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ROOTED IN THE GROUND: REFORMING GHANA'S FOREST LAWS TO INCENTIVIZE COCOA-BASED AGROFORESTRY

SUMMARY FOR POLICY MAKERS

INTEGRATED LAND AND RESOURCE GOVERNANCE TASK ORDER UNDER
THE STRENGTHENING TENURE AND RESOURCE RIGHTS II (STARR II) IDIQ

Contract Number: 7200AA18D00003/7200AA18F00015
COR: Sarah Lowery
USAID Office of Land and Urban
Contractor Name: Tetra Tech
Author(s): Robert O'Sullivan, Julie Fischer, Yaw Antwi, and Mark Freudenberger

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Tetra Tech Contact(s): Megan Huth, Project Manager
159 Bank Street, Suite 300
Burlington, VT 05402
Tel: (802) 495-0282
Fax: (802) 658-4247
Email: megan.huth@tetratech.com

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Submission Date: 13 August 2020 (revised version submitted 16 February 2021)
Submitted by: Melissa Hall, Deputy Chief of Party
Tetra Tech
159 Bank Street, Burlington VT 05401, USA
Tel: (802) 495-0282
Fax: (802) 658-4247

Contract Number: 7200AA18D00003/7200AA18F00015
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LIST OF ACRONYMS

BAAC	Bank for Agriculture and Agricultural Cooperatives
Cocobod	Ghana Cocoa Board
CREMA	Community Resource Management Area
ECOM	Ecom Agroindustrial Corp.
FLEGT	Forest Law Enforcement, Governance and Trade
FMNR	Farmer-Managed Natural Regeneration
HFZ	High Forest Zone
ILRG	Integrated Land and Resource Governance
MLNR	Ministry of Lands and Natural Resources
PES	Payment for Ecosystem Services
STARR II	Strengthening Tenure and Resource Rights II
USAID	United States Agency for International Development
VPA	Voluntary Partnership Agreement
WCF	World Cocoa Foundation

EXECUTIVE SUMMARY

The government of Ghana claims state ownership of all “naturally occurring” trees, including on land privately held under customary title. The lack of tree tenure and inability to capture economic benefits from trees is a major driver of tree loss and disincentivizes cocoa agroforestry. This brief analyzes tree tenure law and policy in Ghana, including the proposed tree registration policy and justifications for state ownership of naturally occurring trees based in the 1992 Constitution. The authors propose an alternative interpretation of the 1992 Constitution based on customary law and usage that allows devolution of all tree rights to customary landowners without a constitutional amendment and removes the need for a tree registry. Evidence from devolution of tree tenure in the Sahel and China shows that devolution can lead to increased tree cover. Based on this analysis a series of recommendations on tree tenure reform are posed for government, the cocoa sector, donors, and civil society.

COCOA AND FORESTS

Ghana is the world’s second largest cocoa producer, and cocoa plays a critically important role in the economy with an estimated 30 percent of Ghana’s population dependent on cocoa for part or all their livelihoods. However, the cocoa sector is in trouble and smallholder cocoa production does not provide a reliable livelihood or ensure a healthy and sustainable ecosystem.

Traditional cocoa farms retained large shade trees which preserved many economically and environmentally important trees within the landscape. In the late 1950s the government inserted itself into the timber market and claimed rights to naturally occurring trees on cocoa farms. This led to increased timber harvesting from cocoa farms that was exacerbated in the 1980s when Ghana’s cocoa marketing board changed its policy and advocated removing shade trees and switching to more sun tolerant cocoa varieties to increase productivity. The new cocoa board policy produced short-term yield gains, but also increased susceptibility to diseases and shortened cocoa trees’ productive life. The combined pressures from forestry and cocoa led to deforestation and fragmentation of forest landscape in

Integrated Land and Resource Governance (ILRG)

The report *Rooted in the ground: Reforming Ghana’s forest laws to incentivize cocoa-based agroforestry* was prepared as part of the ILRG task order’s Supporting Deforestation-Free Cocoa in Ghana activity. The purpose of the activity is to design and then scale up a financially viable smallholder farmer rehabilitation and tenure strengthening model for the Ghana cocoa sector. This is combined with land use planning activities that aim to reduce deforestation and greenhouse gas emissions, increase carbon sequestration and cocoa farm productivity and resilience, diversify farmer incomes, and improve livelihoods.

Ghana’s high forest zone and widespread removal of shade trees from farms. An average of 138,000 hectares of forest was lost per year from 2000 to 2015 and in 2007 it was estimated that 72 percent of cocoa farms across Ghana had “no to light” levels of shade.

The government of Ghana and cocoa industry actors acknowledge the vital role of improved cocoa production systems to mitigate and adapt to climate change, maintain biodiversity, conserve and enhance ecosystem services, and improve the livelihoods of cocoa farmers and their families. They recognize that increasing the diversity of shade tree species in Ghana’s cocoa-growing landscape is critical to improve the health and sustainability of cocoa production and diversify income and resilience for cocoa households.

TREE TENURE: A KEY CHALLENGE TO RESTORING COCOA FOREST LANDSCAPE

A leading challenge to planting more shade trees is government ownership and control of all naturally occurring timber trees – even on privately held land. State ownership of naturally occurring trees is widely considered a strong disincentive for landowners and smallholders, regardless of land tenure, to nurture trees on their cocoa farms. In part this is because the benefits of harvesting naturally occurring trees are shared between loggers, traditional authorities, and the government, while landowners are excluded. Numerous government policy documents over the last decade have advocated for vesting title to naturally occurring trees with communities and farmers that cultivate and tend these trees.

TREE REGISTRATION IS NOT EFFECTIVE TREE TENURE REFORM

The current tree tenure reform efforts are focused on establishing a national tree registry where farmers can register title to trees on their land. Early tree registration policy allowed farmers to register planted trees as proof of ownership but maintained state ownership of naturally occurring trees. More recent policy allows farmers to register both planted and naturally occurring trees and separates rights to trees from rights to the land. This proposed separation of rights to land and trees changes customary tenure norms and creates the potential for conflict on many cocoa farms if tree tenure rights are used to claim *de facto* land rights beyond customary practices.

There are other problems with the proposed tree registration policy. If a farmer fails to register a planted tree, the default determination is that the planted tree is naturally occurring and owned by the state. It is also unrealistic and unsustainable to successfully establish and maintain a national tree registry. Tree registration is estimated to cost from US\$27 - US\$40 per farm, which scales to a cost of between US\$47.5 million and US\$86.4 million to register all the trees on Ghana's cocoa farms. This does not include the Forestry Commission's costs to process 1.7 million to 2.1 million individual records from cocoa farmers, the costs of tree registration in other parts of Ghana, or the costs to maintain the registry over time. Costs to maintain the registry especially for inter-generational succession would far outweigh the costs of initial first-generation registration.

THE 1992 CONSTITUTION: A BARRIER TO REFORM?

Government-sponsored policy reforms that argue cocoa farmers should have rights over all trees growing on their farms are a significant and positive step in the right direction. However, these calls for reform are accompanied by arguments that the current law is based on the 1992 Constitution, and that any law reform requires constitutional amendments. There are two key issues under the 1992 Constitution: i) how natural resources and rights to naturally occurring trees are interpreted, and ii) how revenue from these resources is allocated.

INTERPRETATION OF THE 1992 CONSTITUTION THAT PROTECTS VESTED INTERESTS

The government claims that naturally occurring trees on cocoa farms are a natural resource, and ownership of these trees is not separated from ownership of the land. However, stool lands are vested in the stool who own them “on trust” for the stool subjects, with government involved in regulation and management. While customary rights to stool land can be passed down to farmers, the stool and state have retained rights to natural resources to exercise their fiduciary responsibilities as trustee. As naturally occurring trees are part of the stool's resources, the stool and government divide up the proceeds from timber revenue according to the constitutionally mandated split. This poses a major challenge as farmers are excluded from the revenue. Planted trees, on the other hand, are treated the same as crops, which can be owned separately from the land. Farmers possess all ownership, management, and use rights to crops and planted trees – and the subsequent benefits.

ALTERNATIVE INTERPRETATION THAT SUPPORTS DEVOLUTION

The authors analyzed the 1992 Constitution, customary tenure practices in the cocoa-growing regions, and literature on tree tenure in Ghana and propose an alternative interpretation with two parts:

- First, the main customary land rights of usufruct, *asidee*, and *abunu* that support rural farmland holdings are created by clearing the natural resource of the primary forest. As a result, there is no remaining natural resource associated with usufruct, *asidee*, or *abunu* farmland.
- Second, all trees that are currently considered “naturally occurring” (and therefore argued to be a natural resource owned by the government and the stool) should more correctly be understood as farmed trees. As a result, they should be treated the same as planted trees and therefore owned by the landowner.

This alternative interpretation eliminates the distinction between naturally occurring and planted trees on customary land, with all rights to all trees derived from these family or individual rights to the land. This view suggests that policy makers could avoid the need to register trees, which would allow tree tenure policy reform to move ahead without a constitutional amendment. This proposed interpretation of the 1992 Constitution and recognition of farmers’ rights to all trees on their land should incentivize farmers to cultivate more timber and shade trees on their lands as they would be the legal and beneficial owners of these trees.

LESSONS FROM OTHER COUNTRIES

It can be difficult to establish a cause and effect relationship between tenure systems and sustainable forest systems. Evidence of how tenure security can change farmers’ tree planting behavior exists in other countries and can help inform policy reform in Ghana. The most instructive cases for Ghana on devolution of rights are the innovative and impactful policy reforms that have been implemented in Sahelian West Africa and northern China. In both examples the devolution of rights to individuals led to increased forest cover. China’s experience had a further key lesson: devolution of rights on its own may not be sufficient to incentivize tree planting. Devolution must be coupled with landowner access to markets and benefits. Ghana can also look to neighboring Côte d’Ivoire, which has gone through rounds of forest law reform in 2014 and 2019 that has resulted in provisions to explicitly state that natural or planted trees belong to the landowner. However, uncertainty and conflicts over underlying land tenure in Côte d’Ivoire highlight the need to look at both the land and tree governance framework together, along with the needs and motivations of end users and other stakeholders.

Other countries have experimented with tree registration systems with contrasting results. In Thailand, a government bank invested US\$1 billion as part of a corporate responsibility initiative to establish a tree bank to help farmers access loans and income, and through this program successfully registered over 11 million trees. The Philippines shares more similarities to Ghana; a registry was established to differentiate ownership of naturally occurring and planted trees, though this has not been successful.

RECOMMENDATIONS

The government of Ghana and USAID recognize that strengthening land and tree rights is critical for Ghana to achieve its development goals both within the cocoa sector and more broadly. However, forest resources in Ghana represent an important source of revenue for the government, so bold reforms that limit or remove the state’s control have met strong resistance from the Forestry Commission and customary powerholders, including the stool and chiefs. As a result, years, even decades, of tweaking and modifying the legal and policy frameworks have been largely ineffective as the

focus has been on enforcing and adjusting an inherently unenforceable and unfair legislative framework rather than tackling core issues.

