovation and productivity while also reducing poverty and promoting gender equality. Shea butter has gained economic importance recently due to its growing prevalence in the global market. The export potential of the shea industry is playing a key role in boosting the growth of the national economy, fostering industrial development, and generating employment for marginalized individuals. This indicates that shea could become the next gold in Ghana considering the numerous benefits it brings to the individual, nation and the global economy.

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