



**USAID**  
FROM THE AMERICAN PEOPLE



# **FINAL REPORT**

## **SUPPORTING DEFORESTATION-FREE COCOA IN GHANA, 2018-2022**

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

Contract Number: 7200AA18D00003/7200AA18F00015  
COR: Stephen Brooks  
USAID Office of Land and Urban  
Contractor Name: Tetra Tech  
Authors: Robert O'Sullivan, Mark Freudenberger, Daniel Myers

**NOVEMBER 2023**

This document was produced for review by the United States Agency for International Development. It was prepared with support from the Integrated Land and Resource Governance Task Order, under the Strengthening Tenure and Resource Rights II (STARR II) IDIQ. It was prepared by Tetra Tech.

Cover Photo: Community meeting to discuss community norms on tree planting, ownership and benefit sharing structure. ILRG/Ghana

Tetra Tech Contact: Amy Regas  
159 Bank Street, Suite 300  
Burlington, VT 05402  
Tel: (802) 495-0282  
Email: [amy.regas@tetratech.com](mailto:amy.regas@tetratech.com)

Suggested Citation: O’Sullivan, R., Freudenberger, M. and Myers, D. (2023). *Supporting Deforestation-Free Cocoa in Ghana, 2018-2022. Final Report*. Washington, DC: USAID Integrated Land and Resource Governance Task Order under the Strengthening Tenure and Resource Rights II (STARR II) IDIQ.

All individuals featured in photographs in this document have given their consent for their image to be used in ILRG publications.

# FINAL REPORT

## SUPPORTING DEFORESTATION-FREE COCOA IN GHANA, 2018-2022

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

Submission Date: 29 November 2023  
Submitted by: Amy Regas, Project Manager  
Tetra Tech  
159 Bank Street, Burlington VT 05401, USA  
Tel: (802) 495-0282

Contract Number: 7200AA18D00003/7200AA18F00015  
COR Name: Stephen Brooks  
USAID Office of Land and Urban  
Contractor Name: Tetra Tech  
Authors: Robert O’Sullivan, Mark Freudenberger, Daniel Myers

#### **DISCLAIMER**

This publication is made possible by the support of the American People through the United States Agency for International Development (USAID). The contents of this publication are the sole responsibility of Tetra Tech and do not necessarily reflect the views of USAID or the United States government.

# TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>IV</b>
<b>LIST OF ACRONYMS</b> .....	<b>V</b>
<b>1.0 INTRODUCTION AND BACKGROUND</b> .....	<b>1</b>
1.1 BACKGROUND .....	1
1.2 USAID CONTRIBUTIONS TO LAND TENURE SECURITY IN THE CACAO SECTOR.....	2
<b>2.0 ACTIVITY RESULTS</b> .....	<b>3</b>
2.1 LANDSCAPE GOVERNANCE AND COMMUNITY LAND USE PLANNING.....	3
2.1.1 Background and Objectives.....	3
2.1.2 What Worked.....	3
2.1.3 Challenges and Learning.....	4
2.1.4 Recommendations.....	5
2.2 COST RECOVERY FARM-LEVEL TENURE DOCUMENTATION .....	6
2.2.1 Background and Objective .....	6
2.2.2 What Worked.....	6
2.2.3 Challenges and Learning.....	6
2.2.4 Recommendations.....	7
2.3 FARM REHABILITATION SERVICES .....	8
2.3.1 Background and Objectives.....	8
2.3.2 What Worked.....	8
2.3.3 Challenges and Learning.....	9
2.3.4 Recommendations.....	9
2.4 TREE TENURE FORMALIZATION .....	9
2.4.1 Background and Objective .....	9
2.4.2 What Worked.....	10
2.4.3 Challenges and Learning.....	10
2.4.4 Recommendations.....	11
<b>3.0 REFLECTIONS ON SUSTAINABILITY AND IMPACT</b> .....	<b>11</b>
3.1. OBJECTIVES AND METHODOLOGY .....	11
3.2 PAYMENT FOR ECOSYSTEM SERVICES (PES).....	12
3.2.1 Data collection/tree count verification .....	12
3.2.2 Community information and outreach .....	13
3.2.3 Payment distribution.....	13
3.2.4 Impact on farm level practices.....	14
3.2.5 PES PROGRAM SUSTAINABILITY .....	15
3.3 FARM REHABILITATION .....	15
3.3.1 ECOM rehabilitation initiative .....	16
3.3.2 COCOBOD rehabilitation initiative.....	16
3.4 LAND DOCUMENTATION.....	17
3.4.1 ECOM Perspectives .....	17
3.4.2 Traditional leader Perspectives .....	17
3.4.3 Community Focus Group Perspectives on Successes.....	18
3.4.4 Community Focus Group Perspectives on Limitations.....	19
3.5 LAND USE PLANNING AND ALTERNATIVE LIVELIHOODS .....	20
3.5.1 Galamsey Artisanal Gold Mining .....	21
3.5.2 Alternative livelihoods.....	21

# LIST OF ACRONYMS

ADR	Alternative Dispute Resolution
CFI	Cocoa and Forests Initiative
COCOBOD	Ghana Cocoa Board
CSSV	Cocoa Swollen Shoot Virus
HA	Hectares
ILRG	Integrated Land and Resource Governance
LUPD	Land use planning diagnostic
PES	Payment for ecosystem services
REDD+	Reducing emissions from deforestation and forest degradation
TGCC	Tenure and Global Climate Change
USAID	United States Agency for International Development
CEL	Communications, Evidence, and Learning Project
WEE	Women's Economic Empowerment

# I.0 INTRODUCTION AND BACKGROUND

## I.1 BACKGROUND

Cocoa trees thrive in a thin ecological band of countries along the equator, where the climate is warm and humid. Just two countries – Côte d'Ivoire and Ghana – produce two thirds of the world's cocoa<sup>1</sup>. Cocoa plays a critically important role in the local and national economies, providing jobs, improved livelihoods and social welfare, an expanded tax base, family and corporate income, and foreign exchange earnings. However, long term viability of cocoa farming is at risk in many parts of Ghana and Côte d'Ivoire due to climate change<sup>2</sup>, and for many years smallholder cocoa has been the leading cause of agricultural commodity driven deforestation in both countries. This deforestation has a negative impact on biodiversity, soil fertility, water quality and quantity, affects local rainfall and threatens farmer livelihoods. In response, the governments of both countries and commodity buyers have made specific commitments to reduce and eliminate deforestation from their supply chains through the creation of initiatives such as the Cocoa and Forests Initiative (CFI) and the Ghana Cocoa Forest Reducing Emissions from Deforestation and Forest Degradation (REDD+) Program that will sell carbon credits to the Forest Carbon Partnership Facility.

Companies like Hershey's rely on thousands of West African farmers, each of whom farms a tiny plot, often one to two hectares (2.5 – 5 acres). In Ghana, up to 40 percent of cocoa farms suffer from low productivity due to aging trees and blight. In the past, when cocoa farmers faced diminishing crop yields, they could clear new forests and plant new trees. But today with fewer remaining primary forests this approach to expanding or even maintaining yield is environmentally and socially unacceptable. The most sustainable solution is to replant or rehabilitate old cocoa farms with disease-free new trees. Yet several challenges confront small farmers who want to replant. Many farmers have insecure land tenure that prevents or discourages them from replanting old farms. Tenure challenges also limit incentives to plant and intercrop cocoa seedlings with shade trees that can increase survival and productivity, as well as help cocoa companies meet their sustainability commitments. Farmers have low incomes and limited access to credit to borrow money to invest in their farms. In addition, they often lack information and training on best practices to rehabilitate old cocoa farms to increase yields and resiliency.

According to Ghana's Lands Commission, less than two percent of the country's 800,000 cocoa farmers have documented title to the land they cultivate. Instead, farmers access property through customary tenure arrangements made with a chief or a landowner. Traditionally, these oral agreements have allowed farmers to clear forests and begin farming. Customary tenure comes in several forms that can range from rights analogous to common law freehold (asidae and usufruct) or tenancy (abunu). Under abunu tenure, the farmer's tenure is tied to keeping the land under cultivation as cocoa. If the farm is abandoned or no longer used for cocoa it reverts to the landowner. Once cocoa tree yields drop after 25 years or so – or sooner if disease strikes – abunu farmers often need to obtain permission from the original landowner to replant. At a time of historically high demand for land, chiefs and landowners are increasingly refusing farmers' requests to replant. That leaves abunu farmers with two options: clear virgin forests and start again or get out of the business entirely. The exact number of abunu farmers across Ghana is unknown, but previous United States Agency for International Development (USAID) work in Nyame Nnae community in Asankranwa found 46 percent of farms were under abunu tenure agreements.

