WHITE PAPER

The Futures of Africa's Cocoa Industry: People, Climate, and Sovereignty

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Executive Summary

For decades, the price of cocoa has been too low to support a living income for the five to six million cocoa producers globally (Gilbert 2016), and political pursuit of industrialization has led to the underdevelopment of cocoa-growing regions, particularly in the African context (Akyeampong 2023). In the case of Côte d'Ivoire and Ghana, where sixty percent of the world's cocoa is produced, producers face widespread poverty, poor health, an aging population, lack of (or predatory) access to infrastructure, and more (Berlan 2013; Martin and Sampeck 2016). The issues of forced or child labor and deforestation have been highly popularized as "wicked" problems of cocoa in the media and civil society organization campaigns (Fountain and Huetz-Adams 2022). While hundreds of millions of dollars have been invested by development organizations, large cocoa firms, and local governments, many sustainability schemes serve more to benefit cocoa buyers by producing more cocoa rather than addressing problems producers face (Odijie 2018). Rarely have policy and development projects involved meaningful consultations with producers, which has significantly limited their internalization, impact, and success (Amanor et al. 2021; Berlan 2016; Kumi et al. 2014). This has left producers especially vulnerable to the social, economic, and environmental damage linked to effects of climate change.

To make relevant policy recommendations at both local and international levels, there is an urgent need for research that directly engages with producer needs and that actively includes producers in decision-making processes that affect their livelihoods. It is also necessary to analyze emergent forms of hybrid governance, particularly how state and nonstate forms of order and authority interpenetrate and shape each other (Agbiboa 2022). Since 2019, the governments of Côte d'Ivoire and Ghana have worked together to form a cocoa cartel – informally dubbed COPEC – to apply a Living Income Differential (LID) to increase cocoa's farmgate price (Boysen et al. 2023). This initiative has had mixed results and unintended negative impacts (Aboa 2020, 202; Adams and Carodenuto 2023). For the past three years, cocoa yields have been at their lowest levels in the past decade, while prices have skyrocketed to their highest levels since the 1970s. Simultaneously, the European Union is pushing for intensive due diligence in supply chains, with significant potential impact to cocoa producers in

West Africa (Arhin et al. 2018; Bymolt et al. 2020). African chocolate producers are ever more common, including in their work derivative products and nutraceuticals, with the goal to increase continental consumption. Yet the intractable problems of cocoa persist, and climate change exacerbates them. Smallholder producers are already among those doing the most to adapt to climate change (Hou Jones 2023) and an understanding of their goals as well as barriers to adoption is essential (Kouassi et al. 2023), especially through a decolonizing lens.

The Cocoa Workshop: The Futures of Africa's Cocoa Industry brought together a multidisciplinary group of leading international thinkers at Harvard University for two days of knowledge sharing from April 10-11, 2025. Collectively, they have extensive expertise encompassing social science and STEM fields. Harvard-based co-organizers Emmanuel K. Akyeampong and Carla D. Martin served as moderators throughout the event. The outcomes from this workshop included: a hybrid plenary session and keynote address available to a wide audience; strengthened networks among researchers based in Africa and abroad; and meaningful links to industry practitioners seeking rigorous evidence-based approaches to intervention. This white paper serves to summarize key findings from the workshop.