Bold reform to devolve tree tenure to customary landowners without any need to register each individual tree is needed. To help achieve this aim, a series of recommendations is spelled out below.

RECOMMENDATIONS FOR THE GOVERNMENT OF GHANA

1. Enact law reform to devolve all tree rights to landowners. The law should be clear that all rights to all trees flows with rights to the land and this applies to customary rights holders. Rights to emission reductions can be separated from tree tenure and should not prevent devolution.
2. Implement and enforce existing permit regimes to generate revenue for the Forestry Commission. Active enforcement would go far to replace lost revenue from the devolution of tree tenure.
3. Establish a fit-for-purpose rural land registry to secure customarily held land rights. This should replace the proposed tree registration system.
4. Engage in public consultation and outreach during and after the reform process.

RECOMMENDATIONS FOR THE COCOA SECTOR

1. Re-direct funds away from tree registration pilots to focus on other priorities.
2. Expand tree planting programs. This could be coupled with other policy innovations such as a payment for ecosystem services scheme or a tree bank like in Thailand.
3. Support customary land rights registration.
4. Work with industry associations to support tree tenure reform, including outreach to cocoa farmers.

RECOMMENDATIONS FOR DONORS

1. Develop a unified response to Ghana's tree registration policy to ensure donor support is aligned.
2. Help Ghana finalize the necessary legal and policy reforms to devolve tree tenure, including how devolution can comply with the sale of emission reductions to the Forest Carbon Partnership Facility. This may include supporting some of the communication and outreach needed to inform the public of policy changes around tree ownership.
3. Support additional research on devolution of tree tenure. For example, ILRG plans to carry out further analysis to help identify new sources of Forestry Commission revenue emanating from the proposed reforms.
4. Support registration of customary land rights, including through use of cost-effective mapping technologies and digital databases.
5. Support public communication and outreach on tree tenure.

RECOMMENDATIONS FOR CIVIL SOCIETY

1. Conduct outreach and engagement with all stakeholders to help push for reform.
2. Support tree planting programs, particularly once reform has been enacted.

1.0 INTRODUCTION

The vast majority of smallholder cocoa farmers in Ghana's cocoa belt do not have their land rights documented and lack secure rights to the shade trees they nurture on farm and fallow land. The lack of tree tenure and consequently the inability to capture many economic benefits from timber and other trees has been identified as a major driver of tree loss and disincentive for cocoa farmers to practice cocoa-based agroforestry (Kroeger et al., 2017b). The government of Ghana and the United States Agency for International Development (USAID) recognize that strengthening land and tree rights is critical for Ghana to achieve its development goals both within the cocoa sector and more broadly. These include goals to manage biodiversity and natural resources sustainably, reduce greenhouse gas emissions from the cocoa landscape via the National REDD+¹ Strategy and the Ghana Cocoa Forest REDD+ Programme, realize inclusive economic growth, and empower women and other vulnerable populations (Republic of Ghana-MLNR, 2012; USAID, 2012; Republic of Ghana-MLNR, 2016a; USAID & World Cocoa Foundation, 2015).

This report was prepared as part of the ILRG task order's Supporting Deforestation-Free Cocoa in Ghana activity. The two-year ILRG initiative in Ghana is implemented by an international consortium that includes Tetra Tech as prime contractor and Winrock International and Meridia as subcontractors, and an innovative public-private partnership with the Hershey Company and Ecom Agroindustrial Corp. (ECOM) to contribute to Ghana's journey toward self-reliance. The purpose of the initiative is to design and then scale up a financially viable smallholder farmer rehabilitation and tenure strengthening model for the Ghana cocoa sector. This is combined with land use planning activities that aim to reduce deforestation and greenhouse gas emissions, increase carbon sequestration and cocoa farm productivity and resilience, diversify farmer incomes, and improve livelihoods.

Box 1: Integrated Land and Resource Governance (ILRG)

The ILRG task order under the Strengthening Tenure and Resource Rights II (STARR II) Indefinite Delivery/Indefinite Quantity (IDIQ) contract provides support to the United States Agency for International Development's (USAID) Land and Resource Governance Division. ILRG develops and implements targeted interventions to improve land and resource governance, strengthen property rights, and build resilient livelihoods as the foundation for stability, resilience, and strong economic growth.

1.1 OBJECTIVE

This report examines the complex challenge of deforestation around smallholder cocoa farming and investigates how Ghana's forest management and tree tenure policies and laws may affect sustainable cocoa farming practices.

The report considers the effects of customary norms, national forest and climate change policies and laws, international agendas, and private sector actors on Ghana's evolving approach to regulate and manage tree tenure in off-reserve areas. The report concludes by identifying policy recommendations and practical actions to clarify and legalize Ghana's proposed forest reforms to devolve, document, and manage off-reserve tree rights as a way to re-incentivize farmers to practice shade cocoa agroforestry.

¹ REDD+ stands for a country's efforts to reduce emissions from deforestation and forest degradation, and foster forest conservation, sustainable management of forests, and enhancement of forest carbon stocks.

2.0 CONTEXT

2.1 DEFORESTATION HISTORY

Ghana is the world's second largest cocoa producer (FAO STAT, n.d; Fountain & Hütz-Adams, 2018), and cocoa plays a critically important role in the country's local and national economy. Cocoa is part of Ghana's culture, particularly in rural areas where cocoa farming is estimated to employ over 2 million people directly, with around 6.3 million (or 26 percent of Ghana's total population) dependent on the sector (Ghana Cocoa Board, 2018; Peprah, 2015). However, this important segment of Ghana's economy has a bitter history. The cocoa sector has seen several boom and bust cycles in Ghana with increases in cocoa production being a major driver of deforestation. From the standpoint of the smallholder, as long as there was forested land to access, it was more attractive and profitable to cut down forest for new farms rather than replant aging or diseased cocoa farms (Ruf & Schroth, 2004). Traditional cocoa farms retained large shade trees both as a labor-saving technique and to create shade for the cocoa. This practice preserved a large number of economically and environmentally important trees within the landscape even as cocoa farming went through early boom and bust cycles. However, a wide variety of disincentives subsequently led to widespread degradation and destruction of both farm and fallow land, nearly eliminating the complex cocoa agroforestry system.

Agroforestry practices started to erode in the late 1950s when Ghana obtained independence. The government inserted itself into the growing timber market and claimed rights to naturally occurring trees on cocoa farms. The combination of expanding cocoa production and timber extraction pressures produced notable feedback loops. As cocoa cultivation expanded there was greater need for roads and railways to transport cocoa harvests. As timber harvests increased in the early 1960s, the cocoa frontier also expanded westward along logging roads into the moist evergreen forests of the Western and Central Regions. This led to increased timber harvesting from cocoa farms through the 1970s and 1980s that was exacerbated by a change in policy by Ghana's cocoa marketing board (Cocobod). In the 1980s Cocobod advocated removing shade trees to increase productivity (Roth et al., 2017). This created further pressures to remove shade trees and in 2007 it was estimated that 72 percent of cocoa farms across Ghana had "no to light" levels of shade (Kolavalli & Vigneri, 2011). This loss of trees was accelerated by the expansion of gold mining in many areas of Ghana.



Legal gold mine near Asankrangwa, Ghana
ROBERT O'SULLIVAN

These factors continue to contribute to the growing deforestation and fragmentation of forest landscape in Ghana's high forest zone (HFZ), with an average of 138,000 hectares of forest lost each year from 2000 to 2015 (Republic of Ghana, 2014; Republic of Ghana, 2017). Deforestation and forest degradation also drive biodiversity loss and degradation of ecosystem goods and services, including loss of soil nutrients and natural protection against a variety of pests and diseases that attack the cocoa trees.

2.2 CURRENT SITUATION, SOLUTIONS, AND CHALLENGES

Cocoa has been credited with helping poverty alleviation in Ghana in the past (World Bank, 2007; Vigneri & Kolavalli, 2018), but this is no longer the case. The smallholder cocoa production system in

Ghana no longer provides a reliable livelihood for many cocoa farmers and does not ensure ecosystem health and sustainability. Cocoa productivity in Ghana has been stagnant in recent years with yields around 300 – 400 kilograms (kg)/ha. This is about 56 percent lower than the average yields in Côte d'Ivoire (800 kg/ha) and 79 percent lower than the average yields in Malaysia (1,700 kg/ha). The low yields in Ghana are due to a combination of age, poor maintenance, pests and disease, low soil fertility, poor shade, and inadequate inputs (Roth et al., 2017; Enriquez et al., 2020). Climate change is expected to create further challenges. Drought and rising temperatures will negatively affect cocoa suitability and more than half of current cocoa production (470,000 tons per year) is projected to require systemic adaptation. Many of the adaptation measures are “no regrets” options that will help increase productivity under current climate conditions, such as better pest and disease control, use of drought tolerant cocoa varieties, and promotion of optional shade. Without systematic adaptation, the estimated mean cost of climate change is estimated to be US\$410 million per year by 2050 (equivalent to one percent of GDP at 2010 base year prices) (Bunn et al, 2018).

The government of Ghana and cocoa industry actors acknowledge the vital role of improved cocoa production systems to mitigate and adapt to climate change, maintain biodiversity, conserve and enhance ecosystem services, and improve the livelihoods of cocoa farmers and their families (Asare et al., 2014; Asare et al., 2019; Hirons et al., 2018). Confronted with dwindling productivity and loss of ecosystem services in Ghana's cocoa production areas, effective and sustainable solutions need to be identified and implemented. The government of Ghana has more recently promoted plans to plant millions of trees on cocoa farms under a wide array of initiatives supported by donors and the cocoa industry. The government and private sector cocoa commodity buyers have also made commitments to reduce and eliminate deforestation from the cocoa supply chain through the rehabilitation of old cocoa trees and enhancement and expansion of the cocoa agroforestry system. They recognize that increasing the number and quality of trees in Ghana's cocoa-growing landscape is critical to improve the health and sustainability of cocoa production and diversify income options and resilience for cocoa farming households. Other biophysical benefits include improving carbon sequestration and enhancing ecosystem services.

Replanting lost shade trees to shift (back) to cocoa-based agroforestry or climate-smart cocoa production effectively sequesters carbon and is an adaptive strategy to climate change. Diversified shade cocoa farms and multi-strata agroforestry cocoa production systems that contain crops, native forest, and timber and fruit trees are more sustainable and resilient to climate change. They also offer smallholders a range of agronomic, economic, cultural, and ecological benefits, which increase economic resilience and extend well beyond the farm (Asare et al., 2014; Asare et al., 2019; Hirons et al., 2018).