---

<sup>1</sup> FAO (2022). FAO Statistics. <https://www.fao.org/faostat/en/#data/OCL>

<sup>2</sup> Climate Change Agriculture and Food Security and International Center for Tropical Agriculture (2011). *Predicting the Impacts of Climate Change on the Cocoa-Growing Regions of Ghana and Cote d'Ivoire*, Colombia: International Center for Tropical Agriculture. [https://legacy-assets.eenews.net/open\\_files/assets/2011/10/03/document\\_cw\\_01.pdf](https://legacy-assets.eenews.net/open_files/assets/2011/10/03/document_cw_01.pdf)

Most cocoa farmers are subsistence farmers with little financial capacity to invest in their farms. Cocoa takes four to five years to mature and produce cocoa pods and most farmers cannot afford to cut and replant large portions of their farm at one time due to the time it takes for a tree to produce cocoa. If a farm is diseased, however, the only way to remove the disease in some cases is to clear and leave the land fallow before it can be replanted with cocoa.

Finally, traditionally cocoa farms retain large shade trees. This practice has preserved many economically and environmentally important trees within the landscape. However, a combination of government and Ghana Cocoa Board (COCOBOD) policies has led to the widespread removal of shade trees from farms; in 2007 it was estimated that 72 percent of cocoa farms across Ghana had “no to light” levels of shade. The government of Ghana also claims ownership of all naturally occurring trees, which creates a disincentive to maintain or restore shade tree cover across cocoa farms.

## **1.2 USAID CONTRIBUTIONS TO LAND TENURE SECURITY IN THE CACAO SECTOR**

Since late 2016, the USAID Tenure and Global Climate Change (TGCC) project and the follow-on USAID Integrated Land and Resource Governance (ILRG) project have collaborated with cocoa companies Hershey’s and commodity trader ECOM to support deforestation-free cocoa production in Ghana. This consortium of private sector actors participated actively in all strategic decisions regarding the technical components described here. Regular conference calls, program planning workshops, and post-implementation consultations were held with both firms. Hershey with the technical assistance of ECOM made direct payments to farmers to plant and maintain agroforestry species as part of a pilot Payment for Ecosystems Scheme launched toward the end of the project.

Through the USAID-funded TGCC pilot project supported by Tetra Tech and Winrock International, the partners sought to strengthen land rights and encourage tree planting on existing cocoa farms to reduce pressure on the forest fringe. From February to December 2017, TGCC implemented a pilot in Nyame Nnae, a cocoa farming community in the Asankrangwa district of western Ghana, to clarify and document rights to land and trees and develop a financial model for cocoa farm rehabilitation. Nyame Nnae was chosen based on community interest and factors like a high proportion of non-indigene<sup>3</sup> farmers and a clear land constraint. There are three main customary interests in land in Nyame Nnae: customary freehold (nine percent), asidεε (migrant farmer freehold – 45 percent), and abunu (46 percent). The project did not try to convert these customary rights into statutory rights, but rather captured and documented land and tree rights as currently practiced in the community. The project engaged legal consultants to draft three customary land rights templates based on these prevailing customary norms. A local organization, Landmapp (now Meridia), was subcontracted to complete mapping of community boundaries and individual cocoa farms and store electronic records. ECOM’s extension agents were trained in tenure principles and provided with training materials and simple, laminated fact sheets to help them resolve land disputes, monitor and assess tenure issues in their field work, and prepare customized community training and outreach plans. The boundaries of Nyame Nnae community were mapped and 190 farms were surveyed and had their tenure rights documented, 37 percent of the land which was solely held by women, many of them widows or divorced.

In 2018 the project partners expanded core activities under the USAID-funded ILRG “bridge phase” to further test and expand on TGCC’s activities. The ILRG bridge phase consisted of the following core components in four communities in Asankrangwa:

---

<sup>3</sup> Non-indigene refers to people who are not the historical inhabitants of the area. They are often required to request permission from customary authorities to live and work within the area. The process of accessing land for non-indigene differs from indigenous families.

1. Landscape Governance and Community Land Use Planning
2. Cost-Recovery Farm Tenure Documentation
3. Farm Rehabilitation Services
4. Tree Tenure Formalization

While this final report summarizes the outcomes of each of these activities over their lifespan from 2018 to 2022, it also includes reflections on impact and sustainability, documenting the results of a short field visit to the Asankrangwa following the end of the project, and also based on comparisons with ILRG's broader partnerships with the cocoa sector and ECOM in Ghana.

## 2.0 ACTIVITY RESULTS

### 2.1 LANDSCAPE GOVERNANCE AND COMMUNITY LAND USE PLANNING

#### 2.1.1 BACKGROUND AND OBJECTIVES

From the outset, ILRG adopted a landscape-wide approach to land governance and tenure security in the Asankrangwa District. The District abuts two protected areas which constrain expansion of agricultural activities, either cash crop or food production. For this reason, the focus on land use planning was viewed as critically important because intensification of cocoa and food crop production needed to occur in different agroecological zones. Spatial planning becomes important to direct community and external investments. Hence, the purpose of this component was to develop and promote a community-based land use planning model that could be replicated in other parts of the Western Region and result in the enhancement of forest carbon sequestration and reduced deforestation. To better understand the history and dynamics of deforestation in western Ghana and inform programming, ILRG carried out a land use planning diagnostic (LUPD) in 2019<sup>4</sup>. The LUPD identified a combination of activities that included: i) educating and empowering traditional landowners on the long term economic and environmental impact of land use decisions; ii) documenting customary norms and practices regarding forest conservation for spiritual and other traditional values; iii) supporting self-identified incentives, monitoring, and enforcement mechanisms; and iv) engaging with customary and statutory authorities including local statutory planning authorities. The report pointed out how international market forces have historically shaped the land use decisions of Ghanaian farmers from the pre-colonial period to the present.

#### 2.1.2 WHAT WORKED

The COVID-19 pandemic impacted the initial ILRG work plan, but the team maintained the key tenants of the approach and successfully prepared audio recordings on the causes, impacts, and options to mitigate climate change in Twi (a common local language) and broadcast them over the local radio and community announcement systems. These messages were reinforced with in-person community workshops that covered the same materials. Partners found that the combination of in-person training and follow up broadcasts was highly effective in ensuring message saturation and uptake.

Next, ILRG rolled out the "ECO Game" in the communities and with traditional leaders. The ECO Game was initially developed for northern Ghana by Winrock International and customized for cocoa communities by ILRG. The game requires players to strategically select land uses to meet community

---

<sup>4</sup> Jiekak, S., & Freudenberger, M. (2018). *Supporting Deforestation-Free Cocoa in Ghana Initiative: Land Use Planning Diagnostic Report*. Washington, DC: USAID Integrated Land and Resource Governance Task Order under the Strengthening Tenure and Resource Rights II (STARR II) IDIQ.



needs and respond to natural disasters and economic or social chance events with negative or positive outcomes. Over the course of the game, players learn that selecting to mine their land for gold may produce short-term payoffs, but land uses that involve more sustainable natural resource management decisions lead to better long-term outcomes. The game was accompanied by facilitated discussion and participants quickly combined the background climate change education along with land-use decision making aspects of the ECO Game.

ILRG initially designed a small-grants awards program to support sustainable land use decision making. The COVID-19 pandemic prevented this from moving ahead, but the team modified the approach and landed on a Payment for Ecosystem Services (PES) program associated with planting and maintaining adequate shade trees on cocoa farms, and planting and maintaining additional trees off-farm. ILRG worked with the communities and ECOM to co-design the PES program and develop standard operating procedures for the program. The ILRG team and communities agreed on total PES payments of 150 Ghc/acre (US\$24/acre) to plant sufficient trees to maintain at least 10 trees per acre (25 trees per hectare) on-farm, and 300 Ghc/acre (US\$48/acre) to plant or maintain at least 263 trees per acre (650 trees per hectare) off-farm. The communities agreed that payments should be made via MoMo (mobile money), with one-third made each year around June – July (during the lean season) over a period of three consecutive years. The decision to make the payments over three consecutive years was reached through a combination of farmer preference for consecutive payments, costs associated with extending payments beyond three years, and the expectation that by year three the newly planted seedlings should be sufficiently well established to not need ongoing care or maintenance by farmers. ILRG trained ECOM extension agents on the program and standard operating procedures, and Hershey's agreed to fund the PES program implementation by ECOM and payments to farmers. By September 2022 a total of 325 farmers had enrolled in the PES program and over 17,000 seedlings had been distributed and planted in cocoa farms over two consecutive planting years. Additional off-farm areas were being enrolled, with off-farm enrollment closing in early 2023. The PES program was in its initial stages at the time of project completion, but early indications suggest that tree seedling survival is high – a much higher than the 40 percent survival rate ECOM normally finds under other tree-planting programs<sup>5</sup>.