Guide to Abbreviations

AFRICOIN Africa Cocoa Initiative

ARS-1000 African Regional Standard for Sustainable Cocoa

CRA Commodities Risk Analysis

CCC Conseil du Café-Cacao

Cocobod Ghana Cocoa Board

CRIG Cocoa Research Institute of Ghana

CSSV Cocoa Swollen Shoot Virus

EUDR European Union Deforestation Regulation

LID Living Income Differential

Africa's Cocoa in Crisis

Background

The story of cocoa in West Africa is a remarkable one. Cocoa originated in the Amazon Basin and then spread in Central and South America. European colonizers brought cocoa to West Africa: the Spanish to Fernando Pó and the Portuguese to São Tomé (Clarence-Smith 2000). Cocoa appears to have spread from Fernando Pó to the rest of West Africa, where the slump in the prices for palm oil from the 1860s and rubber from the 1880s and 1890s had intensified the search for a new export crop. Drawing on the works of Francois Ruf (1996), Jean-Pierre Chauveau (1996), Yvette Monga (1996), David Groff (1987), Sara Berry (1975), Polly Hill (1956; 1997) and others, we learn that cocoa was introduced by Baptist missionaries to Cameroon in 1858, and was grown in the 1880s in Lagos, north of Accra in Akuapem, and on the boundary of Côte d'Ivoire and Liberia. But it was in Ghana (then the Gold Coast) and Nigeria that cocoa took off, and Ghana emerged as the world's leading exporter of cocoa in 1911. By the late 1920s, Ghana and Western Nigeria between them accounted for 72% of the world's export of cocoa (Martin 1989). West Africa has since remained dominant in global cocoa exports. Today Côte d'Ivoire and Ghana account for 60% of global supply, and all of Africa for at least 75% of global exports. This is a remarkable story, especially if one considers that at the core of this success story there have been small-scale farmers. Indeed, as Gareth Austin (1996) and others have shown, expatriate attempts to develop cocoa plantations in West Africa were not cost efficient compared to the West African small-scale farmers, encouraging them to leave cocoa cultivation to the smallholders.

But this success came with two inbuilt complications. Cocoa expanded through extensification and not through the intensification of cultivation with the application of inputs such as fertilizers, pesticides, etc. Farmers pushed the frontier of the crop's production in the context of abundant uncultivated forests and cut down other trees to grow more cocoa or when the soil fertility of old cocoa farms was exhausted. Cocoa likes well-drained soils, heat, and moisture all year round. William Gervase Clarence-Smith and Francois Ruf (1996) note that cocoa cultivation has been marked by the sporadic emergence of new "pioneer fronts," and all pioneer fronts represent an assault on the forest. Second, the experimentation with cocoa in

the late 19th century coincided with the imposition of European colonial rule and the abolition of slavery and pawnship. Smallholder cocoa farmers turned to unrecognized familial labor (Austin 2005). As cocoa expanded in the 1910s and 1920s, successful farmers employed northern migrant laborers who came south seasonally to work on cocoa farms. Farmers who could not afford to hire laborers entered sharecropping arrangements or continued their dependence on family labor, including child labor. These two features of cocoa's early success have become contemporary challenges in the ethical transitions of a globalized world. Forests and labor remained the key to the expansion of cocoa in the independence period. In the 1960s Félix Houphouët-Boigny threw open Côte d'Ivoire's forest reserves and invited immigrant labor from Burkina Faso and Mali. Cocoa in Côte d'Ivoire entered its boom period.

Debt has long been a feature of cocoa in West Africa. After the record cocoa prices of the 1910-1914 period drew people into cocoa farming, the 1920s and 1930s saw world cocoa prices plummet. Thomas McCaskie (2000) notes that for the Asante by the 1920s, cocoa had become a poisoned chalice. So, in the context of falling returns and rising debt, why did Gold Coasters hold onto cocoa? McCaskie writes: "Against the indicators, the great mass of farmers clung to cocoa for two main reasons. First, it gave them a foothold – however precarious – in a world of money that they might only enter otherwise by selling their labor on the open market. Second, and simply, they were trapped. Such capital as they had was tied up long term" (2000: 138). In the absence of institutional lenders, cocoa producers depended on moneylenders and richer neighbors. Mortgaged cocoa farms glutted the market from the 1930s and lost value. In the wake of the 1948 riots in the Gold Coast, Gold Coasters expressed the need to the Watson Commission for the establishment of a Cocoa Bank by the Cocoa Marketing Board to assume the mortgages of cocoa farmers. A cocoa bank was not formed but out of that context came the Bank of the Gold Coast, which became the Commercial Bank of Ghana on independence, now GCB Bank.

This historical detour is to underscore that the sustainability of cocoa and the livelihoods of cocoa producers have long been problematic. In 1936, Cocoa Swollen Shoot Virus (CSSV) disease was discovered in the Eastern Province of the Gold Coast. To date it has no known cure. Kwame Nkrumah believed in the 1950s that cocoa was on its last legs. He confided to Martin

