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COMMUNITY LAND PROTECTION PROGRAM

Midline Performance Evaluation Report

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Community Land Protection Program

Midline Performance Evaluation Report

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ACRONYMS & ABBREVIATIONS

ATE	Average Treatment Effect
CLPP	Community Land Protection Program
DiD	Difference in Difference
ERC	Evaluation, Research and Communication
FDR	False Discovery Rate
FGD	Focus Group Discussion
ICC	Interim Coordinating Committee
KII	Key Informant Interview
LMC	Land Management Committee
NGO	Non-Governmental Organization
PE	Performance Evaluation
SDI	Sustainable Development Institute in Liberia
STARR	Strengthening Tenure and Resource Rights

EXECUTIVE SUMMARY

Communally-managed land and natural resources provide an essential input into communities' social, political, and economic sustainability in developing countries, particularly in agrarian societies. Increased land demand and fast evolving norms of land administration pose an important question: how can communities protect and benefit from communal land in the face of changing laws and markets? We study one possibility, the Community Land Protection Program (CLPP), in the West African state of Liberia, to better understand whether initial external support of community management structures can empower communities to autonomously and progressively govern their most important natural resource.

Since the late 1960s, several African nations have passed laws that recognize and support the central role of communal tenure in rural land administration and management. These include Botswana, Burkina Faso, Ghana, Mali, Mozambique, Namibia, Niger, Senegal, South Africa, Uganda, and the United Republic of Tanzania. In some instances, communal land rights have received the same standing as state-issued land rights and included the integration of customary rules and dispute resolution bodies into the national formal system (Wily 2000). This trend is also evident in Liberia, where nascent land reforms provide a potential legal framework for protecting community land.

Developed by the international legal empowerment organization Namati¹, the CLPP is a global program that seeks to empower communities² to successfully protect their land rights through an international framework that bundles technical mapping and titling support, peace-building dispute resolution, and governance-strengthening initiatives to support communities to use national land laws to protect their customary and indigenous lands³. All program activities place special emphasis on strengthening the rights of women and marginalized groups by addressing intra-community power dynamics. Since Liberia's land reform process began in 2009, Namati, the International Development Law Organization and the Sustainable Development Institute in Liberia (SDI)⁴ have assisted rural communities through the CLPP to address the critical need of protecting community land and improving local resource governance for the overall benefit of citizens.

Namati, the International Development Research Centre, and USAID's E3/Land and Urban Office jointly funded a rigorous performance evaluation (PE) of CLPP activities in Liberia. These interventions were delivered at the community level in three rural counties in Liberia over the course of 12–18 months from 2016–2017, and midline data was collected approximately 10 months after the commencement of programming.

1 Namati is an international global network that works with local civil society organizations to develop and implement legal empowerment interventions.

2 The definition of 'community' varies according to what is appropriate for a specific location. During the first step of the community land protection process, the facilitating organization consults regional leaders, relevant government officials, and community members about how best to define the 'community' that will undertake land protection activities based on cultural, political, and geo-spatial realities on the ground and the preferences of local leadership and community members. The CLPP urges participating communities to include all community members in the CLPP process: men, women and marginalized groups.

3 For more information about CLPP, please visit: <https://namati.org/ourwork/communityland/>.

4 SDI is a civil society organization in Liberia dedicated to protecting land, property and resource rights for Liberian citizens.

The effects of supporting communities to protect their community land remain unknown. There have been no rigorous studies on the relative efficacy of community land protection efforts (Lawry et al. 2014), although there have been rigorous studies on the ability of communities to resist deforestation pressures (Busch and Ferretti-Gallon 2017) and case studies on efforts to improve community governance, such as the previous qualitative assessment of the pilot of the CLPP in River Cess county, Liberia (Knight et al. 2013). This evaluation fills this knowledge gap on the benefits of community land protection by rigorously investigating the effects of the CLPP model on improving tenure security, local empowerment, resource governance, and livelihoods.

Previous research has focused on the economic effects of *individual* land titling programs and the positive returns that these programs have for household-level economic development (Galiani et al. 2010; Lawry et al. 2014). In contrast, this study explores the political, social, and economic effects at both the household and community level of protecting *community* land, including communal lands and individual farmland⁵. We incorporate a number of institutional, management, and governance indicators in our study that build on the seminal research on common pool resource governance by Ostrom (1990), as well as more recent work by Agrawal and Chhatre (2006) and Persha et al. (2011), measuring indicators related to local land governance institutions, the existence of land-related rules, monitoring and enforcement, and sanctioning of rule violations that draw from Ostrom's common pool resource governance theory and recent studies linking these aspects of land governance to forest condition (e.g., Gibson et al., 2005; Hayes, 2006; Chhatre and Agrawal, 2008). We also incorporate variables on the perceived effectiveness of these institutions, including household confidence about the capacity of community institutions to enforce land rights when disputed and household satisfaction with local leaders' land management.

The evidence on whether supporting private versus communal rights is better for women and other vulnerable groups is limited (Meinzen-Dick et al. 2017) and what does exist is mixed. Privatization and formalization of property may place constraints on women's right to property as women may lose access to informal or undocumented rights during the formalization process (e.g. Lastarria-Cornhiel 1997). Women's movements have also challenged customary property rights institutions that concentrate power in mostly male leadership structures while excluding women and other vulnerable groups (Tripp 2004). Studies of women's economic empowerment that tend to focus on intra-household dynamics (e.g. Doss 2005, 2012) cannot speak to what might happen to women's political, social, and economic position should an outside force seek to increase their property rights. While, there is some evidence that "push" centered norm change works more generally (Blattman et al. 2014; Cloward 2014; 2016), it is also possible that such efforts could have negative externalities.