In parallel to finalizing the PES program, the ILRG team developed Community Action Plans with the communities. The Community Action Plans were intended to support broader community-wide land use governance. They recorded customary land practices and norms such as maintaining riparian buffers and prohibiting illegal gold mining. They also attempted to embed the PES program in the communities by restating the core components of the scheme including community-wide agreement on how the PES program operates for abunu farmers. The plans also recorded dispute resolution procedures that the ILRG team had helped train community members on.

### 2.1.3 CHALLENGES AND LEARNING

Land use planning is difficult to carry out in rural areas. The team analyzed statutory land use planning requirements in Ghana and concluded that the government's spatial planning processes were largely inapplicable to rural areas because they focused on the built environment and public infrastructure development. The team also determined that most land within the communities was privately owned under customary tenure, with minimal communal land left unallocated. Most communal land was either in villages or swampy areas that were not suitable for cocoa and still held by the stool, the traditional authority in the area. As a result, spatially explicit land use planning was found to be unsuitable for the communities. This led the team to focus on customary norms and practices as the basis for land use planning and the development of Community Action Plans.

---

<sup>5</sup> See postscript in Annex I with reflection from field visit in May 2023 to assess the viability of the PES payment scheme.

Introducing the PES program and ownership of shade trees on cocoa farms created a source of disagreement between landlords and abunu “tenant” farmers. Landowners contended that abunu farmers had been granted land use specifically to farm cocoa, so other benefits should still flow to the landowners. This was resolved by stipulating that PES payments would flow to abunu farmers, but the proceeds from the sale of any timber trees would be split between tenants and landowners, as these proceeds were not part of the initial abunu sharing agreement. Shade tree sales should follow the prevailing sharing formula used for other non-cocoa proceeds, such as from cola nuts or gold mining, endorsed by the Asankrangwa stool.

ILRG considered several galamsey (illegal gold mining) sites for inclusion in the PES scheme, but determined the sites were not appropriate for inclusion in off-farm planting and rehabilitation. This was due to a combination of poor site conditions and evidence that previously replanted mining sites had been subsequently re-mined. Galamsey only increased in frequency during the years in which the project was active, and still appears to pose a significant threat to on and off-farm tree planting efforts. For example, the team encountered a former mining site that the Forestry Commission had replanted, but that had since been mined for a second time, killing the planted trees. Galamsey is a significant threat to cocoa farming and the landscape but addressing it and remediating these sites was beyond the scope of ILRG.

#### 2.1.4 RECOMMENDATIONS

Land use planning as conceived of in Ghana is not appropriate for rural areas. The “indicative” planning process is rooted in town and country planning adapted largely from the British planning tradition. The 1994 National Development Planning Systems Act (Act 480) and the 2016 Land Use and Spatial Planning Act, (Act 925) structures the rural and urban spatial planning procedures. The ILRG LUPD suggested alternative planning methodologies. The approach taken to promote participatory Community Land Use Plans is current best practice in West Africa in both francophone and anglophone countries, but even this approach has limitations. Rural communities plan for the use of their landscapes, but their decision-making is shaped by external forces, including national and international market forces. The cocoa economy has failed to generate sufficient revenues for producers in recent years, and as a result, youth are engaged in galamsey gold mining or have migrated to the cities and overseas in search of work. This has left rural areas largely depopulated of a vibrant workforce. Farmers must try to adapt to changing markets, and now, climatic forces by diversifying into other economic livelihood activities – some of which appear promising, others not at all.

The ILRG team introduced a promising way to subsidize the costs of rehabilitation of diseased cocoa trees through direct payments for shade tree planting and protection by the cocoa sector, in this case Hershey’s. This PES scheme needs to be monitored closely. Follow up assessments should be carried out to determine the seedling survival rate and overall efficacy of the PES program and Community Action Plans to stimulate sustainable land use decisions and governance. This could inform whether it makes sense for the cocoa sector to roll out PES programs more broadly to support tree planting within the supply chain. The PES program could also be expanded to estimate carbon removal associated with tree planting that could be reported as part of companies’ Scope 3 greenhouse gas emissions associated with land use. The postscript in Annex I provides many initial insights on the success of the PES program to date, primarily from farmers’ perspectives on what is working and what is not.

## 2.2 COST RECOVERY FARM-LEVEL TENURE DOCUMENTATION

### 2.2.1 BACKGROUND AND OBJECTIVE

Under the USAID TGCC project, USAID partnered with a land mapping firm Meridia to document customary land tenure to help address tenure insecurity. Meridia issued one farm-level document per farmer in Nyame Nae for free. Meridia's approach under TGCC was based on farm-level mapping, with the cost completely subsidized by USAID. ILRG aimed to modify this approach in two important ways. First, Meridia would carry out comprehensive systematic mapping within each community. This was expected to reduce the cost per farm and help identify all land uses within each community. Second, Meridia would test a partially subsidized fee-for-service model by selling the tenure documents at a reduced cost (subsidized by USAID) to assess farmers' willingness to pay and the financial viability of fee-for-service tenure documentation in rural Ghana.

### 2.2.2 WHAT WORKED

ILRG mapped the territorial boundaries of four communities, took drone-generated images of the settlements, and mapped 842 farm parcels. Not all farmers were available to provide tenure information on their farms, and in the end 787 farmers consented to the mapping services. 19 hectares (ha) of secondary forest lands were also mapped, as well as 69 ha of marshlands and 59 ha of galamsey gold mining sites.

The ILRG Ghana team carried out alternative dispute resolution (ADR) training to help resolve landlord/tenant disputes in one of the communities. This was seen as valuable by community members, and other communities requested their own ADR training to help improve dispute resolution.

In conjunction with the land tenure mapping and documentation, ILRG also decided to test the Forestry Commissions' tree registration policy. Meridia mapped and recorded shade trees while their field staff collected land tenure documents and successfully arranged for the shade trees to be registered with the Forestry Commission. A total of 3,031 planted and 4,352 naturally occurring trees were recorded for 749 parcels owned by 473 farmers.

The ILRG Ghana team negotiated a lump sum fee of Ghc14,000 (US\$2,414 at the time) with the Asankrangwa Stool to sign all the land tenure documents in December 2020. This was a steep discount on the normal per-unit cost the Stool charges to sign ad-hoc tenure documents. Given there was no customary land secretariat to store the documents, Meridia shared hard copies of the tenure documents with the Stool, provided an electronic database of the records and trained a Stool representative on how to access the online database to retrieve records as needed.

### 2.2.3 CHALLENGES AND LEARNING

Despite Meridia's intensive community outreach and dialogue to encourage farmers to purchase tenure documents, only 70 FarmSeal documents were sold at the initial price (less than 10% of the farms mapped). The following factors contributed to low sales:

- Farmers believed that the FarmSeal documents should be free because certificates were previously issued in Nyame Nae at no cost under the TGCC pilot. This issue caused considerable controversy and perhaps doomed the FarmSeal approach from the outset. From the farmers' perspective, they did not see why they should pay for a land documentation service when neighboring communities had received this service free-of-charge. No convincing logic proffered by ILRG could convince farmers otherwise.

- Farmers had limited funds to pay for FarmSeal services due to the poor financial viability of cocoa farming. Farmers are very poor, especially abunu tenant farmers, widows, and other marginalized community members. Landowners themselves seemed wealthier, and thus able to pay, but lived in Accra and other cities. They tried to shift payments onto the tenant farmers rather than pay themselves as absentee landowners.
- One of the influential village chiefs expressed his view that the purchase of FarmSeal documentation would not preclude the need for abunu farmers to negotiate new tenure arrangements with landowners when current tenancy arrangements came to an end. This was seen to undermine the value of the documents to improve tenure security of abunu farmers, and farmers with other forms of customary tenure did not view their tenure as insecure so did not see the value in purchasing documentation. In effect, as alluded to in the postscript to this report, ambiguities remain in place around the “second generation” land transfer process that emerges when original owners die, sell, or lease their lands. A central question remains – how will land records be updated by the customary authority when the second generation of land inheritance and land transactions transpires? And how will the long-term relationships around abunu farming be addressed through these customary pathways?

A separate baseline study carried out by the USAID Communications, Evidence and Learning (CEL) Project reported low levels of perceived tenure insecurity within the four communities and surrounding communities, despite access to land being a driver of social tension and conversion of forests to agricultural land<sup>6</sup>. There was some insecurity around abunu rights to cut and replant their cocoa farms, but tenure documents on their own do not alleviate this risk. The overall low levels of perceived tenure insecurity may also have led to a reduction in the value of the land tenure documents to farmers and their unwillingness to pay. A joint decision between USAID and the ILRG team was made to change the delivery approach and deliver all FarmSeal documents for a token amount of 20 cedis per parcel (about US\$3.50 at the time). The team also issued refunds to the 70 farmers that initially paid the higher price for the documents, which generated substantial trust and support within the communities that carried over into other activities within the communities.