Luther King Jr. during Ghana's Independence celebrations in March 1957, that cocoa was "too flimsy a foundation for Ghana's economy" (Gaines 2006: 84). He believed that Ghana's future lay in industrialization, and he neglected the cocoa industry while drawing on its resources to fund his industrial vision (Akyeampong 2023). Despite this official disregard, cocoa in West Africa has repeatedly found ways to renew itself. Ruf has theorized about cocoa cycles, which seem to occur every 20-25 years (Ruf et al. 2015). Ghana's exports reached record heights after Nkrumah's government. However, today, cocoa is assailed on multiple fronts. CSSV remains a problem. Forest destruction in favor of growing cocoa continues. The European Union Deforestation Regulation (EUDR) (which has yet to come into effect due to political uncertainty and administrative delays) could draw a hard line in the sand for African cocoa exporting countries. Climate change has impacted cocoa yields heavily in recent years, sending cocoa prices to record heights on the world market. And artisanal and illegal mining has emerged as an existential threat not only to cocoa but also to rural livelihoods in its despoilation of agricultural land and its contamination of water bodies. Can cocoa renew itself again? Herein we consider the futures of Africa's cocoa industry.

Intractable Problems

Downstream supply chain actors have popularized what they characterize as intractable problems in cocoa (e.g. (Fountain and Huetz-Adams 2022). These include but are not limited to: ecological crises, water scarcity and contamination, social inequality, infrastructure challenges, and uneven global economic distribution. We argue that while none of these problems are ultimately unsolvable, they are often impacted by the ability of institutions and policy makers to successfully execute strategic plans for improvement. Aligning political will and resources can make or break interventions. In addition, astute observers of the literature will recognize that, though these challenges are described today as contemporary, many of them have always existed in cocoa, with debate over potential solutions comprising a cyclical part of industry discourse.

In the case of ecological crises, cocoa in Africa is under considerable pressure: climate, forest, and soil are all impacted. While cocoa has historically thrived in the tropical forest belt, in

West Africa land is losing biodiversity and forests are vanishing (Ruf et al. 2015). Cocoa trees are suffering from age and disease. Recent research findings have identified infrequent rain, long droughts, unpredictable winds, and pollinator decline as pivotal issues changing the viability of cocoa production (Lander et al. 2025). In Ghana, one focus of the government and Cocobod has been agroforestry (Annoh 2024), which has the potential to resolve some of these challenges, though not necessarily all (Kumeh 2024).

Very few West African cocoa farms benefit from any form of mechanized irrigation and are therefore subject to the capricious nature of water availability. At the same time, water scarcity and contamination, the result of changing rain patterns and pollution from illegal mining, have significantly reduced the possibility to safely irrigate cocoa production (Siaw et al. 2023). In Ghana, Cocobod and private companies have piloted borehole construction and irrigation training as solutions, though these are incomplete fixes without the successful remediation of galamsey damage (Bentil 2011; Laryea 2025).

Primary to all of this is, of course, the human element – the social reality of cocoa producer's lived experiences. It is well known that cocoa producers increasingly choose to leave the sector (except during cocoa booms) around the world, especially in West Africa. A large proportion of cocoa producers are caught in debt traps; they hold great apprehension toward the market due to low prices (Odijie 2019). This growing disorientation among upstream actors poses elevated risk to the sustainability of cocoa supply and downstream actors consistently seek stability elsewhere (e.g. right now in Nigeria, Cameroon, Ecuador, and Brazil). The land tenure system, too, causes disruption to the cocoa supply, where young people leave rural areas due to a lack of vibrancy while older generations hold land under low productivity (Bros et al. 2019). Young people see foreclosure, a lack of wealth inheritance, and more as economic quagmires, limiting sustainability and conservation initiatives (Asaaga et al. 2020). For producers, theirs is too often a story of exclusion, where, if they are included in policymaking and development planning, it is but on the fringes of the system, sometimes even in damaging ways.

Labor issues, too, are far more complex than they are currently understood to be, with the situation in Côte d'Ivoire and Ghana better understood than elsewhere. There, cocoa

production has long required the labor of the extended family, children, and neighbors, with a new shift to precarious labor sources due to ecological and financial crises (Berlan 2013; Busquet et al. 2021). Abuses are not uncommon, especially as labor dynamics have shifted to involve migration, gendered landlessness, and peri-urban sprawl. The informality of labor vis-à-vis no written contracts, lack of wages, and precarity also impacts the sustainability of the sector. However, this does not mean that abuses do not occur elsewhere, for example, in Nigeria, where labor exploitation is taking place via child trafficking that is yet little studied (Odijie Cocoa Workshop presentation 2025). Simultaneously, West Africa has strong laws that apply to rural agricultural workers, even if many are unaware of these rights and enforcing them is not yet the norm (Dowuona-Hammond et al. 2021).