However, shifting to agroforestry faces many challenges. Cocoa farmers lack secure tree tenure and are largely excluded from revenue from the sale of naturally occurring trees on their land, which is cited as one of the most significant disincentives that prevents smallholders from planting, nurturing, and protecting trees on their farms (Richards & Asare, 1999; Treue, 2001; Hansen et al., 2009; Acheampong & Marfo, 2011; Damnyang et al., 2012; Roth et al., 2017; Gaither et al., 2019). Projects aimed at reforestation, afforestation, forest restoration, and reducing deforestation, which are common under international initiatives such as REDD+, also rely on smallholder participation and widespread cooperation by forest-based and farming communities. Without clear and easily verifiable land and tree ownership, the success of such initiatives is doubtful. However, on-farm land and tree tenure rights in the cocoa-growing regions of Ghana are rife with complexities and pluralities of ownership, including overlaps of customary norms and statutory regulations.

To motivate Ghana's cocoa farmers to practice more sustainable farming practices, outstanding tree and land tenure issues and benefit-sharing arrangements must be addressed. This needs to be done coherently and effectively through reform of legislation and policy informed by a new interpretation of constitutional law and lessons from other countries.

3.0 TREE TENURE IN GHANA: FOREST LAW, POLICY, AND MANAGEMENT

The debates around tree tenure law and policy in Ghana have historically focused on the exploitation of timber with little attention to the impact of tree tenure policies on the expansive cocoa-based agroforestry systems that prevail in Ghana's HFZ. Ghana's national REDD+ strategy recognized the importance of tree tenure and the need for policy reform (Republic of Ghana, 2015), but progress has been slow. The current array of land and tree tenure arrangements in Ghana's cocoa production areas, which blends customary norms and statutory law, is complex.

3.1 CUSTOMARY TENURE PRACTICES

Approximately 80 percent of the total land area in Ghana is estimated to be held under customary ownership (Ubink & Quan, 2008; Bugri, 2012), though the basis for this claim is unclear. In the cocoa-growing region, most of the land is held under customary title by farmers with long-term customary tenure rights such as usufruct, *asidee*, and *abunu* (see Box 2, based on Roth et al., 2017; Asamoah & Owusu-Ansah, 2017; Roth et al., 2018). Farmers also have the right to plant any species of trees; planted trees are the property of the land holders. In general, a farmer's right to plant trees under an *abusa* contract is much weaker as the farmer does not have rights or title to the land being farmed – just a share of farm proceeds. As a result, *abusa* farmers may not have the rights to plant trees or own trees they plant.

Elsewhere in Africa, customary landowners have tended to discourage and/or oppose tree planting by land users. This is because tree planting is considered a long-term or permanent claim to the land, which would make it difficult for the allodial titleholders or those with customary freehold to

Box 2: Summary of Customary Land Tenure in Ghana's Cocoa Production System

Under customary practice rights to trees are not separated from land rights. The key land rights affecting the cocoa production system are summarized below in hierarchical order:

Allodial title. The highest form of customary interest in land held commonly by indigene landowning groups. While the Stool formally owns the allodial title, possession and all rights of economic utilization are passed down to clans, families and individuals as usufruct and *asidee*, which in turn can be passed down further as *abunu*.

Usufruct (customary freehold). The usufruct is created through customary rules that entitle every indigene or sub-group of an allodial community the right to work any common forests. Usufruct held lands remain private within the family or clan and may be left fallow for years without loss of usufruct rights. Usufruct rights are perpetual and usufruct rights holders may create customary tenure arrangements with strangers/immigrants on the usufruct land without involvement or interference of the allodial titleholder.

Stranger landowner (asidee). A variation of usufruct that is established when strangers migrate to a community and acquire land directly from the allodial. *Asidee* landowners have perpetual rights. They can sell the land with consent of the allodial at a fee, grant *abunu*, and bequeath the land. *Asidee* is also known as *trama* in some parts of rural Ghana.

"Tenant" farmer (abunu). Land rights are gained through a land agreement whereby a stranger or migrant or (in rare occasions) an indigene acquires land for farming. An *abunu* farmer can bequeath or sell the land and rehabilitate the farm (cut and replant cocoa). This often requires the consent of the landowner, but landlord consent is not universally required across Ghana. So long as the land is maintained as a cocoa farm, *abunu* tenure rights continue in perpetuity. *Abunu* is different to common law tenancy as there is no ongoing rent paid to the landlord but "tenant" farmer is often used as there is no English equivalent.

Caretaker (abusa). Under *abusa* the landowner establishes a farm and a sharecropper or caretaker is hired to maintain the farm. The *abusa* caretaker may be fired on short notice and does not have any rights to the land being farmed.

reclaim the land once the land user has planted trees. This is not the case with long-term customary tenure rights such as *asidee* and *abunu*, which rights-holders can enjoy in perpetuity. In the case of *abunu* the land rights are connected to land being maintained as a cocoa farm so the *abunu* farmer's tenure rights can be perpetual so long as the land is maintained as a cocoa farm. However, in general, the landlord must often give their consent for an *abunu* farmer to cut and replant a cocoa farm when it becomes old or diseased. This is common in many areas, but in some areas the *abunu* farmer does not need landlord approval to cut and replant a cocoa farm, making it more akin to *asidee*. As land resources become scarce, landlords are less inclined to give approval to replant, which disincentivizes farmers from replacing aging or low-yielding cocoa trees.

3.2 STATUTORY LAW AND POLICY

3.2.1 CURRENT LAW AND POLICY

The land and forestry-related laws, acts, and policies in Ghana, along with the customary norms discussed above, drive the way forest resources are managed and exploited. Forest resources represent an important source of income for the government, and the legal and policy frameworks prioritize the rights of the state to manage and profit from forest resources. Ghana's land and forest laws also attempt to reconcile and rationalize the competing land and forest demands of farmers and loggers while recognizing the limited rights of traditional authorities.

Under Ghana's statutory law, the ownership of naturally occurring trees is distinct from that of planted trees and the rights to timber trees² are different from those of non-timber species. The government claims rights to naturally occurring trees and timber species specifically as it considers these a natural resource.³ Smallholder cocoa farmers can freely fell all trees when clearing the forest to farm, but neither landowners nor migrant cocoa farmers have any legal rights to harvest the trees for, or receive revenue from, commercial timber. If a farmer plants a timber tree, they can own the tree which is evidenced by registering the tree.

The distinction between naturally occurring and planted trees is scattered throughout Ghana's legislation, including 1962 Concessions Act, 1974 Trees and Timber Act, 1997 Timber Resources Management Act, and 2002 Plantations Development Fund Act (which amended the Timber Resources Management Act). Recent government analysis and justifications for the distinction between naturally occurring and planted trees, and government ownership of the former, are based on the distinction in a particular interpretation of the 1992 Constitution. The constitutional justification simultaneously throws up legislative hurdles to deeper reform and supports entrenched and vested interests. This prevailing interpretation along with an alternative interpretation is presented at the end of this section.

3.2.2 NATIONAL TREE REGISTRY

The idea of a national tree registration program for planted trees was first promoted by the Forestry Commission in the early 2000s under the government's modified *taungya* system program and gained momentum as non-governmental organizations piloted tree registration. There was renewed interest in tree registration soon after the 2012 Forest and Wildlife Policy was finalized. This was part of a larger effort to combat elite capture of forest market benefits and to help curtail, and even reverse, deforestation and forest degradation by encouraging individual landowners, land users, and communities to nurture and plant trees. The 2012 Forest and Wildlife Policy recognized an individual's right to own

² In this document timber trees refers to a variety of tree species extracted by loggers for commercial purposes.

³ The species considered as timber species has changed over time. After the higher value species were logged out other species that were not previously targeted for commercial timber extraction were claimed.

any tree planted on his or her land, but the government was not prepared to give up its claim over forest resources or the accompanying revenue generated by the timber industry. To maintain control the government retained the distinction between planted and naturally occurring trees and mandated a national tree registrar. In 2016, with the publication of the Tree Tenure and Benefit Sharing Framework, the Forestry Commission revised the tree registration modalities to allow farmers and landowners to also register the naturally occurring trees on their farms and fallow land (Republic of Ghana-MLNR 2016a).

3.2.2.1 ANALYSIS OF TREE REGISTRATION POLICY

There is insufficient evidence of the efficacy of tree registration on the land management practices of cocoa farmers and landowners. This is because tree registration has only been implemented in a few local settings and the registration methods are still evolving and have not been written into law. However, several arguments continue to call implementation of the policy into question.

First, successfully establishing and maintaining a national tree registry for Ghana's entire cocoa production landscape is unrealistic and unsustainable. Unlike land that is fixed in place, trees are planted and felled periodically. Storms may blow over trees. Within days of registering trees, the number and state of trees on any given parcel of land could change drastically, making the functionality and efficacy of such a registry questionable. Registering and maintaining up-to-date records of a constantly changing resource base such as trees renders any monitoring system expensive and complicated, if not impossible. Extrapolating from field work by ILRG and other projects produces estimates of between US\$47.5 million and US\$86.4 million to register all the trees in Ghana's cocoa farms (Box 3).⁴ This does not take into account the Forestry Commission's costs to process 1.7 million to 2.1 million individual records or the costs to establish and maintain the registry over time. It also does not consider the cost of farmers' time to work with someone to map their farm, participate in an audit, or follow up to maintain their registration over time. Ghana does not have the resources to individually catalog millions of trees on tens of thousands of smallholder cocoa farms and fallow land and keep the registry up to date. First-generation registration of trees needs to be followed up by a mechanism to register transfers of ownership rights following succession from one generation to another, sale, or even gifting of trees. Within customary tree tenure arrangements, transfers of rights occur all the time as part of customary practice. Many chocolate companies such as Hershey and ECOM already spend resources on community programs such as income diversification, farm management and rehabilitation, tree nurseries, and prevention of child labor. Passing this cost onto chocolate companies or donors would divert funding from these types of programs and is not a good use of limited resources.

Box 3: ILRG Tree Registration Experience

ILRG tested tree registration in four communities in Asankrangwa. The project prepared registration documents for 3,031 planted and 4,352 naturally occurring trees on 749 parcels owned by 473 farmers. This cost approximately US\$27 per farm. This price was considered a conservative cost, with cost estimates from other projects reported to be up to US\$40 per farm. USAID is planning to carry out an evaluation that will include further data collection on tree registration.

Second, the Forestry Commission's continued distinction between natural and planted trees causes confusion and opens the door to abuse. If a farmer plants a tree and does not register it, the default position of the Forestry Commission is that the tree could be naturally occurring and therefore not owned by the farmer. Although the Forestry Commission maintains that one of the fundamental reasons

⁴ Ghana's cocoa marketing board estimates Ghana has 800,000 cocoa farmers. Field work in Asankrangwa estimates farmers have on average 2.7 farms each (Persha et al., 2019), with field work in other areas of Ghana found lower averages of 2.2 farm parcels per farmer (Asamoah & Owusu-Ansah, 2017). The low and high range estimates represent the low and high point costs when extrapolating US\$27 and US\$40 per parcel across 2.2 and 2.7 parcels per farmer for 800,000 farmers.

for introducing tree registration in Ghana is to address the issue of elite capture in the timber industry, the tree registration process itself is likely to be co-opted by elites.