Adding tree tenure mapping and documentation increased the time it took to map farm parcels by approximately 30 percent, with an estimated incremental cost of US\$25 per farm (compared to Meridia’s estimate of US\$40 per farm to register shade trees only – i.e., without bundling with land tenure). Extrapolating the US\$25 per farm cost, it is estimated that it would cost at least US\$58,320,000 to register all shade trees on Ghana’s cocoa farms (excluding Forestry Commission procedural costs for registration). While the farmers appeared to value the tree tenure documentation, there was also some residual skepticism or uncertainty that the farmers owned the trees. The concerns with the tree registration policy are discussed in more detail in other ILRG reports<sup>7</sup>.

## 2.2.4 RECOMMENDATIONS

Comprehensive land tenure documentation should remain a long-term priority for Ghana. However, for many farmers, undocumented customary tenure provides sufficient tenure security, and those farmers that experience tenure insecurity (e.g. abunu farmers and those without land) do not necessarily see documentation as a path to improve security. Future efforts to improve tenure security could focus on more cost-effective uses of ADR techniques to resolve underlying disputes that give rise to tenure

<sup>6</sup> Persha, L., Haugan, G., Mittelberg, T., Wendt, R., and Protik, A. (2020). *Evaluation of the ‘Supporting Deforestation-Free Cocoa in Ghana’ Project Bridge Phase: Baseline Report*. Washington, DC: USAID Communications, Evidence and Learning (CEL) Project.

<sup>7</sup> O’Sullivan, R., Fischer, J. E., Antwi, Y. A., & Freudenberger, M. (2021). *Rooted in the ground – Reforming Ghana’s forest laws to incentivize cocoa-based agroforestry*. Washington, DC: USAID Integrated Land and Resource Governance Task Order under the Strengthening Tenure and Resource Rights II (STARR II) IDIQ.

insecurity. This is because documenting existing customary norms does not, by itself, alleviate the need for conflict resolution associated with those customary tenure norms that create tenure insecurity.

## **2.3 FARM REHABILITATION SERVICES**

### **2.3.1 BACKGROUND AND OBJECTIVES**

Many cocoa farms in Ghana have trees that are old and diseased, few shade trees and so need to be replanted. However, many cocoa farmers do not have the income or know-how to replant following climate-smart agroforestry techniques. The objective of the farm rehabilitation services component was to develop a financially viable service delivery model for farm rehabilitation.

In 2016 ECOM started working on a cocoa farm rehabilitation model, and TGCC supported the development of a financial model that involved clearing old or diseased cocoa trees and replanting a new cocoa farm with shade trees, while setting aside one third of the cleared land for cash crops. The model was designed to allow full payback of ECOM's farm rehabilitation services within three years. ECOM's first year of testing the new approach under TGCC resulted in lower yields and higher costs than anticipated. ILRG continued to work with ECOM to refine and improve the model and assumptions.

### **2.3.2 WHAT WORKED**

In 2019, ILRG awarded a grant to ECOM's Sustainable Management Services to equip field technicians with soil scanners – a new technology that could provide rapid analysis of soil conditions that would allow ECOM to tailor farm inputs to boost cash crop yields and cocoa tree health. The soil scanners measure soil pH, organic carbon content, nitrogen, phosphorus, potassium, and carbon exchange capacity. The grant also helped ECOM test various soil-less media technologies for cocoa seedling propagation such as coco peat, fiber and rice husk biochar to allow for the tap root to develop longer and stronger and long plastic reusable seedling cones to allow roots to grow longer. ECOM successfully produced 28,000 high quality and resilient cocoa seedlings and distributed 26,250 seedlings to farmers.

ECOM enrolled 29 farmers with a total of 87 acres in their farm rehabilitation program in Asankrangwa. Carbon stock data was collected on these farms and at ECOM's cost the farms were cleared for rehabilitation on a two-to-one ratio, with two acres rehabilitated into cocoa farms in the first year and one acre converted into annual food and cash crops. The model aimed to return the extra plot back to cocoa after farm rehabilitation costs were recouped from selling annual cash crops.

ECOM planted a diverse range of cash crops on the non-cocoa acreage to collect data, gain experience with diverse food crops, and inform the service delivery model. In 2019 a combination of cowpeas, maize, plantains, chilis, garden eggs (African eggplant), okra, and turmeric were planted and work was paid for by ECOM from their own resources.

The soil scanners were effective at rapid soil testing and ECOM used the results to develop soil treatment plans to improve soil quality prior to planting. This new technology is cost effective for it gives immediate on-site soil analyses. This led to increased costs that were absorbed by ECOM as part of their pilot. ECOM's work to improve cocoa seedling production was successful, with nursery survival rates of 95 percent and farm-level survival rates of 75 percent. While the farm-level survival rate was lower than the target, it was nonetheless a substantial improvement over a previous pilot where farm-level cocoa seedling survival rates were 40 to 45 percent. In the 2020-2021 growing season, ECOM planted five different species of timber as shade trees on the rehabilitated farms. Each hectare averaged 60 shade trees and 12 different species, with a total of 2,500 shade trees planted on 29 rehabilitated farms.

### 2.3.3 CHALLENGES AND LEARNING

Non-cocoa yields were lower in 2019 than initially forecasted, varying between 66 percent of expected output for turmeric and 10 percent for chili pepper. The low yields were due to a combination of factors such as low soil fertility, poor germination, pests, a lack of irrigation, and farmers harvesting and selling the crops on the side. The second season ran from 2020 – 2021 and included chili peppers, watermelon, and cabbage. Yields were higher across all crops compared to the first season but were still below expectations, ranging from 57 to 67 percent of projected yields. Low productivity and side selling were the biggest challenge, and while productivity increased across the years, it was still lower than anticipated with a lack of irrigation and reliance on rain a notable contribution to low yields. Side selling was a common problem for all crops except for turmeric, as there is a limited local market and it is not traditionally consumed. However, the turmeric quality was lower than expected and the value chain for the crop could not be developed by ECOM. It is important to note that the forecast yields were already discounted from agronomic data on standard yield expectations for all crops, meaning observed yields were even lower than what is considered normal or expected yields.

At completion of the ILRG grant, ECOM informed USAID that the field trials did not support scaling the current farm rehabilitation model, as observed yields and revenue did not cover rehabilitation costs. For example, soil fertility could be improved by the addition of compost, but compost making required high labor investments and transport costs. ECOM was reconsidering its approach to rehabilitation services but had not yet identified an alternative model at the time of project closure. The postscript to this report indicates that some farmers who participated in the program are now benefiting from the farm rehabilitation and are indeed seeing improved cocoa yields, and most likely, additional funds from other planted crops.

### 2.3.4 RECOMMENDATIONS

Farm rehabilitation is still needed across Ghana. Rehabilitation is important given the expected impacts of climate change on farms and the reduced resilience associated with aged or diseased farms or farms with insufficient shade trees. If cocoa farmers are unable to find financially viable options to maintain or replant cocoa, a shift away from cocoa to other annual cash crops can be expected. The LUPD discussed in considerable detail this likely scenario. If the cocoa industry or government of Ghana is unable or unwilling to support this, the cocoa industry will need to find other countries from which to source cocoa, and the government of Ghana will need to find other sources of income to replace the revenue currently generated by COCOBOD.

## 2.4 TREE TENURE FORMALIZATION

### 2.4.1 BACKGROUND AND OBJECTIVE

The government of Ghana claims state ownership of all “naturally occurring” trees, including on land privately held under customary title. This tree tenure regime, and inability of local people to capture economic benefits from trees, is a major driver of tree loss and disincentivizes shade tree planting or regrowth on cocoa farms. The government of Ghana is piloting tree registration to encourage shade tree planting and restoration of cocoa agroforestry, but this policy faces several challenges and broader reform is needed. To help increase understanding of tree tenure policy and implications for reform, ILRG carried out a policy analysis on options for reform and evidence from other countries as well as an economic analysis on the implications on tree tenure reform on Forestry Commission income. ILRG also tested tree tenure registration alongside the land tenure documentation activity, as discussed above.

## 2.4.2 WHAT WORKED

ILRG conducted extensive research on tree tenure policy globally and in Ghana and produced a comprehensive report, *Rooted in the ground: Reforming Ghana's forest laws to incentivize cocoa-based agroforestry*<sup>8</sup>. Three versions of the report were produced – a full length and comprehensive report, a shorter summary for policymakers, and a brief. The report analyzed tree tenure law and policy in Ghana, including the proposed tree registration policy and justifications for state ownership of naturally occurring trees, which is based in the 1992 Constitution. The authors proposed an alternative interpretation of the 1992 Constitution based on customary law and usage that would allow for the devolution of all tree rights to customary landowners. This interpretation, if accepted, would allow devolution without a constitutional amendment and there would be no 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. A similar tree registry in the Philippines faced significant challenges and was not successful. Further challenges with tree registration were identified by testing tree tenure registration as part of the land tenure documentation activity discussed above. Based on this analysis, a series of recommendations on tree tenure reform were prepared for the government, the cocoa sector, donors, and civil society. These were shared during workshops and events organized by others in Ghana and internationally, including pre-parliamentary consultations to kickstart the development of a consolidated national forestry law and at World Cocoa Foundation-sponsored events.