Moreover, the poor social infrastructure that typifies rural cocoa producing areas in West Africa profoundly impacts possibilities for development of the sector. Roads, means of transportation, water delivery, electricity, medical care, educational facilities, banking options, and more delimit the upward mobility of cocoa producers and the consistent functioning of the businesses that they seek to participate in. While the state apparatuses for cocoa and development projects provide some support, resources are limited and scope of the problem causes saturation in the ability to respond (Arhin Cocoa Workshop presentation 2025).

Finally, the global cocoa economy positions West Africa as a raw material supplier for the global chocolate industry. As development and sustainability projects receive international press, significant greenwashing occurs in the chocolate value chain – deceptive marketing and exaggeration that suggests sustainability without achieving it. Issues like deforestation, child exploitation, and child labor are employed as buzzwords affiliated with sustainability language by large, branded retail manufacturers and trading companies. The losers in these sustainability schemes are cocoa producers, whose best interests are rarely at the top of priority, and the winners are the companies themselves that achieve a veneer of respectability with minimal effort (Odijie 2018). This is also the result of unequal ecological exchange at a much larger scale that cannot be solved simply by setting the "right price" for cocoa.

All is not lost. Intractability is often associated with irresolvable conflict, but the solutions being employed in cocoa demonstrate plurality, pathways, and possibilities, suggesting

that these problems do have viable solutions (Agbiboa Cocoa Workshop presentation 2025). A focus on what is working, study of sites of invention, and investment in shared responsibility will support with finding the best ways forward. Organizations must ask: Where is the presence of success, rather than the absence of it? What were the factors that allowed this success to occur?

The concept of telecoupling likewise supports research in this space by recognizing power dynamics, inequalities, and dependencies. In the case of a situation such as that in Cameroon, a high biodiversity area with established trade to Europe, telecoupling allows a focus on food systems transformation by considering social and ecological solutions to problems, especially through understanding their interconnectedness and how they are perceived by the communities in which they exist (Ingram Cocoa Workshop presentation 2025). Seeking a plural value perspective is essential – recognizing differences in knowledge and opinions, being comfortable with pluralistic views, and imagining multiple pathways to change. This allows conversations to move beyond the near obsession with the market, and to include understanding value chains transcending economics: of leverage points within environmental externalities, sociocultural values, and consumer emotions and experiences. It also opens the possibility for multiple solutions approaches, which inevitably allows for more success.

In sum, in order to imagine the futures of Africa's cocoa industry, we must seek a proper understanding of the present. Research and development must attend carefully to ethics given the precarity of the sector. At every step, producers and workers must gain voice to become political partners with joint access to law, community organization, and education. Cross-regional collaboration will allow for more possibilities of transformation, especially as transparency is increased. Building coalitions of the willing to leverage the collective against the global profit apparatus will best serve as a post-colonial way to improve livelihoods.

Economics

Economic challenges in cocoa exist at both the micro- and macro-levels. For cocoa producers, there tends to be low overall benefit in cocoa production due to the volatility of cocoa price and the structural limitations that are placed on driving value to the farmgate. This

is further complicated by the industry-, civil society-, and media-led overemphasis on poverty and child labor in relation to cocoa rather than structural issues in agriculture more broadly, such as, but not limited to environmental factors (e.g. replanting and fertilization needs) and social factors (e.g. migration, lack of sufficient socioeconomic infrastructure in rural communities) (Baah-Boateng Cocoa Workshop presentation 2025). Too often, the solution to cocoa producers' challenges is proposed as simply a rise in productivity or a rise in the cocoa price, yet recent years have proven that these are not the magic cures to the social and economic ills that they purport to be. Historically, increases in cocoa supply tend to depress cocoa prices on the world market, a cycle that was noticeable as early as the 1920s and 1930s, when farmers produced more to make up for declining prices in cocoa (Hopkins 2020 [1973]). Ndonga Samba Sylla in his Cocoa Workshop keynote (2025) raised the question of whether it is in the interest of West African cocoa producers to produce less cocoa. But government commitment to maximizing cocoa production and cocoa revenue have turned neighboring producers of cocoa in West Africa into competitors instead of collaborators, and the political manipulation of cocoa prices has created the phenomenon of "tourist cocoa" (smuggling), where cocoa moves across national boundaries to markets with attractive producer prices (Savage 2025).