Third, according to the Ministry's recently published Field Guide to Tree Registration, both landowners and farmers (including foreigners) who cultivate land under a customary land agreement, such as *abunu* or *abusa* agreements for cocoa farmers for at least one year, are allowed to register and own trees. According to the field guide, "even if the land would return to the landowner at one moment in time, the registered trees will remain officially under the ownership of the farmer" per the terms of the previously negotiated land agreement (Dohmen et al., 2018, p. 28). As noted in section 3.1 on customary tenure, the tenure of trees in cocoa farms was rarely part of negotiated agreements nor were tree rights separated from land rights under customary practice. This policy shift that gives *abunu* or *abusa* farmers rights to trees that may extend beyond their rights to land could give rise to new tensions between landowners and *abunu* and *abusa* farmers regarding tree planting, existing land agreements, and any new agreements.

Fourth, tree registration as it is being implemented in Ghana places the burden of proof and administrative costs of registration on the farmers and landowners. Minimally educated cocoa farmers will find it difficult if not impossible to surmount the financial and administrative demands of the registration process on their own.

Transaction costs are born primarily by the farmer and may add up quickly if, for instance, the farmer makes multiple trips to the commission offices, but may find no one present to handle administrative procedures. The system is also open to corruption, with Forestry Commission agents potentially expecting "fees" in exchange for processing paperwork and documentation associated with the tree registration process.

Secure tree tenure, along with more equitable benefit sharing arrangements for timber exploitation, can and should be achieved without any need to register each individual tree.

Finally, the current tree registration policy has not yet been promulgated into law and it is unclear if tree registration will transfer legal rights to trees to farmers. Given government arguments that justify state ownership of naturally occurring trees through their interpretation of the 1992 Constitution (see section 3.3), the legal efficacy of the policy is unclear.

3.2.2.2 CONCLUSION

The Forestry Commission states that the goal of tree registration is to incentivize tree planting. This is a laudable policy goal; however, experience in the field is beginning to show that tree registration could become a disincentive as farmers realize that it is both costly and cumbersome. The claim that tree registration is essential to increase sustainable forest management appears to confuse and confound tree registration with secure devolved tree tenure rights. Failure to register may be seen as, or result in, a loss of rights to the trees themselves. Secure tree tenure, along with more equitable benefit-sharing arrangements for timber exploitation, can and should be achieved without any need to register each individual tree.

3.2.3 IMPLICATIONS OF THE CURRENT LAW AND POLICY

State ownership of naturally occurring trees is widely considered a strong disincentive for landowners and smallholders, regardless of land tenure, to nurture trees on their cocoa farms. As far back as the 1990s, the Forestry Commission said it would address the disincentives that stem from the farmer's lack of tree rights (Boateng et al., 2009). The Constitution Review Commission in Ghana recommended: "Natural trees should be vested in communities where the trees are found and farmers who cultivate these trees should enjoy the benefits from their proceeds of the sale of these trees" (Republic of Ghana

Constitution Review Commission, 2011, p. 598). This position was reiterated in a report on REDD+ benefit sharing commissioned by the Forestry Commission (Dumenu et al., 2014) and the Ministry of Land and Natural Resource's 2016 Tree Tenure and Benefit Sharing Framework (Republic of Ghana-MLNR, 2016a), the Framework on Tree Tenure and Benefit Sharing Scheme (Legal Reform Proposals) (Akapme, 2016), and the Forestry Development Master Plan for 2016 – 2036 (Republic of Ghana-MLNR, 2016b).

The evolving policy that called for devolution of tree tenure to landowners has been intertwined with externally driven donor and industry policies. This includes the European Union's Forest Law Enforcement, Governance, and Trade (FLEGT) initiative; the Programme for the Endorsement of Forest Certification; multinational REDD+ programs; and most recently the cocoa industry's commitment to deforestation-free sustainable cocoa production systems. Ghana is heavily reliant on foreign donor funds for forest management and conservation, and these donors have exerted pressure on the government of Ghana to address issues of tenure and property rights.

However, years, even decades, of tweaking and modifying the legal and policy frameworks to address illegal logging and destruction of forest resources on cocoa farms have been ineffective due to divergent and competing interests and unequal power relations between the state and smallholder cocoa producers. Forest resources in Ghana represent an important source of revenue for the government, so reforms that limit or remove the state's control over the resource base have met strong resistance by the Forestry Commission and customary powerholders, including the stool and chiefs. As a result, the focus of policy reform has been on enforcing and adjusting an inherently unenforceable and unfair legislative framework rather than tackling the core policy issues. REDD+ and the government's sale of emission reductions from forests could reinforce this resistance,⁵ but it is important to note that rights to emission reductions can be separated from rights to trees and should not be a barrier to devolution.

The recent policy reforms that argue cocoa farmers should have rights over all trees growing on their farms are significant and a positive step in the right direction. However, this call for new legislation is simultaneously shackled by arguments that tie reform to a constitutional amendment and undermined as the devolution of tree tenure rights is linked to mandatory tree registration.

3.3 INTERPRETING THE 1992 CONSTITUTION AND ITS IMPLICATIONS ON TREE TENURE

3.3.1 1992 CONSTITUTION: KEY PROVISIONS THAT AFFECT TREE TENURE

There are two key issues under the 1992 Constitution – i) how natural resources and rights to naturally occurring trees are interpreted, and ii) how revenue from these resources is allocated. Under the 1992 Constitution all public lands are “vested in the President on behalf of, and in trust for, the people of Ghana” (Article 257(1)), and all stool lands “shall vest in the appropriate stool on behalf of, and in trust for the subjects of the stool **in accordance with customary law and usage**” (Article 267(1), emphasis added).⁶ Article 257(6) claims all minerals in their natural state as property of the government, vested in the President akin to public lands.

There are also provisions on how to manage and regulate stool lands: “The Lands Commission and the Administrator of the Stool Lands shall co-ordinate with all relevant public agencies and traditional authorities and stools in preparing a policy framework for the rational and productive development and

⁵ For example, the government's sale of emission reductions to the Forest Carbon Partnership Facility's Carbon Fund requires the government to demonstrate it has legal title to all the emission reductions sold “free of any interest, encumbrance, or claim of a third party.”

⁶ As noted above approximately 80% of land has been estimated to be held as customary or stool land. However, the basis for this estimate is unclear.

management of stool lands” (Article 267(8)). Article 267(6) regulates how “revenue accruing from stool lands” is divided, with 10 percent going to the Office of the Administrator of Stool Lands to cover administrative expenses, and the remainder divided between the stool (25 percent), traditional authorities (20 percent), and the district assembly (55 percent). It should be noted that communities, cocoa farmers, and other individuals are excluded from this list of beneficiaries.

Two interpretations of these articles of the 1992 Constitution are presented below. The prevailing government interpretation and the implications of this are discussed first. The second interpretation is an alternative, recommended interpretation by the report authors presented at the end of this chapter.

3.3.2 TREE TENURE UNDER THE PREVAILING INTERPRETATION OF THE 1992 CONSTITUTION

The government has claimed its rights to naturally occurring trees and the benefit sharing of this timber revenue are rooted in the 1992

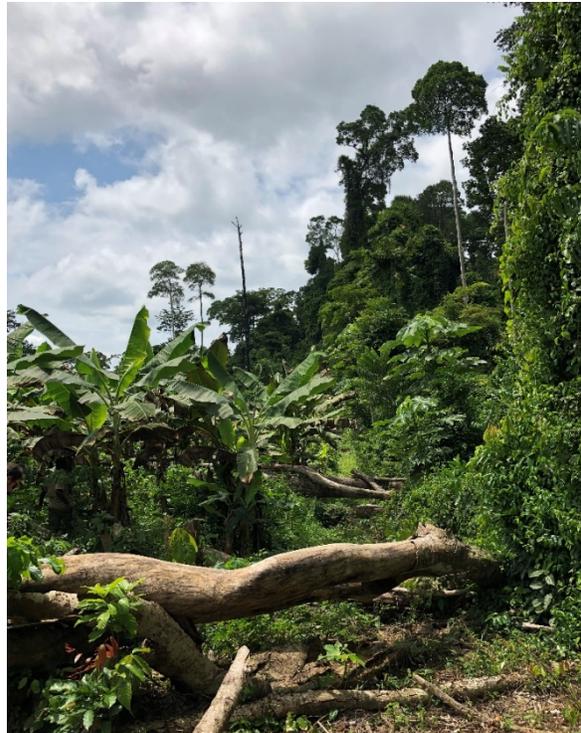
Constitution. As a result, the government argues that constitutional amendments are needed to address rights to naturally occurring trees off-reserve; such amendments are very difficult to achieve. This argument is based on the view that the Constitution does not state who owns natural resources, aside from minerals, which are owned by the state. Naturally occurring trees on cocoa farms are considered a natural resource, and ownership of naturally occurring trees is not separated from ownership of the land. Stool lands are vested in the stool who own them “on trust” for stool subjects, with government involved in regulation and management. Customary rights to stool land can be passed down to farmers, but to exercise their fiduciary responsibility as trustee, the stool and state retain rights to naturally occurring trees on these lands.

As naturally occurring trees are part of the stool’s resources, the stool and government divide up the proceeds from timber revenue according to the constitutionally mandated split in Article 267(6). This poses a major challenge to incentivize farmers and communities to protect and nurture the country’s forest resources as they are excluded from the revenue.

Planted trees, on the other hand, are treated the same as crops, whereby ownership of a planted tree (or crop) does not by default coincide with ownership of the land. As a result, farmers can claim all ownership, management, and use rights to planted trees – and the subsequent benefits. Planted trees can be registered with the Forestry Commission to prove a tree is planted rather than naturally occurring. If planted trees are not registered it is likely they will be considered naturally occurring by default.