While devolution of tree tenure was identified as a needed policy reform, the report recognized that implementing this policy would impact revenue generated by the Forestry Commission. To better understand the financial impacts of the proposed policy reform, ILRG carried out an additional analysis of Forestry Commission income from harvesting naturally occurring trees and how this might change if devolution of tree tenure led to increased tree planting and tree cover off-reserve. Winrock International modeled two scenarios of increased tree planting and the local team researched government revenues from the timber industry and modeled changes in income based on current trends and future scenarios. The analysis found that while the devolution of tree tenure would lead to an initial loss of stumpage fees and drop in Forestry Commission income, total Forestry Commission income would increase over time to exceed “no reform” scenarios. This is because the Forestry Commission generates income from other parts of the value chain that would increase over time to more than compensate for the losses in stumpage fees. The reform would also generate substantial greenhouse gas removal and contribute to Ghana's Nationally Determined Contribution to the Paris Agreement on climate change in a much more cost-effective manner than the current government proposal outlines. These findings were presented at a final ILRG-sponsored workshop in Ghana in November 2022.

## 2.4.3 CHALLENGES AND LEARNING

Civil society and many non-governmental organizations were very receptive to the analysis and proposed reform, but the activity encountered push back from some service providers that benefited from tree registration. While carrying out the economic analysis, the team faced challenges obtaining key data from government sources and had to identify workarounds to collect information on expected government revenues. During the final workshop, the government informed ILRG that it had overestimated one source of revenue – though this error would in effect increase the economic benefits to the Forestry Commission of the proposed reform. An updated paper was released incorporating the revised data. The government also had mixed responses to the proposed reform, with some staff acknowledging problems with tree registration, though the official government position opposes devolution. The Forestry Commission expressed concerns that the devolution of tree tenure would

---

<sup>8</sup> O'Sullivan, R., Fischer, J. E., Antwi, Y. A., & Freudenberger, M. (2021). *Rooted in the ground – Reforming Ghana's forest laws to incentivize cocoa-based agroforestry*. Washington, DC: USAID Integrated Land and Resource Governance Task Order under the Strengthening Tenure and Resource Rights II (STARR II) IDIQ.

open a legal Pandora's box that could call into question government ownership of subsurface mineral resources – even though these are expressly dealt with in the 1992 Constitution whereas naturally occurring trees are not. Substantial additional work including coalition building and sustained government engagement is needed to drive policy reform. This was outside the mandate of ILRG and needs to be taken up through a coalition of stakeholders.

#### 2.4.4 RECOMMENDATIONS

Sustained efforts are needed to overcome vested interests and reform tree tenure policy in Ghana. Tree tenure reform is unlikely to surface as an election issue, so internal champions within the government need to be identified and supported by a coalition of donors, the cocoa industry and civil society. Alternatively, policy reform could be linked to other donor support or funding such as that provided by the International Monetary Fund.

## 3.0 REFLECTIONS ON SUSTAINABILITY AND IMPACT

ILRG conducted a follow-up field visit to Asankrangwa in May 2023 as part of ongoing engagement with ECOM counterparts under another ILRG-supported project in Ghana on women's economic empowerment in cocoa value chains. The team, which included ILRG global staff, ILRG Ghana consultants, and ECOM Ghana staff visited three partner communities<sup>9</sup> with the goals of understanding how the activities above have been adopted within the community and through ECOM's practices and to consider future recommendations.

### 3.1. OBJECTIVES AND METHODOLOGY

The analysis below reflects on three areas of the work: PES; farm rehabilitation; land documentation; and participatory land use planning. The analysis examines how these investments have been perceived by communities, by the company and their prospects for lasting success. The data collection methods consisted of several days of focus group discussion and individual interviews with a limited number of project beneficiaries through focus group and key informant discussions. An in-depth interview was held with the Queen Mother of the Stool Chieftaincy in Asankrangwa. In-depth interviews were also held with ECOM staff in Kumasi and Accra.



Rehabilitated cacao farm with shade trees.  
MEAGAN DOOLEY/ILRG

---

<sup>9</sup> The team visited the following communities, Domeabra, Nyame Nnae, and Yirase.



## 3.2 PAYMENT FOR ECOSYSTEM SERVICES (PES)

Toward the end of the ILRG activity, Hershey's decided to make direct payments to farmers for planting shade trees. ECOM administered the experiment, and many features are on-going. This pilot was put in place because farm rehabilitation did not work out as expected. Early assumptions about the profitability of farm rehabilitation were wrong. Farm rehabilitation costs were simply too high from the cocoa company perspective. In the end, , and the lack of communally-managed "commons" land meant that land use planning exercises were not expected to generate significant forest-related benefits. Internationally, PES has been heralded as a novel and direct way to deliver environmental outcomes and ensure that those bearing the costs of delivering the outcomes are compensated. Yet, structuring performance payment models that influence long-term behaviors remains a challenge.



A cacao shade tree.  
MEAGAN DOOLEY/ILRG

The ILRG team worked very closely with the designated local communities to design the Payment for Ecosystem Services model and with the full concurrence of the Hershey and ECOM staff. At the outset, the ILRG implementing team anticipated that direct PES payments to farmers would commence in July each year for three years (during the lean or "hungry" season). However, due to delays in farmer registration, tree counting, and setting up digital payments, the first-year payments went out to farmers in December 2022. Farmers apparently accepted this shift because funds were received just before Christmas and were anticipated to be used for holiday gifts and food. ECOM plans to send out year two payments in December 2023 and year three payments in December 2024. This change in payment schedules was communicated to the USAID endline evaluation team in May 2023 in case changes needed to be made to the data collection schedule.

### 3.2.1 DATA COLLECTION/TREE COUNT VERIFICATION

ECOM engaged local committees to verify the performance of farms in relation to the PES contracts. There was some initial hesitancy from the committees to help ECOM with this effort. While members viewed their committee work as a voluntary contribution for community development, committee members were not willing to do this work for free for a private sector entity. ECOM agreed to pay committees a nominal fee (US\$0.5 per farm) to verify tree counts. Some committee members have received their payments, but some have not, which led to incomplete work in some places as of May 2023.

ECOM outsourced data collection in Domeabra to field agents in 2023 (though they indicate the tree committee will take over in the future). During field interviews, many complained about the poor quality of work of the agents. Community members expressed that field agents did not visit all the farms. Others carried out a very cursory count for trees on one acre and then moved on without verifying the whole parcel. ECOM acknowledged that these field agents did a poor job, and ECOM is not planning to engage them again.

ECOM noted that data collection/tree verification was a challenge because it was hard getting farmers to make time for the count. ECOM staff reiterated regularly to the communities the importance of making oneself available to ECOM or tree committee staff during the tree count to ensure timely PES payments. Community members in Domeabra suggested coordination approaches to carry out the tree count, but it is unclear whether these will be implemented by ECOM moving forward.

### 3.2.2 COMMUNITY INFORMATION AND OUTREACH

Though community members were familiar with the PES system and ECOM said they have done community communication and outreach on the scheme since the ILRG activity closed in 2022, there seemed to be much confusion among community members on the tree registration, verification, and payment details. More community training and outreach are needed. Data collection visits frequently devolved into clarification regarding payments and modalities. For instance, in Domeabra some community members thought that they were supposed to receive US\$13 /acre/year, rather than US\$4.33 /acre/year for US\$13 total over the three-year life of the PES program.

Originally, ECOM was not sure they had enough funds to pay all farmers who enrolled in the PES scheme. After discussing with communities (which community members verified), ECOM agreed that they would pay each farmer for one acre each the first year to ensure all who participated at least received some form of payment. Community members agreed this was the most equitable approach. After the tree count, ECOM found they had enough funds to pay everyone based on acreage as was originally envisioned under the concept design. ECOM stated that it communicated this change to community members, but there were questions in each community about why their neighbor received more than them – potential recipients thought everyone was receiving the same lump sum.

Beneficiaries of the PES payments did not seem confused or opposed to shifting the expected July payment to December. However, during the focus group interviews, some confusion emerged around the issue of tree seedling distribution. Some community members did not understand that the trees requested during the first growing season would be delivered the following season. ECOM argued that they needed a year to obtain from farmers the numbers and types of trees desired and then time to grow seedlings in nurseries. Beneficiaries hoped that fruit trees requested could be obtained immediately.