There is a real, non-negligible risk of West African cocoa decline that has impacted the industry for the past several years. As producers adapt to challenges, they should be given a leading role in determining how adaptation will take place, as they are the changemakers. This begs the question: How do we address commodity dependence and climate change within an asymmetric and shifting global financial order? The ARS-1000 Pan-African action for sustainability, were it to build in significant farmer-driven consultation and implementation, could serve as a model for how to build in producer-centric solutions to some of the most pertinent sustainability issues (Agyarko-Kwarteng Cocoa Workshop presentation 2025).

Debate exists within Africa between Côte d'Ivoire and Ghana, with their parastatal cocoa organizations, versus Nigeria and Cameroon (and others) where a free-market model reigns. So, too, exist debates around the best path to increase farmer income – should it involve cocoa intensification, crop diversification, an increase in the global cocoa price? And most actors,

except of course those who would find their profits reduced as a result, agree that the oligopoly of cocoa trade must be abolished to allow for more flexibility and competition in the industry (Adams and Carodenuto 2023). To find answers to major research questions, a renewed focus on the micro/farmer level with a political ecology lens, can support in revealing narratives and shared experiences that are missed in macro levels.

The extractive nature of commodity production is also a major factor in how the industry is shaped. Loan syndication is highly inefficient and costly. While Ghana's Cocobod has explored a new model of loans this year, it remains a profoundly difficult situation given the valuation of the cedi to the dollar. Could there be a Pan-African selling policy (e.g. Kwame Nkrumah's call to "pool" cash crops and "extract better prices")? Do countries export for "good" reasons or just to get foreign finance? A harmonization of marketing policies for cocoa across Africa could certainly provide support for collective financing models and pricing (Sylla Cocoa Workshop presentation 2025). But for such an approach to be possible, African producer countries must see themselves as more than producers of raw beans. Locked in a role as raw commodity producers makes it incumbent on them to sell their beans to western markets. Then producers become competitors in their bid to sell the raw beans, to the benefit of buyers (processors, chocolate companies, etc.). A regional or Pan-African cocoa selling policy requires multiple outlets for Africa's cocoa in terms of markets and end products. The use of cocoa is certainly not limited to confectionery only.

Increased effort is needed to explore important proposals for change: e.g., a "land bank" proposal; tried and true methods to provide stability and profitability to producers; the building of a Pan-African Payment System (Kaulihowa 2022); the support for good microfinancial systems at a local level; and systems of solidarity and anti-imperialism that are resistant to disruption from outside actors. Still missing in the research is a diverse collective pool of ideas and data to support the redesign of economic systems and mechanisms; a summary of the different micro- and macro-economic strategies needed; and the possibilities of the specialty market in cocoa and chocolate, from which Africa has been systematically excluded over the past two decades (Martin and Lopez Ganem forthcoming).

Climate Change

Climate change is affecting Africa in four fundamental areas: sea-level rise with implications for flooding and erosion; rain-fed agriculture (applies to 96 percent of agriculture in Africa); rural-urban migration; and urban informal settlements. Cocoa yields in West Africa have been unpredictable in recent years with a shortfall of about 40 percent in cocoa production. Factors proposed for this decline include adverse weather, pests, and disease. A *Financial Times* story on March 26, 2024, pointed to weather and plant disease as the two main culprits behind the low yields in the 2022-23 cocoa season and the 2023-24 season (Savage 2024).

Sufficient and timely rainfall is crucial to a good cocoa harvest. It determines the flowering of cocoa trees and the development of pods. The major rainy season in Ghana and Côte d'Ivoire from March through May shapes the main harvest between October and January, and the lesser rainy season in August through October sets the stage for the minor cocoa crop. Heavy rains are also associated with diseases like black pod, when cocoa pods turn black and become inedible. Heavy rains in recent years have been associated with low yields. Above average rainfall in Côte d'Ivoire and Ghana in 2023 caused widespread black pod fungal disease and the abortion of flowers, leading to significantly lower output in both countries (Abubakar 2024). CSSV remains a devastating disease in West Africa caused by mealy or curry bugs. Other pests that feed on cocoa include the mirid bug, also known as capsid.