3.3.3 ALTERNATIVE INTERPRETATION OF THE 1992 CONSTITUTION AND WHO OWNS TREES

The prevailing interpretation above supports entrenched interests and creates significant barriers to planting more trees on cocoa farms. The authors analyzed the 1992 Constitution, customary tenure practices in cocoa-growing regions, and literature on tree tenure in Ghana and propose an alternative



Cocoa farm abutting Bura River Forest Reserve, Western Region, showing large trees felled to establish the farm
ROBERT O’SULLIVAN

interpretation. The authors' interpretation of the 1992 Constitution is consistent with customary tenure practices⁷ and reflects currently prevailing circumstances. This alternative interpretation results in eliminating the distinction between naturally occurring and planted trees on usufruct, *asidee*, and *abunu* land with all rights to all trees flowing with these family or individual rights to the land. It also removes the need to register trees and allows tree tenure policy reform to move ahead without a constitutional amendment. The alternative interpretation has two parts:

- First, the main customary land rights of usufructs, *asidee*, and *abunu* that support rural farmland holdings are created by clearing the natural resource of the primary forest. As a result, there is no remaining natural resource on usufruct, *asidee*, or *abunu* farmland; and
- Second, all trees that are currently considered “naturally occurring” (and therefore argued to be a natural resource owned by the stool) are more correctly understood as farmed trees. As a result, they should be treated the same as planted trees and owned by the landowner.

These distinctions are analyzed below .

3.3.3.1 EXTINGUISHMENT OF THE NATURAL RESOURCE

Primary forest can be readily defined as a natural resource originally owned in common and held in trust by the stool for its subjects. However, under customary tenure practices, stool subjects have the right to carve out portions of the commonly owned natural forests into their “private holdings” by clearing the forest and farming the land. This practice created usufruct or customary freehold interests for stool subjects. Similarly, *asidee* rights were obtained by migrants who purchased forested land from the stool and developed the land by clearing the primary forest. Either of these rights holders may subsequently create *abunu* rights over their usufruct or *asidee* holdings (see Box 2 at the start of this section).

The creation of usufruct, *asidee*, or *abunu* rights on any stool land therefore extinguished the natural resource owned by the stool because these customary rights were created by clearing the naturally occurring forest. The result of all three customary tenure holdings is the same: the primary forest was cleared to make way for cocoa or other farming and the pre-existing natural resource was extinguished from the land.

3.3.3.2 ANALYSIS OF “NATURALLY OCCURRING” TREES

The authors identified three categories of trees that the current government policy regime considers to be “naturally occurring” outside forest reserves. Each of these are analyzed in turn to understand if they should be considered a “natural resource” or a farmed resource.

1. **Trees grown from buried seeds or stumps.** These trees grew in the cocoa or food crop farms after the primary forest was cleared are the result of active decisions and farm management practices of the farmer. It is up to the farmers to allow – or not allow – these trees to grow to maturity. As such, these trees are properly considered to be farmed and owned by the usufruct, *asidee*, or *abunu* farmer. It is irrelevant whether the farmer put the seed in the ground or if the seed was already there. This is no different from farmers that allow cocoa-yam, crabs, snails, or a myriad of other natural resources to grow on a farm that neither the stool nor state claim rights to.
2. **Mfofo or secondary forests.** These exist when the families with usufruct or *asidee* actively decide to leave the land fallow to regenerate into forest before re-clearing for farming (or

⁷ Customary tenure fits within the spectrum of laws, practices, and norms that make up customary law and usage. We use customary tenure in this document to be precise about which aspects of customary law and usage we refer to.

preserving as forest into the future). Again, it is the landowner's or farmer's active land management practices and decisions that allow (or prevent) the trees to mature. As such, these trees should be considered farmed and owned by the usufruct or *asidee* farmer. When an *abunu* farmer lets their cocoa farm revert to secondary forest it is considered abandoned and the land returns to the landlord – not the stool.

- 3. Trees that were not cleared when the farm was created.** Most of the remaining high-value timber trees left by the original cocoa farmers have already been logged by concessionaires under license from the Forestry Commission. However, some of the original trees may remain on some farms. These still exist due to active decisions by farmers to not fell the trees when the primary forest was cleared, and to let them continue to grow on their farm. When the customary land rights were established, the holder of these rights was given absolute control and decision-making power over all trees on the land, and decided which trees were felled and which were kept. With the loss of primary forest and transition to farmland, trees the farmer decided to leave standing should also be considered farmed trees.



Who owns me? Naturally occurring crabs from a swampy area on a cocoa farm
ROBERT O'SULLIVAN

3.3.4 DISCUSSION OF THE ALTERNATIVE INTERPRETATION

3.3.4.1 TITLE TO TREES

From the perspective of the authors, there is no reason to believe that there is any basis to recognize any continuation of rights to trees as a natural resource when the land is transferred from a commonly held customary right to family or individual usufruct, *asidee*, or *abunu*. Furthermore, there appears to be no basis to differentiate between planted and naturally occurring trees. This point of view suggests that all trees on usufruct, *asidee*, or *abunu* land should be private property and not owned by the state. The government or stool is therefore not obliged (or empowered) to hold back any rights to own, manage, or control a selection of trees off-reserve on trust for the subjects of the stool or people.

The analysis presented here is particularly relevant for those lands where trees may be classified as “naturally occurring.” In all three forms of “naturally occurring” trees, the farming decisions and associated efforts of the farmers are no different from those decisions they would make regarding “planted trees.” All these trees should be considered farmed. From this viewpoint, it is questionable whether it is necessary to create an artificial distinction between different types of farmed trees that considers one set a “naturally occurring” resource as owned by the state and the other as a private resource owned by the farmer. Once this distinction between naturally occurring and planted is removed on usufruct, *asidee*, and *abunu* land, all rights to all trees flow with the customary owner of the land. Devolution should not cause any issues for usufruct and *asidee* farmers who have a type of customary freehold rights, but how this change in law may affect existing or new *abunu* relationships needs further analysis.

As noted in the section on customary tenure above, in some areas tree planting can be viewed as an effort by tenant farmers to claim longer tenure rights over the land than they otherwise have. This is not

the case for *abunu* cocoa farmers where *abunu* farmers gain rights to farm the land in perpetuity, subject to the land being maintained as a cocoa farm.

Under current *abunu* arrangements, *abunu* farmers automatically hold rights to all trees on the land that have not been claimed by the government. This includes *abunu* farmers possessing rights to cocoa trees, fruit trees, and non-timber shade trees. If tenure to all trees is divested to landowners it seems logical that timber trees should be treated the same as other trees, and flow to *abunu* farmers without the need to renegotiate existing or new *abunu* relationships. While this is the most logical approach, this assumption needs to be tested.

The approach recommended in this paper differs from the tree registration guide that states registered trees would “remain officially under the ownership of the farmer who planted [the trees].” If the act of tree planting is interpreted as a covert measure to assert permanent rights to the land by abunu or abusa farmers beyond farming the land for cocoa, this will create conflict and impede efforts to develop cocoa-based agroforestry.

The approach recommended in this paper differs from the recent Forestry Commission tree registration guide that states that registered trees would “remain officially under the ownership of the farmer who planted [the trees]” (Dohmen et al., 2018, p. 6) and includes the *abunu* farmer’s rights to sell and bequeath the trees even if the rights to the land have reverted to the landowner. If the act of tree planting is interpreted as a covert measure to assert permanent rights to the land by *abunu* or *abusa* farmers that extend beyond farming the land for cocoa, this stance will create conflict and impede efforts to develop cocoa-based agroforestry. This is because *abunu* farmers only have rights to all on-farm trees while they are cultivating cocoa, and *abusa* farmers do not have any land tenure rights. Changing this to permanent rights to *abunu* or *abusa* farmers may give rise to more friction between landowners and these farmers, particularly when renegotiating rights to replant old or diseased cocoa farms or if a cocoa farmer abandons their farm and it reverts to the landlord.

The proposed recognition of farmers’ rights should incentivize farmers to cultivate more, and more valuable, timber and shade trees on their lands as they are the legal and beneficial owners of these trees. This proposal also eliminates the need to register trees to demonstrate ownership, and eliminates the need for a land registry as a condition to hold these rights since customary land rights already exist. A rural land registry is still important and valuable to help improve tenure security and documentation, but it is not a prerequisite to reform tree tenure.

The analysis does not apply to any forested lands still held by a stool and not yet divested as usufruct, *asidee*, or *abunu*, or lands within forest reserve areas. These forests could be properly considered to be a natural resource owned by the state or stool on trust for the people.

3.3.4.2 BENEFIT SHARING

The interpretation above treats all trees as farmed and indistinguishable from planted trees. As a result, the benefit-sharing arrangement for all trees on usufruct, *asidee*, or *abunu* land trees should follow the benefit-sharing arrangement for planted trees. The Office of the Administrator of Stool Lands is empowered to collect “revenue accruing from stool lands” under Article 267(6) of the 1992 Constitution. This refers to land rents and the revenue extracted from classifying certain trees as naturally occurring. Current law does not apply this article to farm proceeds, commercial tree plantations, or proceeds from cocoa farming. All the benefits of these farm products go to the farmer.

Therefore, under this alternative interpretation, all trees on usufruct, *asidee*, and *abunu* land holdings should be treated the same and placed under the current policy regime of planted trees when it comes to benefit sharing.

4.0 LESSONS ON DEVOLUTION OF RIGHTS AND TREE REGISTRATION

Ghana is not the first country to grapple with these difficult issues. To help inform policymakers in Ghana, the authors collected evidence on other countries' experiences with devolving rights to trees to communities and individuals; other countries' experiences with tree registration; and research in Ghana to understand how tree tenure affects land use decisions. Findings from this research are presented below.

4.1 DEVOLUTION OF RIGHTS

Establishing a cause and effect relationship between tenure systems and sustainable forest systems is a knotty problem. Early gaps in our understanding of this cause and effect relationship were identified by Cernea (1991), who wrote in *Putting People First*: “The most challenging issue...is to determine how... different incentive and constraint structures operate in specific sociocultural areas” (p. 322). The limited number of relevant case studies make it difficult to establish the relationship between devolution, tree tenure, and forest condition. The consensus in the literature is that the lack of clear resource rights for the farmers, resource users, and landowners in Ghana has been a disincentive for migrants to reinvest in the rehabilitation of the unproductive farms (Acheampong et al., 2014; Akrofi-Atitianti et al., 2018) and for individuals to maintain trees on their land (Boateng et al., 2009; Asare, 2010; Acheampong & Marfo, 2011; Acheampong et al., 2014; Kroeger et al., 2017b). This can also be linked to state ownership/control over naturally occurring trees, which is considered a strong disincentive for all landowners and smallholders, regardless of land tenure, to nurture trees on the land (Roth et al., 2018). But the inverse hypothesis – that giving farmers and landowners clear, unambiguous tree resource rights will result in increased on-farm tree planting and managed regeneration of naturally growing trees – is more difficult to claim conclusively due to limited studies.

Devolution of rights can take many forms, including individual management of private property, co-management of jointly held forest resources, and local municipal management. The literature to date has focused on co-management or community-based forest management and private plantations, with few examples about the impact of the devolution of tree rights to individuals managing agroforestry systems.