“It was a great joy receiving the money I was paid through the PES system this year. It was like manna from heaven.” – Woman *abunu* farmer, Nyame Nnae

“I was happy to receive money from the PES scheme. I used it for school fees for my children and food for my family. We also used some for funerals and other social events in the community, and put some towards helping complete the building of our new house.” – Woman landowner, Nyame Nnae

### 3.2.3 PAYMENT DISTRIBUTION

During the field interviews with focus groups, it became quickly apparent that there were significant problems implementing the PES payments during Year One, after ILRG’s engagement ended. At the time of the field visit, ECOM had distributed some first-year PES payments to registered farmers, but not all. Each of the field focus group discussions devolved into tense and highly confrontational engagements. These discussions demonstrated a wide gulf of understanding about how the PES system was intended to operate with the beneficiaries.

ECOM is committed to making payments transparent and traceable. To facilitate ease of payment as well as transparency, ECOM opted to use mobile money to distribute payments. However, there were numerous issues with this approach. In Ghana, one cannot register for a mobile money account without holding a national ID card, which many of the intended recipients do not possess. As a result, many intended recipients registered with a friend or family member’s mobile money account. ECOM found there were many duplicate mobile money accounts on their list, which took time to verify. ECOM was able to make payments to 241 out of 342 registered farmers. ECOM is continuing to follow up with the remaining 101 to verify their mobile money numbers.

Understandably, confusion over the payment of funds to community members is a serious matter. Registered farmers want to know why some have been paid, some have been paid twice (likely money

for two different farmers who registered with the same mobile money number) and some have yet to be paid. For example, the chief in Domeabra is one of the individuals who has not been paid, so at least it does not look from the outside like the powerful got paid first.

Particular issues arise with respect to inclusion, as women, elderly, and marginalized groups are less likely to have the national ID or their own mobile money account. ECOM is committed to putting in place a traceable payment method and is trialing a stronger system in another region alongside World Resources Institute. However, delays in payments and misunderstandings around how much registered farmers are expected to receive are undermining the credibility of the experimental PES scheme. This is not surprising, as the logic behind performance-based PES schemes has been well established but the transaction costs and logistics for making them operate well are significant.

### 3.2.4 IMPACT ON FARM LEVEL PRACTICES

Though farmers were upset about logistics associated with the PES, recipients noted that they expected funds to be sufficient to motivate them to protect and maintain trees on their farms (though everyone said the payments should be increased given the inflationary situation in the country).

Tree cutting is still a challenge for on-farm PES sustainability. The focus group discussions suggested that farmers are willing to engage in agroforestry and plant fruit trees, but there is more resistance to shade trees. This is likely because fruit trees generate direct profits from sales whereas the cause and effect of shade tree planting is less direct.

“The tree committee has gotten many complaints about the PES payments. Going forward make sure that you pay one time for everyone.” – Man *abunu* farmer and tree committee member, Nyame Nnae

“The project went well. The only issue has been the non-payments for PES – some people got paid, some got paid twice, some not paid at all. I myself haven’t gotten my payment yet. It is hard to get people to come to further training if they haven’t received their last payment.” – Chief of Domeabra

“PES payments were not fair, it did not feel like they were linked to the number of trees on the farm. Some farmers are to blame, ECOM gave everyone a timeframe to have their trees counted but some people didn’t do it.” – Chief of Yirase

“The tree committee was given training, told they would help with the tree count this year. They asked for an incentive, which never came, so they stopped working.” – Woman community member, Domeabra

Cocoa farmers complained that the government forest service awards concessions to outsiders to cut timber trees in their communities. When large timber trees are cut, they often bring down nearby cocoa trees as well. During these discussions, interviewees also noted that communities protest against the arrival of chainsaw contractors who come into the community to cut timber trees at will. These outsiders come armed with paperwork supposedly giving them authorization to cut. This underscores the importance of broader tree tenure reform in Ghana needed to influence household incentives around trees on-farm.

While USAID had intended the PES scheme to apply to communally managed land, ECOM acknowledged that off-farm PES has not had much uptake, in large part due to changing land use pressures to convert communal land into competing galamsey gold mining interests. A woman interviewed from the community of Domeabra summed up the issues very well: “Youth are not motivated to farm. Galamsay is a major threat to the sustainability of cocoa farming. There is faster money from mining, and the cocoa prices are low.” ECOM is doing its best to try to reach shade tree planting targets, but this is a struggle.

### 3.2.5 PES PROGRAM SUSTAINABILITY

ECOM noted that the handover between ILRG and ECOM on the PES front left a gap as the ECOM implementation staff had limited ownership of the activity. When questions arise about how the PES scheme was designed, ECOM has no one to ask. ECOM field staff were not fully engaged in the initial outreach and communication, resulting in ambiguities when community members came forward with complaints about payment amounts and timing. They said this was a core learning that led to stronger implementation in the Women's Economic Empowerment (WEE) partnership with USAID. ECOM has been involved in this initiative since day one and it is embedded in internal work streams. In contrast, the Accra team at ECOM felt that the deforestation work was largely externally imposed with only two staff knowing the ins and outs. Interviews with staff in Kumasi and Accra noted that a two-year handover period would have been helpful, especially for the PES work (there was better partnership on the farm rehabilitation work so ECOM had a better idea of what was done there). Transitions of leadership within ECOM and Hershey's throughout the project time period likely led to this gap, as well as the relatively late introduction of this workstream.

About 100 new farmers have been informed of the PES scheme, though they are not yet all registered despite their interest. ECOM is trying to digitize the registration process to reduce delays.

The ECOM team noted that formal land or tree tenure recognition had a positive impact on the PES system, as it was easy to verify acreage for payments. ECOM has been distributing shade trees for 10 years but has never seen much uptake due to a lack of security of tenure – people are afraid to maintain or cut new trees if they do not have secure tenure. As a result, internally there is a recognition of the opportunities that this work has provided.

ECOM has expressed interest in expanding the PES system elsewhere in Ghana, but also notes that it will be difficult because land documentation does not exist in other places like it does in Asankrangwa. ECOM is considering whether to scale in other places where agroforestry work is expanding, but they are hesitant to expand direct payments for maintaining trees (fruit, shade) until there is a better national system for land/tree registration. ECOM indicated they would need additional expert help to set up an improved system.

### 3.3 FARM REHABILITATION

As ECOM noted at the end of ILRG, they did not see the farm rehabilitation model as economically viable. The ECOM team indicated that COCOBOD has since launched its own farm rehabilitation scheme, focused on replacing Cocoa Swollen Shoot Virus (CSSV) infected trees. The COCOBOD work is nationwide in scale. COCOBOD recognizes that abunu farmers do not want to cut down their cocoa trees because this triggers an end to their lease with the landowner. Under the COCOBOD model, the government is providing an incentive payment to the farmers, a portion of which is given to the landowner. COCOBOD has launched the project in the north and west to date. For now, ECOM is not looking into any alternative model for rehabilitation on their own; they view the COCOBOD work as sufficient, despite previous observations regarding the timing and



Rehabilitated cacao farm with shade trees and mixed tree planting of cocoa and bananas/plantains.  
MEAGAN DOOLEY/ILRG

quality of seedling distributed through COCOBOD activities. ECOM is collecting data on tree age and disease among their farmers and informing farmers about the COCOBOD rehabilitation work. They have also encouraged farmers to do rehabilitation work themselves, focusing beyond old and CSSV infected trees. ECOM is also providing seeds and training to farmers who want to rehabilitate themselves, recognizing the criticism referred to above.

### 3.3.1 ECOM REHABILITATION INITIATIVE

The ILRG and ECOM field team visited one of the farms rehabilitated by ECOM in Nyame Nnae. Landowner Isaac Boateng's farm was rehabilitated in 2017 with the technical and financial assistance of ECOM. ILRG and ECOM helped him plant shade trees on his four-acre farm. He said he has had good productivity since then and the shade trees are flourishing. He has since rehabilitated 12 of his other farms at his own expense thanks to the success of his ECOM rehabilitated plot. He says his farms are now self-sustaining – the increase in productivity has covered the cost of the rehabilitation. This experience raises the question of whether ECOM abandoned their rehabilitation scheme too early. No information is available about how many other farmers are replicating the rehabilitation model launched by ECOM. Further field research is needed to determine whether other farmers benefited from farm rehabilitation even if the model was abandoned by Hershey and ECOM.

### 3.3.2 COCOBOD REHABILITATION INITIATIVE

The ILRG and ECOM field visit team met with a farmer who had received rehabilitation support from COCOBOD in Nyame Nnae. Abunu farmer Abdul Wahab enrolled in the COCOBOD scheme two years ago on his 3.5-acre plot. In addition to receiving new cocoa saplings, he was given fruit (pear, plantain) and shade trees. He is positive about the rehabilitation so far, though the cocoa trees are still young. He thinks more people should take part in the COCOBOD scheme because it gives tenant farmers the opportunity to increase productivity and diversify production. Wahab initially discussed participation in the rehabilitation scheme with his landowner, who supported the initiative to plant young cocoa and shade trees. Since an abunu agreement was already in place, Wahab paid the landowner a small token to gain permission to rehabilitate his half with COCOBOD support. He said he learned a few new practices under the rehabilitation scheme, including a pegging system for trees so that one only has to re-plant those trees that don't survive.