Cocoa being predominantly a smallholder crop, most producers have limited financial resources to afford expensive pesticides, and other biotechnological interventions. This makes higher farmgate prices important as an incentive for cocoa producers to invest in good cultural management practices. Research has established that good farm practices such as regular tree pruning, weed management, frequent pod harvest, regular removal of infested pods aid in the management of pests and diseases, but these are labor intensive (Armengot et al. 2016). Government institutions such as Cocobod and Conseil du Café-Cacao (CCC) may be better placed to organize mass spraying of cocoa farms and to supply fertilizers. These institutions are also better positioned to conduct research on agroforestry practices and advise producers on the combination of cocoa with palm, fruit, and timber trees that produce beneficial results.

Agroforestry not only provides shade trees, but creates certain microclimate conditions – reduced light, wind speeds, relative humidity, temperature – that require investigation in terms of its impact on the incidence of pests and diseases in cocoa trees. Organic cocoa accounts for only about 3.4 percent of global cocoa production. Recent research points to how organic farming can promote pest control (Armengot et al. 2020). Yet cocoa producers need improved assistance concerning interlinked issues like pests and diseases.

Expatriate companies like Veriground, part of Commodities Risk Analysis (CRA), have invested in weather research in cocoa producing countries in West Africa. Forthcoming work by Anna Lea Albright, Rebecca Berkoh-Oforiwaa, and Peter Huybers points to heavy rainfall and drought as primary causes of the recent cocoa production declines and "highlight the utility of improving seasonal-to-decadal forecasts of such rainfall extremes" (Albright et al. forthcoming). Weather data allows the surveillance of pests and diseases, as well as a targeted application of pesticides and fertilizers (Abubakar 2024). The need for precise weather data cannot be over-emphasized and must factor into policy planning and decisions in cocoa-growing countries. Investing in weather intelligence and making these accessible to cocoa producers will be integral to a sustainable cocoa future, informing the precise application of fertilizer and pesticides, together with good cultural management practices. These efforts, buoyed by higher farmgate prices, would translate into higher yields per hectare and alter the dynamics of extensification, whereby cocoa expansion has historically been based on the penetration of new forest land. This resort or strategy has been made more tenuous by the EUDR, which is (for now) scheduled to take effect from December 31, 2025 (Adamolekun 2025).

The human element of climate change remains paramount in any attempted response. Too often, what is missing in the research is the producer perspective on climate adaptation, health, and more. This negatively impacts policy success, as much policy is predicated on assumed needs of producers versus co-designed, negotiated information about the actual lived realities of producers. Further research on producer knowledge and cultural context in relation to climate change, deforestation, and adoption of amelioration tactics will prove essential, as will coordination between researchers and stakeholders around results and subsequent actions.

The Futures of Africa's Cocoa Industry

New Production Models

For years, actors have asked: How do we move away from the extractive model of cocoa commodity production? How do we develop value in and drive profits toward the countries from which cocoa comes? What are the possibilities for new production models? In recent years, several unique solutions have arisen, ranging from local chocolate production to nutraceuticals and derivative products. Insights from these innovations come at both the practical (business) and theoretical (research) levels.

When it comes to local production of chocolate and its companion products (e.g. cocoa butter, cocoa powder, chocolate liquor), distance between farm and factory is a critical factor in profitability. Most of the challenges specific to chocolate production in the tropics (heat, humidity, electricity, transportation) can be superseded with careful planning; advances in storage and retail continue to make this more feasible. At the same time, increasing local consumption remains an area of exciting potential: initiatives such as those of Niche Cocoa via confectionery and school nutrition programs that introduce both traditional and new products play a role in making this possible (Poku Cocoa Workshop presentation 2025).

The goal to capture profit share locally remains elusive in some cases, for example tax havens for international businesses that do not benefit local supply chain stakeholders. In addition, factories do not provide large numbers of jobs that significantly reduce local unemployment. That said, local chocolate businesses can address the importance of local taste, as well as increase national and Pan-African pride in continental cocoa production and chocolate creation. They lend themselves well to the experience economy, ecotourism, and more (Arkaah, Burie, and Kouamé Cocoa Workshop presentations 2025; Egbedi 2018).

Nutraceuticals and derivative products remain largely underexplored areas of likely growth in African cocoa. Whether touting the benefits of theobromine, polyphenols, or vitamin and mineral content in cocoa, the marketing possibility of cocoa as a superfood is high (Grassi et al. 2016). Derivatives such as theobromine for medical applications are also areas for exploration. On the farm, repurposing of cocoa pulp, cocoa pod husks, and fallen cocoa leaves also has taken up popularity (Bastidas et al. 2022; Mendoza-Meneses et al. 2021).