4.1.1 CO-MANAGEMENT: LESSONS FROM WEST AFRICA

Forest management reforms in West Africa during the 1980s and 1990s included the devolution and distribution of rights to local communities that lived near and were dependent on forest resources. These reforms were based on the belief that forest-dependent communities would be more effective resource managers than the state. The modalities of these reforms varied widely, in terms of the “bundle of rights” extended to communities – the legal basis of the rights, the roles of national and local actors in forest management, and the benefit-sharing arrangements. A review of devolved forest management in sub-Saharan Africa found that democratic decentralization was often not established (Ribot et al., 2010). Forest co-management assumes an honest state and an equitable balance of power between local resources users and the state, a combination that remains rare in many of the countries that have attempted co-management.

Devolving rights to individual cocoa farmers and landowners to encourage agroforestry is a very different form of devolution than co-management of forests or community forestry. Community-based forest management initiatives targeted management of the commons or collectively held forested spaces. Ghana adopted the community-based forest management model as a community resource management

area (CREMA). The CREMA system was originally developed for community-based wildlife management and habitat protection in northern Ghana and can be adapted for managing forests. This has been proposed as part of Ghana's national REDD+ strategy (see Roth et al., 2017 for a review). However, very few such community forests exist in the cocoa production landscape in Ghana so CREMAs have not yet provided many lessons on individual tree tenure on cocoa farms.

4.1.2 DEVOLUTION TO INDIVIDUALS: LESSONS FROM GREENING THE SAHEL AND CHINA

The most instructive cases for Ghana are the innovative and impactful policy reforms that have been implemented in Sahelian West Africa and northern China to devolve rights to individuals. Both of these examples found that the devolution of tree rights led to increased tree cover.

4.1.2.1 GREENING THE SAHEL

The approach known as farmer-managed natural regeneration (FMNR) was developed and disseminated in Niger in the 1980s as an alternative to conventional methods of reforestation. Rather than replanting new trees, FMNR focuses on farmer training and outreach to regenerate tree stumps of indigenous tree species as an easy, low-cost way for farmers to increase the number of trees in the fields and restore croplands, grazing lands, and degraded forests. Benefits include poverty reduction, enhanced food security, environmental stability, enhanced community resilience to climate change impacts, and contributions to climate change mitigation. Since 1985, more than one million rural households in Niger have protected and managed trees across five million hectares (12.3 million acres) in the densely populated parts of Maradi and Zinder. Other analyses by the United States Geological Survey's Earth Resource Observation and Science data center reported in 2009 that the area re-greened by farmers was closer to 12 million hectares, and that farmers have protected and managed at least 200 million new trees over the past two decades. This has been estimated to have sequestered at least 30 million tons of carbon over the prior 30 years (Stevens et al., 2014), or 110.1 million tCO₂e.⁸

The successes of the FMNR program were made possible by policy changes that devolved rural tree tenure in 1993 and granted local communities the authority to devise and enforce local rules to protect their individual property, which also contributed to local empowerment. Before the 1980s, trees and tree products in Niger belonged to the state. After a decade (1982 – 1993) of discussions about rural land and natural resource tenure issues, a framework ordinance was drafted in 1993 that contained principles that protected and strengthened the local rights to protect, manage, harvest, and benefit from on-farm trees.

The 2004 Forest Code formally recognized people's rights to use forest resources located in areas held by local communities. This empowered farmers to make their own decisions about tree management on their land, thereby ensuring that their efforts to restore the land by nurturing naturally occurring trees benefitted them. As a result, the greening experiences in Niger and elsewhere in the Sahel have largely occurred because of the actions of farmers who have protected and managed the natural regeneration of trees, especially in highly populated areas where there is little or no fallow land.

4.1.2.2 CHINA'S TRANSITION OF FOREST CONTROL FROM COLLECTIVES TO INDIVIDUALS

China has transferred over 102 million hectares of forestland to more than 72 million households through de-collectivization, the introduction of longer-term and more secure forest use rights, and the liberalization of timber markets. Private tree ownership has been permitted since 1956 and tree owners have the right to sell and bequeath trees when they die. Starting in 2000, China implemented several

⁸ One ton of carbon is equal to 3.67 tons of CO₂e, the base unit used in most GHG reporting and accounting.

new initiatives to reverse forest loss including reform of tenure policies. China's forest sector reforms consisted of two fundamental components:

- Land tenure and production changes brought on by the household responsibility system to replace the collective regime; and
- The introduction of market mechanisms through the gradual shift from compulsory quotas and planned prices to market-based transactions and commodities.

This led to the devolution of management and use rights of as much as 90 percent of formerly collectively controlled forestland to an individual or small groups of families. Household tenure rights were expanded to include transferring, inheriting, and mortgaging forestland.

Lu et al. (2002) reported that these initiatives produced successes and failures, noting, "in many areas contracting out of forestlands to private households has been widely praised for raising productivity, increasing forest stocks and improving welfare. In others, it is blamed for increasing deforestation and worsening social inequalities" (p. 41). The impact of China's forestry reforms has hinged on how the reforms were bundled when implemented. The successful cases included the adoption of more attractive benefit sharing terms in contracts, the promotion of contract transferability, the introduction of auctions to allocate plots, and longer contract periods. If farmers were granted land use rights and liberalized market access, the incentive structure improved, resulting in increased forest production. However, where reforms were implemented without the right to access a free and fair market, the incentive structure resulted in negligible changes in forest management practices. Researchers concluded that China needed to address the harvesting regulation and market distortion problems associated with timber production as well as the tenure issue (Yin et al., 2002).

A key lesson from China is that devolution of rights on its own may not be sufficient to incentivize tree planting. Devolution must be coupled with landowner's ability to access markets and benefit from tending the trees on their land.

China's restoration programs have focused on forest plantations and restoration of farmland. Since the

Ghana case is one of individual management of private property, China's recent forest initiatives may be one of the more relevant cases for Ghana's cocoa-growing areas. A key lesson from China is that devolution of rights on its own may not be sufficient to incentivize tree planting. Devolution must be coupled with landowner's ability to access markets and benefit from tending the trees on their land. Another lesson from China is that policy uncertainties and inconsistencies are cited as the key factors for the regional variations in the success of forest sector reforms.

4.2 TREE REGISTRATION IN THAILAND AND THE PHILIPPINES

Thailand and the Philippines are two contrasting examples of registering trees that are illuminating examples for Ghana. In Thailand, a government bank invested US\$1 billion as part of a corporate responsibility initiative to establish a tree bank and has successfully registered over 11 million trees. Farmers do not register trees to gain title, but rather use them as collateral to access loans and generate income. The Philippines has more similarities with Ghana; with a registry established to differentiate ownership of naturally occurring trees and planted trees. This effort has not been successful.

4.2.1 THAILAND'S TREE BANK

The government-owned⁹ Bank for Agriculture and Agricultural Cooperatives (BAAC) formally launched the Tree Bank Project in 2009 as a corporate responsibility initiative with a US\$1 billion investment. The tree bank is a new financial model to help farmers access two types of financial services: loans and income. Trees can be used as security to get loans at low interest rates, or trees can be deposited with the tree banks to earn interest on the monetary value of the tree. Farmers with a variety of land tenure rights and at least 0.4 acres are eligible to participate in the program. During the first 10 years, the registered trees cannot be sold, and their valuation includes planting costs. After 10 years, the valuation is based on the market value of trees. Although not required, the focus has been on indigenous species and farmers have planted a diverse range of native species (Searchlight Process, 2012; Macqueen, 2016).

In 2015 there were over 3,000 branches of Thailand's Tree Bank Foundation and by 2018 a total of 6,000 communities with 150,000 farmer members were growing more than 11 million trees (Macqueen, 2016; Chantanusornsiri, 2018). Active members keep detailed records of every tree that is planted, its volume, the standing value (based on 2010 prices per species), and the carbon sequestered in each tree. In 2018 the Royal Forestry Department of Thailand launched an application, e-Tree,¹⁰ to enable private landowners to register their trees online (The Nation Thailand, 2019). The benefits of the online system include expedited permission to harvest, transport, and sell timber trees. The national Forestry Department is also in the process of revising a forestry law that bans felling high-value species. This was originally intended to curb illegal logging from reserves and government-owned plantations, but the revisions would allow smallholders to grow and exploit high-value trees.

The tree bank provides farmers with small landholdings, as well as those with mortgaged farmland, the opportunity to access loans in the formal sector. This could reduce their dependency on high-interest-rate loans from the informal sector. In the next few years, BAAC plans to sell carbon credits from the trees registered with the tree bank and give the amount earned to the registered smallholders, further increasing their income. A minimum set of preconditions for the tree bank to be a viable business model have been identified, none of which are considered optional (Macqueen, 2016):

1. Rights to secure tenure.
2. Sustainable forest and farm management.
3. Sustainable livelihoods through market access.
4. Significant participation in governance structures.
5. Associations to defend the interests of forest and farm producers.

Many of these conditions are currently absent in Ghana. Farmers do not have secure tenure rights, do not receive meaningful revenue or access to markets for timber from naturally occurring trees on their land, and are not involved in governance structures or associations associated with these trees. That said, with strong political commitment for meaningful policy reform and similar support structures something akin to a tree bank could be considered in Ghana.

4.2.2 PHILIPPINES TREE REGISTRATION

The Philippines saw significant deforestation from the 1950s onward, with most of the national forests cleared and converted to agriculture in the late 1970s and 1980s (Guiang, 2001). In response to this

⁹ The bank's website states that 99.78% of shares are owned by the Ministry of Finance. The next largest shareholder are cooperatives, that own 0.18% of shares. See https://www.baac.or.th/baac_en/content-about.php?content_group_sub=0024

¹⁰ See <https://nsw.forest.go.th/rfdportal/Home.aspx> to access Thailand's e-Tree portal.

deforestation, large-scale reforestation efforts have occurred, with approximately 1.7 million hectares planted between 1960 and 2002, with an estimated survival rate of 50 percent (US Forest Service, 2011). A ban on cutting and harvesting in natural and residual forests was imposed in 2011 (Executive Order No. 23, s. 2011) to protect the remaining areas of native forest, initiate a National Greening Program to replant trees, and create an anti-illegal logging task force. Despite efforts to promote tree planting, relatively few landowners responded to the ban by planting trees on their farms. The government aims to produce timber outside forest areas by allowing private individuals and entities to plant timber trees. Lack of secure land tenure has been cited as an impediment to the development of sustainable land management, including tree planting (Herbohn et al., 2004). The state retains official ownership of forestland, which represents 60 percent of all land in the Philippines. Over half of the land officially classified as forestland has already been cleared for farmland, and all trees on this “forestland” belong to the state and are illegal to harvest, even if the trees were planted by private individuals (Mangaoang & Harrison, 2003; Herbohn et al., 2004).