Some farmers in the COCOBOD rehabilitation scheme cut back their diseased trees, but they were not immediately replanted. This is a disincentive for other farmers' involvement. Communities lack trust that COCOBOD will carry out its promises. Many community members in Domeabra said they are afraid COCOBOD will come and cut down all cocoa trees on their entire farm, but new cocoa and shade tree seedlings might not come in time for replanting. As a result, some farmers are doing rehabilitation on their own on a portion of their plot so they still have some trees producing each year. They said that if COCOBOD really did the work within two years like they said they would, there would be no issue.



COCOBOD rehabilitated cacao farm.  
MEAGAN DOOLEY/ILRG

The Chief in Domeabra had his 10-acre farm rehabilitated by COCOBOD. He said he had to be actively involved throughout the process or things would not have gone well. COCOBOD used just a few laborers to do the tree cutting and clearing, so farmers had to wait a long time for COCOBOD to arrive on one's land. The chief allowed COCOBOD to cut down cacao trees, but he brought in extra plantains to make up for the lost cocoa income during the replanting period. The chief also hired extra laborers on his own to weed beyond what COCOBOD was doing. After two years, his farm is doing well, but he said others who thought COCOBOD would do all the work have not seen large changes in productivity.

### 3.3.3 REHABILITATION SUSTAINABILITY

The experiences between the private sector-led rehabilitation and incentives associated with the COCOBOD rehabilitation are unsurprising. The nation-wide COCOBOD scheme offers a low-cost approach, though farmers are wary of the quality of COCOBOD implementation. Farmers are being careful, while taking advantage of the scheme when they can access it. The ECOM/ILRG scheme seems to have been successful from a farm perspective, however, it was too costly for ECOM to absorb on its own, given the need for upfront investment and long-term financing. The scale of rehabilitation required in Ghana is enormous however and there may be room for longer-term partnerships between COCOBOD and companies like ECOM. These, however, were not examined under the ILRG program.

## 3.4 LAND DOCUMENTATION

Community members and traditional leaders were very positive about the land documentation work that occurred under ILRG with the support of Meridia (Landmapp). This perspective differs somewhat with the points of view of the ILRG implementing partners and technical specialists. With the passage of time, community members who gained land documents may have come to appreciate them more than at the outset. They noted land documentation agreements and certificates (Farm Seal) have resolved many conflicts between landowners and tenant farmers, and the documents continue to be referred to by chiefs, landowners, and abunu tenant farmers. Some mentioned their interest in seeing more tree registration, but most feedback focused on the land documentation process. Leaders and community members mentioned that the activity built a lot of trust and goodwill with community members, especially when they reimbursed those who had paid full price for documents when the decision was made to switch to a token payment model to increase uptake. A few emerging issues did arise where documents do not seem to meet current needs, such as when a landowner dies, and second-generation landowners take over. Former ILRG Ghana ADR Specialist noted that some of these issues discussed were new to him (not raised during the project period) and are an area for further exploration.

### 3.4.1 ECOM PERSPECTIVES

Land documentation seems to have had a positive impact on PES. ECOM has distributed shade trees for 10 years but never saw much take up due to a lack of secure tenure. Many landowners in the past were afraid to maintain newly planted trees for fear of violating their lease, so they did not want to engage in any tree renewals. ECOM staff reflected that they believe the land documentation process gave farmers increased security and willingness to plant shade trees. ECOM is interested in increased documentation for future PES work, but they are not positioned to support this directly. ECOM is looking for a new project or partner to take on future land documentation.

### 3.4.2 TRADITIONAL LEADER PERSPECTIVES

Queen Mother Akua Asamoah, Chief Atuamas and local chiefs in the three communities were all very positive about the land documentation work. They said it has resolved most conflicts between

landowners and tenants and brought peace to the communities. They said when there are issues, the documents are brought out and referred to. The Queen Mother confirmed that copies of the documents are stored at the palace and are brought out during disputes.

The Queen Mother and regional chief were asked about planned future documentation work in the area. They said that the system is already in place – if an abunu/landowner share the land, they must document the arrangement. They view the ILRG project as a complement to the Stool's existing system. Interviewees noted that most everyone in the Stool now has a land document. The challenge now is to update records for second generation transactions (i.e.: deaths, sales, leases).

“The Stool bought a cabinet to store the documents, the palace has a copy. We bring out these documents when there are disputes.” – Queen Mother Nana Akua Asamoah I, Asankrangwa

“The land documentation was helpful to farmers. They helped with difficulties between the tenant and landlord. They have promoted unity. If the tenant's trees are overgrown, they now discuss and pay the landlord a token, and then they are ready to go. Now shade trees are protecting our cocoa from the sun. Both landlord and *abunu* are now one.” – Chief of Yirase

“The documentation is working. Only when a tenant doesn't tell the landlord about rehabilitation is there an issue. If they go by the documents, it is easier.” – Chief of Yirase

“If any farmer/landowner has not signed a document, their personal relationship is not good. If the relationship is not good, the documents will not work.” – Chief of Yirase

“There have been no disputes since there is documentation as to ownership and responsibilities. If issues arise, they have documents, and it is easily resolved.” – Regional Chief of Kwabeng (woman)

“This process has brought more unity between tenant and landowners. Any discussion is now easier. It is now easier for the tenant and the landowner to communicate on land issues.” – Palace spokesperson and chief farmer, Nyame Nnae

### 3.4.3 COMMUNITY FOCUS GROUP PERSPECTIVES ON SUCCESSES

Traditional leaders and community members emphasized that the land documents have been helpful and are working. This perspective may be different from what was perceived at the time of implementation. This issue needs to be explored in more depth through the planned USAID End-Line study. Now, if a tenant wants to rehabilitate their land, they go and have a discussion with their landowner, offer them a small token payment, and then rehabilitation by the tenant abunu farmer can proceed. The documents are the basis of this relationship. While a few individuals said they still have issues with their landlords, the vast majority said that they have been able to rehabilitate their land after productive conversations with their landlord.

Both tenants and landowners said they found value in the documents – both emphasized that there is now no conflict between them. The Chief of Domeabra said that there was a case where a tenant farmer replanted trees without asking the landlord and the landlord wanted to take the land back. He looked at the documents and discussed with the parties the process that should have been followed for replanting. He was able to resolve the issue with them and the land was returned to the tenant after paying the landlord a small token.

People are now aware of their land size, which makes it easier to make decisions about the amount of agricultural inputs needed on their farm. The land documents were helpful for the PES scheme because PES payments were easier to calculate based on more accurate statistics about land size and trees planted.

Documentation helped streamline the succession process and helped landowners update old documents with current tenants, as well as track how many generations tenants have been on the same land.

“Land documentation was successful. Before when a tree died, it was difficult to agree with the landowner to replant. With the land document this is easier now. We sit with the landowner and have a peaceful discussion, pay them a small token, and then you are good to go.” – Man tree committee member, Nyame Nnae

“The documents have helped bring peaceful coexistence. If the landowner agreed to sign, there is now peace. We discuss, pay a token, and then can rehab the farm.” – Man community member, Yirase

“Farmers and landowners now have an agreement about trees, they share the costs. Before farmers lost access to the land [when they cut trees]. After [land documentation] both landowners and tenants agreed to the inclusion of trees. When there are trees, ownership is shared, they split them. This system is working.” – Queen Mother Nana Akua Asamoah I, Asankrangwa

“We appreciate that the land documentation was free. Under the normal process we have to pay, which makes it difficult to get.” – Man community member, Yirase

“With the inclusion of trees [in *abunu* agreements], people are now pushing to grow more trees. Before when the cocoa died, farmers would lose access. But now they have access until they harvest or cut the trees.” – Queen Mother Nana Akua Asamoah I, Asankrangwa

#### 3.4.4 COMMUNITY FOCUS GROUP PERSPECTIVES ON LIMITATIONS

Chiefs and community members emphasized that the relationship between the landowner and tenant matters – documents will not help if there is a bad interpersonal relationship. It seems documents have formalized pre-existing good relationships but have not resolved outstanding tensions in poor relationships. The ADR processes introduced by the ILRG project may have helped those *abunu* farmers with poor relationships to sign documents with their landowners, but the documentation itself does not seem to help resolve ongoing tensions – tensions that are deep and long standing in nature.