Nonetheless, further research is needed to provide accurate statistics on local grinding, processing, and consumption. While the number of companies making chocolate in Africa has grown significantly, most of these businesses are small and under-resourced. They are competing with the oligopoly of the cocoa market trader-processors owned by non-Africans, and they do not have significant international presence, either of single origin African cocoa or African-produced chocolate. For these businesses to meet their claims, they will need to match their traceabililty value propositions with actual impact on the lives of cocoa producers. They will likewise need to address poverty beyond transactional relationships with producers by supporting improved livelihoods in local communities. These goals will best be served by investing in local upskilling, rebranding and reeducation for local consumers, and strategic support for how to succeed in a system typified by a business oligopoly.

Pan-African Collaboration

Cocoa cultivation continues to extend into new regions of Africa, expanding the possibilities for and urgency of Pan-African collaboration to protect African interests. In Central and East Africa countries not traditionally associated with cocoa like Tanzania and Uganda are now growing in popularity as producing origins. West African countries like Liberia and Sierra Leone are likewise emerging as notable cocoa producers. Cocoa plot renovation or new exploration is taking place in Angola, Equatorial Guinea, Kenya, Malawi, Rwanda, São Tomé and Príncipe, and even South Africa. Madagascar, while a relatively small producer, holds great significance on the specialty market as a source of specialty cocoa. Growth of cocoa production in Asia, a region long touted as an alternative to Africa, continues to make headlines (Spencer-Jolliffe 2025). This is bittersweet news – wonderful for cocoa processors and chocolate companies as the multiplication of sources of cocoa supply vitiates the hold of major producers like Côte d'Ivoire and Ghana – and fraught for those countries who have long been positioned as top producers. This follows a historic cycle of boom and bust from the nineteenth century when the demand of tropical products like palm oil and kernels and rubber from West Africa quickly spread to Central Africa and Asia resulting in excess supply and declining prices.

The new Côte d'Ivoire-Ghana Cocoa Initiative is astute in presenting the initiative as a nucleus for other African countries to join. Mature cocoa-producing countries like Ghana and

Côte d'Ivoire should be able to share invaluable information about cocoa production with relatively new entrants. A research institution like the Cocoa Research Institute of Ghana (CRIG), which has evolved from the West African Cocoa Research Institute (WACRI), has an invaluable role to play. With Africa producing 75 percent or more of the world's cocoa, Africans must necessarily be at the forefront of cocoa scientific research. Governments must be willing to invest in scientific research, and research and development into new cocoa products, particularly nutraceuticals. Africa will continue to produce cocoa beans for export to a global market. But it is important that Africa become known for much more than being a bean producer. Initiatives like the Africa Cocoa Initiative (AFRICOIN) at the African Export Import Bank have recognized this through its support of African private sector processing capacity of cocoa (Bell 2014).

The LID policy aims to mitigate poverty among cocoa producers in Côte d'Ivoire and Ghana by charging higher prices for cocoa. Yet its implementation has been limited by the behavior of downstream actors and their willingness or not to pay the higher prices. It also has potential negative effects on government revenue and on non-LID country producers, leaving much yet to be desired (Adams and Carodenuto 2023). Ongoing conversation with neighboring countries Nigeria and Cameroon might have the desired effect of strengthening the cartel-like structure of the LID (Agyarko-Kwarteng Cocoa Workshop presentation 2025), though it will depend on the ability to supersede perceived differences between the cocoa market in each space.

Similarly, the ARS-1000 Pan-African action for sustainability was designed by African nations to professionalize the cocoa sector through promoting best practices in farm management systems, cocoa quality, traceability and certification. It stands alongside existing voluntary sustainability standards such as Fairtrade or organic certification. One of its goals is to support cocoa producers in retaining access to European markets through supporting due diligence data collection and reporting (World Cocoa Foundation 2024). Currently being rolled out in Côte d'Ivoire and Ghana, its adoption among other countries will also likely play a role in its longevity and success.