To distinguish between planted/plantation trees and naturally occurring trees in natural forests, the government established a national tree registration system. Registered tree growers in the Philippines are issued a certificate of tree plantation ownership. Tree registration is a lengthy process that requires time, effort, and financial resources, giving rise to a form of corruption called the *Lagay* or “under the table” system to facilitate the completion of the tree registration process. The banning of tree harvesting from native forests, together with the complex regulation and permit systems used to control timber harvesting and transport, provides multiple entry points for rent-seeking officials (Herbohn et al., 2004; Pulhin & Ramirez, 2016).

Smallholders evade regulations partly by not registering their trees but also by not investing in planting or nurturing trees beyond their immediate household needs. People prefer to grow crops since it can be done without regulations and state intervention. To try and improve registration, one project trialed localized tree registration where local government entities were given the responsibility to coordinate and process tree registration. Tree farmers were found to be willing to register their trees when they were well-informed, had a positive relationship with the government agencies involved, and could register trees for free (Mangaoang et al., 2007). In a more recent assessment, it was found that farmers had not registered their trees because registration was costly and required substantial time and effort, the process was laborious, and government agencies and personnel were inaccessible (Mangaoang, 2014). These are useful lessons to consider when evaluating Ghana’s tree registration policy.

4.3 LESSONS FROM GHANA

As noted above, there is ample evidence and acknowledgement that a lack of tree tenure and benefit sharing has created a disincentive for cocoa farmers in Ghana to grow and maintain shade trees. However, will granting farmers rights to trees automatically result in more tree planting? Some researchers found that cocoa farmers who are landowners and have tenure rights are more likely to preserve and protect a variety of tree species in their fields and that tenant farmers who have insecure tenure rights were less apt to plant and protect trees on farmland (Leach & Fairhead, 2000). Others argue that sharecropping and leases do not provide farmers with sufficiently secure tenure to undertake long-term investments such as tree planting (Damnyang et al., 2012). However, others have found that a relatively large percentage of cocoa farmers grow timber and shade trees on their fields even though they neither own the land nor have any clear rights to the trees on their farms (Asare & Anders, 2017; Anglaaere et al., 2011). The willingness of cocoa farmers to plant and nurture trees, regardless of the land tenure arrangement under which they cultivate their farm, may be due in large part to cocoa’s need for shade.

There are many factors influencing a farmer’s decision whether to plant and/or protect trees. Weak forest governance, including a lack of law enforcement and a corrupt timber industry, as well as advice from extension agents on shade cover, have all had an impact on the management of off-reserve timber resources in Ghana. International and market factors both within and beyond the cocoa sector play a role in how Ghana’s cocoa farmers manage their land, including on-farm tree harvesting. Other factors outside the cocoa and timber economies also play a role. Population growth and growing land pressures in Ghana’s HFZ have raised the demand for food production, and high-value *galamsey* gold mining activities put added pressures on on-farm forest resources.

In Ghana’s cocoa-growing regions, secure tree tenure may not be sufficient on its own to incentivize cocoa farmers to plant and protect trees on their farms. Cocoa farmers will need to be convinced that cocoa agroforestry is financially beneficial to them. Lessons from abroad show that this may include ensuring that shade trees have long-term financial value and providing pathways for farmers to access timber markets and benefit meaningfully from the timber grown on their land.

4.4 LESSONS FROM CÔTE D’IVOIRE¹¹

Côte d’Ivoire’s forests have decreased from 16 million hectares in 1900 to 7.8 million hectares in 1990 and to 3.4 million hectares in 2015 (GoCI, 2018). Agriculture – especially cocoa – has been the primary driver of deforestation in Côte d’Ivoire (World Bank, 2019). A fifth of the population depends on cocoa for a living. As land availability in rural areas has diminished, farmers have moved into gazetted forests and protected areas, which today account for a quarter of national production (RFI, 2019).



Cocoa seedlings
ROBERT O’SULLIVAN

Two important features differentiate Côte d’Ivoire’s tenure arrangements for cocoa compared to Ghana. First, Côte d’Ivoire’s farms have a different settlement history, with the vast majority established during migrations to forest zones by outsider ethnic groups, mainly the *baoulé* ethnic group as well as foreigners mainly from Burkina Faso (OFPRA, 2017). Clearing forest helped secure access to land (Bymolt et al., 2018), and migrants had a strong incentive to clear natural forests. Customary arrangements varied and evolved, with most initially governed by the *tutorat* system of integrating outsiders through sharing of production and gifts with a representative of the land-owning family (Chauveau, 2007). These arrangements became more monetized as land pressure increased (Chauveau, 2007) and in some instances transitioned to outright land sales from the 1950s (Wily, 2015) but especially the 1970s and 1980s (Chauveau, 2007). In the 1990s and 2000s, new tenure arrangements called *planter-partager* (plant and share, which is similar to *abunu* in Ghana) took hold whereby outsiders would clear forests and build a farm and then half of the farm would revert to the landowner upon crop maturity. The new paradigm could be explained by land-owning groups becoming more aware of the value of holding onto land while “financing” the labor needed to establish a viable plantation (Colin & Ruf, 2011). Specific tenure agreements are diverse, with as many as 15 typologies (Wily, 2015). While

¹¹ The text of this section is below is extracted from the ILRG brief *Tree and land tenure nexus in Côte d’Ivoire* (DeJong, 2020) prepared to inform ILRG’s research on tree tenure in Ghana.

some of these arrangements resemble those found in Ghana, Côte d'Ivoire differs in the preponderance of migrant farmers and also the violence and politicization cocoa-belt land disputes in the 1990s and 2000s (Chauveau, 2000).

A second distinguishing feature of Côte d'Ivoire is the history of centralized state-driven approaches to land and forest management in disregard of customary practices. This has led to legal pluralism (Lamarche, 2019) and a schism between laws and what is done in practice (OFPRA, 2017). While Ghana has similar features, there is no equivalent of recognized “stool lands” in Côte d'Ivoire despite the existence of parallel customary systems. Instead the rural land law recognizes customary rights only as a temporary stepping stone towards a national titling system controlled by the central government (GoCI, 2017; OFPRA, 2017). This leads to considerable challenges in securing land tenure despite over \$100 million in donor support in recent years (Dagrou & Loroux, 2017; Wily, 2015).

Cote d'Ivoire has gone through rounds of forest law reform in 2014 and 2019 and the new forest code of 2019 (*loi N°2019-675 du 23 Juillet 2019*) explicitly addresses tree tenure for the first time and gives primacy to the underlying landowner (GoCI, 2019). Article 27 of the 2019 forest code explicitly states that the property of a natural forest or natural tree belongs to the landowner, and the property of a planted forest or a planted tree belongs to the landowner or the planter if the landowner agrees in writing to cede those rights. Therefore, any tree located on rural land, whether cocoa or another species, belongs to the underlying landowner or the migrant farmer if authorized by the underlying landowner.

Article 27 is a key innovation as it explicitly ties underlying land rights to the tree rights, including planted trees of all types, potentially creating an incentive for cocoa farmers with secure rights to plant and preserve shade trees. The code also reduces the bar to prove private ownership, as one has only to prove customary ownership, defined as continuous and peaceful occupation of the land, rather than show a land certificate. However, there is still the caveat that per the 1998 land law, unregistered land can become state property if not registered by 2023, at least theoretically (IDEF, 2020).

A lack of implementing regulations regarding Article 27 and challenges with rural land certification have stimulated the notion of parallel tree registration. The rationale for separate documentation for trees is that certifying land is not always possible due to conflict and bureaucratic challenges, and because loggers may not respect landowner rights even if certified. The prospect of certifying the trees instead of the land or the plantation has also been advanced as a way to address shortcomings in cocoa certification programs (Ruf & Varlet, 2017). It is also argued that tree registration could be used to secure tree rights in the case of farms located in the government's private domain, such as agro-forests, where land certification by farmers is prohibited because the land belongs to the government. There is only one tree registry pilot project run by the non-governmental organization Impactum in collaboration with Meridia, World Cocoa Foundation, GIZ and the Rainforest Alliance that aims to publish preliminary results by the end of 2020. While tree registration in Côte d'Ivoire is being piloted in a different context of land tenure insecurity, tree registration in Côte d'Ivoire will likely face similar challenges as tree registration in Ghana, i.e. tree registration efforts will be costly to implement and maintain over time as trees die and ownership of land or trees change, and it will be difficult and costly to establish and maintain a function tree registry, especially in the absence of a land registry. Additionally, tree registration in Côte d'Ivoire will not address underlying land tenure issues, and it is possible that efforts to implement parallel (and potentially conflicting) tenure registration systems may lead to more confusion and conflicts rather than less.

The logic underlying Cote d'Ivoire reforms is as follows: just as secure land tenure is a key predictor of higher cocoa productivity (Schulte et al., 2020), secure tree tenure can incentivize agroforestry. However, this is not straightforward in practice due to underlying conflicts and tension over land tenure. Vesting both planted and natural trees with the landowner inevitably ties tree tenure clarification

efforts to the risks, challenges and conflicts around rural land certification. The same underlying logic behind the reforms in Cote d'Ivoire is also applicable in Ghana. However, differences in land tenure law and customs between the countries means the land tenure challenges seen in Cote d'Ivoire should not be applicable in Ghana.

5.0 SOLUTIONS AND RECOMMENDATIONS TO RESTORE COCOA FORESTS

5.1 SOLUTIONS

Cocoa in Ghana is in trouble. Most of the primary forest outside reserves has already been cleared and most of the commercial timber trees – and shade trees more broadly – have been removed from most cocoa farms. Planting and nurturing more shade trees on cocoa farms is the only option to improve the sustainability, long-term productivity, and resilience of Ghana’s cocoa. This can also have the added benefit of increasing tree cover, carbon sequestration, biodiversity, off-reserve timber production, and farmer incomes, with high-value timber trees serving as long-term investments for farmers. For example, if all 72 percent of Ghana’s cocoa farmers that are estimated to have “no to light” levels of shade planted 10 new shade trees on their farms, this would sequester approximately 576,000 tCO₂e per year over 25 years.¹²



Bura Forest Reserve boundary seen from a cocoa farm, Wassa Amenfi West
ROBERT O’SULLIVAN

However, any efforts to achieve these benefits will be hamstrung unless tree tenure and benefit sharing are reformed so that landowners benefit from protecting and nurturing all trees on their land. Current efforts to achieve this by creating a tree registry are impractical and unlikely to succeed. Furthermore, tree registration, as it is currently being proposed and piloted, does not address the fundamental and inherent disincentive problem of treating non-planted trees as naturally occurring and owned by government. Continuing along the path of tree registration will cost time and precious resources that could be better spent elsewhere.

The simplest way out of the unending land and tree tenure challenges and conflicts is to ensure rights to trees flow with the rights to the land, with *abunu* farmers’ tree tenure rights extending for the duration of their *abunu* rights. The devolution of tree tenure to landowners can be separated from rights to emission reductions, which should not be used as a barrier to devolution. Customary landowners should also reap the benefits of maintaining trees on their land to ensure incentives are properly aligned. Farmers will be much more likely to invest in managing trees when they have exclusive and legally confirmed rights to use and benefit from them.