The documents have also not helped with the issue of land fallows. One farmer in Domeabra talked about how, if his trees are infected with disease and cut, he is worried there is something in the soil that will infect the new trees. Thus, he needs to let the field life fallow for a season. But his landlord says if he is not actively farming the land his lease becomes invalid. This issue of leaving land fallow for a period before replanting was not explicitly addressed in the land documentation process.

Another issue that arose was second generation landlords not honoring initial agreements. If a landowner dies and his children inherit the land, sometimes they do not view the old land document as valid. There were a few stories of tenants approaching these new landlords and asking to rehabilitate their portion of the land. The landlord insisted that if they did so, they had to rehabilitate the landowners' portion of the land as well at their own expense. The landlords said all the trees are old, so they all need to be replanted. They said the tenant should leave the land if they do not want to replant the entire land. The tenants said they are unable to cover the cost of rehabilitation of both parcels.

This issue may be one encountered by second generation landowners who were not part of the original agreement/discussion between landowner and *abunu* farmer. These second-generation landowners sometimes believe the agreement ends when the original landowner dies, and that the agreement should be renegotiated at that time. This appeared to be solely an issue in Domeabra, though when asked about it in Yirase, interviewees said this is happening there as well. ECOM staff said this is a new issue and seems likely to grow in the future as more of the original landowners pass away and the second generation takes over. Community members argued that this issue could be solved by COCOBOD if they came in and rehabilitated the entire cocoa plot.



A few farmers pointed out that the documents do not set the terms for the discussion between landlord and tenant – they just say one should discuss the rehabilitation with the landlord. As a result, some landlords are being fair and asking for a small token payment in return for rehabilitation by the tenant abunu farmer. Others are demanding large payments, insisting tenants rehabilitate the entire plot, and if not, deny tenants outright use of the land. Abunu farmers suggested that the terms of a reasonable landowner/tenant discussion should have been spelled out in the land documentation agreements. Abunu farmers said they need help to negotiate fair agreements with the landlord.

“There are still issues when the relationship between the farmer and landlord is not good. It is hard to rehab the farm then. Personal relationships are still key.” – Awinba Anoka, *abunu* farmer, Nyame Nnae

“I have an issue with the land arrangement here. I moved here from the north. If I knew that if a tree dies, I lose access to the land, I would not have accepted the agreement.” – Man *abunu* farmer, Nyame Nnae

“The documentation helped but there is still some confusion. Some landowners are still not allowing replanting. They signed the documents but now rescinded their agreement to rehab the land.” – Woman community member, Domebara

“The terms of renewal are changing with succession. They are demanding we take care of the landowner’s plot as a term of our agreement [to rehab our plot] without any payment, all at our own cost. This is not fair. But the whole farm does need rehabilitation – the trees are now 30 years old.” – Woman community member, Domebara

### 3.5 LAND USE PLANNING AND ALTERNATIVE LIVELIHOODS

The land use planning process focused on the use of simulation exercises (ECO Game) introduced as the COVID-19 outbreak occurred. As a result, community meetings were few and far between, and for this reason it seems that the land use planning process had less lasting impact than some of the other activity components. With prompting from former ILRG staff about the ECO Game activities, most focus group participants remembered taking part in these exercises. The activity consisted of community discussions around scenarios regarding allocation of different areas of the village territories for different uses (i.e. crop production, cocoa growing, fallows, land restoration, etc.). The ECO Game exercises led to the preparation of Community Action Plans. These aspirational plans do not appear to have been implemented to date, though community members note no new projects have come into the area since ILRG ended that might benefit from the action plans. That said, some community members observed that the ECO Games were helpful. One community member suggested that the community should be using all the land for productive purposes because some landowners were doing nothing productive with their holdings. This comment touches on a key issue - what is “productive” and from whose perspective?

“We are following all that we were trained in. Some are using marshy areas for rice. Since the land use planning we have not had any new projects come to the area, so we haven’t used it again.” – FChief of Yirase

“I believe we have only one land, I won’t allow anyone to destroy the land [through mining]. I tell people if you are ready to refill the land after you are done [mining], I might allow it, but no one has been willing so far.” – Chief of Yirase

“It is difficult to ban mining, the youth are so involved. It is quicker money. The government needs to increase the prices of cocoa and have more incentives for cocoa farming to convince youth to move back.” – Chief of Domeabra

### 3.5.1 GALAMSEY ARTISANAL GOLD MINING

Two of the chiefs visited do not allow illegal gold mining in their community, which was encouraging. However, right outside of the community limits there is mining occurring on both sides of the road.

Community members commented that all youth are involved in gold mining, so it is very hard to obtain labor for cocoa growing. Farmers must often recruit workers in the adjoining community. Farmers said they understand the draw of artisanal gold mining, given the current low price of cocoa. Many farmers view galamsey as a direct threat to the cocoa economy. However, they acknowledged one cannot live on cocoa alone right now – youth can do better by earning US\$8.75 per day washing gold. The farmers interviewed all noted that COCOBOD needs to step in and raise the cocoa prices – many pointed out the discrepancy between Ghana cocoa prices and those of Cote d'Ivoire.

Interestingly, the Queen Mother and Regional Chief said they have seen a decline in galamsey in the area, but the field visit team was not convinced of this claim. The field team observed gold mining everywhere, but the chiefs insisted mining has been reduced. Some community members interviewed said a few chiefs have banned gold mining outright and that this is beginning to influence others to do the same. At the same time, government is making it difficult to purchase the machinery needed for mining.

“We got to know *galamsey* is not good. We should use the land for cocoa and shade trees, including the marshy areas.” – Woman community member, Yirase

“Most of us don't agree with *galamsey*, it destroys the land. There is no arrangement for future generations.” – Man community member, Yirase

“*Galamsey* threatens food security, but we aren't getting enough money from farming. That's why people are turning to mining. We need government help to get enough money from farming.” – Man community member, Yirase

“I have a plot in a community where the chief does not support *galamsey*. Someone came to prospect and the chief didn't allow it. Some are gradually starting to change their minds, but we need support to reclaim the degraded areas.” – Queen Mother Nana Akua Asamoah I, Asankrangwa

“Illegal mining has drastically reduced; government is banning the machines needed. Initially, there were wetlands available here, mining has damaged these.” – Queen Mother Nana Akua Asamoah I, Asankrangwa

### 3.5.2 ALTERNATIVE LIVELIHOODS

Communities said they are now allocating more land for alternative crops – pepper, maize, and cassava. In Nyame Nnae, farmers noted that they are now growing cabbage for sale to Chinese buyers who are actively buying and exporting agricultural crops in the area. This is a new source of income for young women specifically, who are often responsible for non-cocoa farming. As noted during the implementation phase, marshy lands are presently being converted for rice cultivation. Income from cocoa growing is generally saved for future investment in the trees (labor for weeding, collecting, and processing cocoa), while crops are for disposable income. Some people interviewed said they have seen some increase in income due to expanding field crop cultivation.

## 3.6 CONCLUSION

Between 2016 and 2022, USAID worked with Hershey's and ECOM on a diverse set of activities in Nyame Nnae and neighboring communities that sought to address insecure land tenure, pressures on trees in forests and farms, and declining cocoa yields. The interventions were negatively influenced by a range of factors including COVID-19, questions of ownership of the activities by ECOM and ILRG implementation staff, tensions over macro-economic drivers like the gold mining industry, a lack of interest in tree tenure reform at the national level, and a rapid (and changing) implementation timeline

which led to miscommunication. Nevertheless, the individual elements of the program each generated significant learnings regarding the importance of addressing land documentation, long-term contracts between abunu farmers and landowners, the strong interest in farm rehabilitation by local farmers, as well as the importance of secure tenure in addressing local level tensions and conflict. The planned USAID End-Line study will need to delve into these lessons learned and broader impacts. Adaptive management allowed most implementation challenges and miscommunications to be resolved (for example when farmers were required to pay different amounts – or nothing at all for their land certificates). It is clear that each of the interventions requires a long timeframe to see results, as well as consistent communication and adaptation during the first years of new models like PES. Hershey's and its partner ECOM made great strides in testing a new PES model - now is the time to learn even more about the replicability of the initiative to the broader cocoa sector. The ILRG activity did not unlock a company-wide investment for Hershey's and ECOM in land documentation, nor stimulate national level tree level reforms. However, it did demonstrate that these are extremely important components in the success of the cocoa economy moving forward. ECOM through the institutional support from Hershey's was able to adapt its partnership approach with USAID and ILRG to new programs, based on learning from this activity and is already implementing long-term changes nationally. The experiences and findings from this work will be further explored in an impact evaluation and should continue to be discussed as Ghana searches for a holistic way to reduce deforestation, increase farm rehabilitation, and increase farmer livelihood security going forward for farmers in all types of tenure regimes.

**U.S. Agency for International Development**

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

[www.usaid.gov](http://www.usaid.gov)