Another crucial area for Pan-African systems thinking is in the area of financing models, to address commodity dependence and climate change within an asymmetric and shifting global financial order (Sylla Cocoa Workshop presentation 2025). Through the development of an international clearing union, an idea advocated by Keynes and other economists at the time of the creation of Bretton Woods system, African nations could move away from the current binary debtor/creditor model that traps them in the unequal global financial order and seek climate financing outside of the usual dominant international currency of the U.S. dollar (International Monetary Fund 1996 [1942]).

Broader South-South collaboration, for example between countries like Ecuador and Ghana, which do not currently engage in significant knowledge exchange due to the industry's positioning of them as competitors, also has the possibility to allow for more coordinated action in service of cocoa producers and producing countries. The two countries are roughly equivalent in land size and growing capacity, though per-hectare yields in Ecuador routinely exceed those of Ghana. Challenges such as plant disease, aging farmer populations, high involvement of intermediaries, and excessive dependence on multinational corporations and the export market are found in each country. While Ecuador's indigenous communities have thousands of years of relationship to cacao, the country's internal chocolate consumption remains one of the lowest among cocoa producers in the world, and its 0.26 kg per capita is only one-quarter of Ghana's 1 kg per capita (and growing) (International Cocoa Organization 2025). Both countries have made major investments in agroforestry and crop diversification in cocoa, and their strong producer associations, local chocolate processors, public institutions and universities, exporter associations, banks, and technology service providers urgently need coordination as shared stakeholders in the sector.

Whether in a Pan-African or South-South collaborative context, there is the possibility for cocoa producing nations to work together on issues such as: cocoa quality maintenance; coordination on price, logistics, and security; sustainability certifications; traceability and transparency; access to new markets; and local processing and consumption of derivative and finished products. Those who wish to prioritize the temporary power and wealth of the few,\

can move quickly and alone. However, for those who wish to build sustainable wellbeing and wealth for all, they must work together.

Education and Information Science

The significance of education and information science to effective, transparent communication throughout the cocoa-chocolate value chain cannot be understated as an area of impact for the futures of Africa's cocoa industry (e.g. Martin and López Ganem forthcoming). Africa's learners, whether they are aging cocoa farmers or young urban dwellers, stand to benefit tremendously from further investment in serious local capacity building and skills development. An increasingly large body of literature interrogates the impact (or lack thereof) of cocoa producer training and youth engagement in the West African context, as well as the impact on producer health and wellbeing (Donkor et al. 2023; Guest et al. 2023; Umeh et al. 2022). Trust, comfort in knowledge level, access to quality information, and ability and willingness to adopt beneficial practices remain pivotal elements of producer outcomes and industry sustainability.

As much as possible, upskilling and training should be taken out of the hands of the consultancy class and biased for-profit actors and placed in the care of the capable educators of Côte d'Ivoire and Ghana themselves. The strong universities, technical institutes, and parastatal organizations in each country contain the right elements to oversee such training, rather than submitting to the whims, trends, limited-term projects, and top-down models that have long characterized many externally imposed programs.

Furthermore, the entrenched relationship between the consulting industry and the chocolate business, civil society, and government entities to which consultancy firms charge high (mostly European- and North American-based) fees requires redress. Too many entities and projects rely on outsourcing basic functionality, advisory practice, decision-making, and legitimation to extensive contracts and networks of large consultancy firms and individual consulting actors. Consultancy-based actions often keep vital information hidden from public view, refer actors exclusively within profit-based relationship networks, and rely on shallow metrics that project success rather than critically informed analyses of impact (Mazzucato and

Collington 2023). This serves to weaken the social, economic, and environmental improvement goals that undergird sustainability initiatives spearheaded by businesses, civil society organizations, and governments, as rarely are consultants required to provide evidence of feasibility and progress in the medium- to long-term, with often middling and sometimes disastrous consequences for the subjects of their work (Anaf and Baum 2024).

The development of intra-African ombudsman-style networks for collaboration and repositories of information that are vetted and compared have the potential to change these dynamics for the betterment of the sector and, especially, attention to cocoa producer needs and consumer wants. Rather than being required to navigate the siloed, purposefully opaque networks that characterize the industry today, a different vision for the future is possible. To quote our Cocoa Workshop keynote speaker, Ndongo Samba Sylla, "One thing seems clear however: only the building of a global coalition of the willing based on solidarity and anti-imperialism can allow us all to both gradually overcome the colonial and imperial legacies that created the North/South divide and make the leap forward towards a better human civilization."

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