Bundling tree tenure with customary land tenure will also eliminate the need to create a tree registry, which will save resources and time. Operating separate land and tree registration systems is inefficient

¹² This is based on Winrock International’s estimated carbon accumulation rate of 0.05 t/CO₂e/yr/tree and FAO data from 2010 that estimated 1.6 million cocoa farmers in Ghana.

as two separate registries compete for scarce resources and increase the cost of transacting land and property. For the sake of efficiency, transparency, access, and oversight, it would be far more effective to have a single land title document that automatically covers all trees on the land, linked to one parcel map and stored in one registry.

5.2 RECOMMENDATIONS

National and international forest management agendas, donor funding, and the private sector's growing commitment to deforestation-free cocoa have all influenced Ghana's forest policy toward the devolution of tree rights. However, action to date has not gone far enough and there is a risk that failure to address underlying tree tenure issues will lock in poor policy for many years to come.

The challenge for government, donors, and private sector partners is how to prioritize limited resources and collaborate strategically to achieve positive outcomes. The authors propose several recommendations based on the findings of this review. The recommendations are tailored for four key groups: 1) the government of Ghana, 2) the cocoa industry, 3) the donor community, and 4) civil society.

5.2.1 RECOMMENDATIONS FOR THE GOVERNMENT OF GHANA

The rapid deforestation and degradation of forest resources in Ghana expose the failure of the current legislation, policies, and regulations to effectively address tree tenure issues in the country. The global and national evidence examined in this review demonstrated that:

- Devolution of tree tenure can result in improved forest management;
- Distinguishing naturally growing trees from planted trees creates a strong disincentive for landowners and smallholder cocoa farmers to plant and nurture trees on farms and fallow land;
- A national tree registry will be costly and administratively infeasible; and
- Devolution of tree tenure can be separated from emission rights and benefit sharing from the sale of these rights.

Although the government has moved toward devolution, especially in the 2012 Resources Management (Legality Licensing) Regulation (LI 2184), the existing legal regime places an emphasis on the rights of the government to manage and profit from forest resources. To ensure that farming and forest-based communities are incentivized to be stewards of trees and timber resources, the government must overhaul the tree tenure and benefit-sharing regime to expand landowners' rights and benefits. Incremental changes will not address the underlying issue of tree tenure that must be addressed to drive change.

RECOMMENDATION 1. LAW REFORM TO DEVOLVE ALL TREE RIGHTS TO LANDOWNERS

New legislation should be drafted to vest communities and individuals with the clear right to own and dispose of the trees they plant or nurture, without distinction between naturally occurring and planted and without the need to register tree ownership. The law should be clear that all rights to all trees derive from rights to the land, and that this applies to customary rights holders. This will ensure *asidede*, usufruct, and *abunu* rights holders also gain all rights to trees on land they have tenure to. As *abusa* farmers are sharecroppers without rights to the land, rights to trees would remain with the landowner in this arrangement. Rights to emission reductions or removals can be separated from tree tenure and should not be a barrier to devolution.

Further legal analysis is needed to confirm which specific sections of existing legislation need to be updated, but the authors' analysis has identified that the 1962 Concessions Act, 1974 Tree and Timber Act, 1997 Timber Resources Management Act, and 2002 Plantations Development Fund Act (including its amendments to the Timber Resources Management Act) may need to be revised.

RECOMMENDATION 2. IMPLEMENT EXISTING PERMIT REGIMES TO GENERATE INCOME

The proposed reforms do not need to cripple the Forestry Commission's budget. The existing timber industry permit and social responsibility agreement regimes should be updated to take into account the proposed divestment in Recommendation 1 and then implemented to provide the Forestry Commission with a sustainable revenue stream from the exploitation of the country's timber resources. This includes enforcing the permits regime established by the 1998 Timber Resources Management Act and ensuring the timber industry meets its statutory obligations to the state and the public by paying the mandated timber rights fees, stumpage fees, and income taxes. There is ample evidence that the forest industry's compliance with these mandates and permits is minimal or nonexistent. The government could greatly increase revenues by ensuring timber concessionaires comply with regulations mandating forestry payments. A focus on licensing and policing loggers would also be effective strategies to decrease illegal logging.

Concessionaires should be responsible for paying stumpage and stool fees and negotiating with farmers the price farmers receive for the timber they fell on farmers' land based on fair market prices. More research may be needed on this point to better understand and demonstrate the revenue the Forestry Commission could generate through increased tree planting and harvesting off-reserve that could result from the divestment of tree tenure to landowners.

RECOMMENDATION 3. ESTABLISH A FIT-FOR-PURPOSE RURAL LAND REGISTRY

The government should stop implementing the national tree registry and focus on establishing a simple, sustainable, and affordable land administration system for customary land registration that is legal under Ghanaian law. The development of such a land registration system should be based on electronic record-keeping and build on prior experiences with customary land secretariats.

RECOMMENDATION 4. PUBLIC OUTREACH AND COMMUNICATION ON REFORM

The proposed changes in law need to be accompanied by a strong public consultation during their development. This could include pro-active consultation to minimize any potential conflicts between landlords and *abunu* farmers from devolution. Once enacted, a comprehensive information campaign will be important to ensure cocoa farmers are aware of the new laws.

5.2.2 RECOMMENDATIONS FOR THE COCOA SECTOR

The cocoa sector's commercial interests in cocoa sustainability, extensive seedling distribution projects, logistics infrastructure, and farmer relationships make them ideally positioned to scale up efforts to re-plant shade and timber trees on cocoa farms.

RECOMMENDATION 1. REDIRECT FUNDS AWAY FROM TREE REGISTRATION ACTIVITIES

The cocoa industry should use their resources to increase tree planting programs if tree tenure policy is reformed (see recommendation 2 below) and/or support registration of land title (see recommendation 3 below). If tree tenure is not reformed and tree registration programs continue, the cocoa industry should engage with cocoa farmers to ensure programming trade-offs and farmers' priorities are aligned.

RECOMMENDATION 2. EXPAND TREE PLANTING PROGRAMS

Planting more trees helps improve the productivity and resilience of cocoa farms, sequester carbon, and restore forest cover. The cocoa industry should expand its tree planting programs and incentivize the restoration of shade trees and forest cover. The industry could consider two ideas to help expand existing tree planting programs:

1. The cocoa industry could implement a payment for ecosystem services (PES) scheme to monitor tree planting, funneling payments to farmers who maintain trees. The PES scheme could be linked to the carbon sequestered in planted trees, which could be used to help the industry meet corporate commitments along with national greenhouse gas reduction commitments under the Paris Agreement.
2. The industry could work with the financial sector to pilot the creation of a tree bank to invest in tree planting. The tree bank could provide farmers with a form of collateral to receive credit to purchase improved inputs and access other professional farm services.

RECOMMENDATION 3. SUPPORT CUSTOMARY LAND RIGHTS REGISTRATION

If Ghana establishes a fit-for-purpose rural land registry, the cocoa industry should ensure existing farm mapping efforts meet these requirements and support registration of customary title documents.

RECOMMENDATION 4. WORK WITH INDUSTRY ASSOCIATIONS TO SUPPORT TREE TENURE REFORM INCLUDING OUTREACH TO COCOA FARMERS

It is difficult for individual companies in the sector to advocate for specific policy reform. Companies should work through industry associations such as the World Cocoa Foundation and platforms or initiatives such as the Cocoa and Forests Initiative and the Ghana Cocoa Forest REDD+ Program to support devolution of tree tenure. The cocoa industry should also use its existing outreach channels to help with consultation and publicity campaigns to explain the new tree tenure law and what it means for cocoa farmers.

5.2.3 RECOMMENDATIONS FOR DONORS

Donors can play an important role to help the government research, develop, and implement tree tenure policy reforms.

RECOMMENDATION 1. DEVELOP A UNIFIED RESPONSE TO GHANA'S TREE REGISTRATION POLICY

Key donor agencies need to coordinate on how best to support tree tenure reform in Ghana. This should include alignment on the types of reform that are needed and what types of programs are supported.

RECOMMENDATION 2. SUPPORT GHANA TO FINALIZE THE NECESSARY LEGAL AND POLICY REFORMS TO DEVOLVE TREE TENURE

Donors should support coordination between government agencies, including the Ministry of Land and Natural Resources, Cocobod, Lands Commission, and Forestry Commission, to discuss, agree on, and map out how to address the competing national priorities around increased cocoa production and improved forest protection.

Donors should also support a national discussion with the government, private sector, cocoa farmers, landowners, citizens, and national civil society to set long-term sustainable objectives for Ghana's cocoa sector, including a discussion of tree tenure.

RECOMMENDATION 3. SUPPORT ADDITIONAL RESEARCH ON DEVOLUTION OF TREE TENURE

Donors could support further research on how the devolution of tree rights might impact holders of statutory and customary rights to land and how carbon rights can be separated from tree tenure – particularly for the sale of emission reductions to the Forest Carbon Partnership Facility. If conflicts between landlords and *abunu* farmers arise as a result of devolution, donors should support additional training and implementation of dispute resolution tools.

Donors should also support research on any reform or enforcement of timber licensing and stumpage fee collection to support Forestry Commission operations.

RECOMMENDATION 4. SUPPORT CUSTOMARY LAND RIGHTS REGISTRATION

Donors should support Ghana to establish a fit-for-purpose rural land registry. This should include supporting the use of cost-effective technology for mapping and registry services and the promotion of social safeguards and social inclusion in those processes.

RECOMMENDATION 5. SUPPORT PUBLIC OUTREACH ON TREE TENURE

Donors should support stakeholder consultation during law reform and then, if a reformed law is passed, public outreach campaigns should be prioritized that educate civil society on the new tree tenure law and implications for farmers.

5.2.4 RECOMMENDATIONS FOR CIVIL SOCIETY

Ghanaian civil society has the potential to help raise the profile of tree tenure reform and implications for Ghana's cocoa farmers. Civil society organizations are well positioned to support research, analysis, outreach, and engagement on policy reform and work with all stakeholders to help plant more trees.

RECOMMENDATION 1. CONDUCT OUTREACH AND ENGAGEMENT

Local civil society should carry out a multi-stakeholder deliberative process in 2021 to raise awareness and address the outstanding issues related to devolving tree rights to individuals. This includes completing and disseminating research on specific legislative amendments that are needed to devolve tree tenure, engaging farmers and other stakeholders on the reform process to build awareness and support for reform, economic or financial analysis of the implications of reform on government budgets, and engaging government and elected officials on reform options.

RECOMMENDATION 2. SUPPORT TREE PLANTING

Once tree tenure policy has been reformed, civil society should help develop tree planting programs and help monitor their implementation.

ANNEX I: REFERENCES

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U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

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