Additionally, this evaluation has relevance for the broader question of the effectiveness of skills building, training, and technical support interventions by outside actors. While the CLPP aims to provide comprehensive support to communities so that they might protect their land, it does not provide specific material benefits in the form of cash loans or grants. As a result, this evaluation presents an

⁵ Three of the property types studied in this evaluation are communal: communal town land, forestland, and community farmland. The fourth (household farmland) is individual, although it is perhaps best described as a hybrid type. In many towns, household farmland is held communally but distributed or "given" to individual households at different intervals; the level of "privatization" varies. In addition, many of the key questions in the debate about promoting individual property rights versus protecting communal structures centers around economic development at the household level. As a result, we capture some measures of household level property rights in order to speak to these debates and capture any spill over from the program that focuses more specifically on communal land.

additional test of the general hypothesis that skill-based interventions where elites aim to shift norms, as opposed to change incentives, can spur economic development.

This report presents the midline results of a rigorous PE of CLPP and focuses on five broad inquiries:

- Whether and how the CLPP effectively strengthens the land tenure security of rural communities;
- Whether and how the CLPP improves perceptions of governance and increases local leaders' accountability;
- Whether and how training, mentoring, and technical support help communities to document their land and to codify rules (bylaws) to protect their community land and natural resource claims;
- Whether and how the program protects women's land rights and the land rights of marginalized groups (substantive and procedural); and
- Whether and how the program leads to conservation and sustainable natural resource use.

The research team designed this study as a rigorous impact evaluation. When implementing partners reduced the number of communities assigned to receive the CLPP treatment, we grew concerned that the study would not include enough communities to detect intervention effects⁶. However, updated power calculations on the reduced sample indicated that we retained sufficient power to detect impacts for primary indicators⁷.

The evaluation estimates⁸ the Average Treatment Effect on the Treated for households and for communities that received the CLPP intervention, using a quasi-experimental Difference in Difference (DiD) approach where possible. Cross-sectional (midline only) fixed effects linear models and qualitative data are also used to confirm outcomes and elucidate mechanisms. The study estimates effects on household and community beneficiaries for a set of outcomes across seven outcome 'families':

- Land and natural resource governance;
- Empowerment;
- Tenure security;
- Land conflict;
- Community land development and natural resource condition;
- Livelihoods; and
- Heterogeneous treatment effects for subgroups of interest (women, youth⁹, poor, and members of minority groups¹⁰).

Within each outcome family, primary, secondary, context and mechanism indicators were specified in a Pre-Analysis Plan (Appendix 3). Pre-registering the analysis in this way increases confidence that our results identify meaningful changes and are not statistical artifacts. All types of indicators (cross-sectional

6 While originally designed as an impact evaluation following the USAID definition, the evaluation was reclassified as a PE when funding constraints reduced the number of treatment communities.

7 Please refer to Appendix 3—Pre-Analysis Plan for power calculations.

8 These models are presented numerically in Appendix 6. They estimate how much the value of Y (the variable) changes when X (treatment status) moves from 0 to 1 (control to treatment), and in what direction. If the sign of the treatment effect is positive, then the value for the treatment group is higher, and if the sign is negative the value for the treatment group is lower. The p-value indicates whether the estimated relationship is statistically significant, or probably not due to chance. Critical values for the p-values are generally set to three different "alpha levels," .01, .05, and .1. If a p-value is below the alpha level of .1, we consider the effect statistically significant.

9 Youth are community members who are 18–35 years of age.

10 Members of minority groups include respondents of a non-majority religion and respondents of a non-majority ethnic group in their town. They are commonly referred to as 'strangers' in the local parlance.

and panel) have been divided into four categories, ordered according to their importance for answering the evaluation's central questions:

- Primary indicators: First-order indicators used to assess program impact on outcomes;
- Secondary indicators: Additional indicators analyzed to further assess program impact;
- Mechanism indicators: Elucidate hypothesized mechanisms for change in key indicators; and,
- Context indicators: Provide additional information about conditions related to outcomes.

We estimate the effects of the CLPP using a panel survey dataset of 683 household observations and 36 community observations and a cross-sectional dataset of 818 household observations and 43 community observations in Lofa, Maryland, and River Gee counties. We gathered the baseline data prior to program commencement and the midline data approximately 10 months after the beginning of implementation, about two-thirds of the way through the program.

This evaluation pays particular attention to how CLPP effects vary for key respondent characteristics that could be important modifiers of program effect: gender, age, membership in a minority ethnic or religious group, and socio-economic status. These results provide additional guidance to inform policy and programming considerations.

KEY FINDINGS

The evaluation finds evidence that the CLPP produced expected results for primary indicators across three of the seven outcome families (Table 1).

TABLE 1: OVERVIEW OF SIGNIFICANT FINDINGS ON PRIMARY INDICATORS¹¹

Outcome Family	Indicator	Finding on households in treatment areas [†]	Finding on communities in treatment areas [†]	Source [‡]
Tenure Security	Perceive a reduced risk of encroachment on communal land by actor and by land type	Pos/—	Pos/— ¹²	Panel model and Cross-sectional model
	Improved household rights to communal land	—	NS	Cross-sectional model
Land Governance	Increased perception of leader capacity	+	+ ¹³	Panel model

11 † A plus sign (+) indicates a quantitative finding in the direction indicated in the indicator description, while a minus sign (-) indicates a quantitative finding in the opposite direction as indicated in the indicator description. Size and bold font indicate the level of statistical

significance: +/—: p<0.1; **+/-**: p<0.05; **+/—**: p<0.01.

'Pos' indicates a qualitative finding in the direction indicated in the indicator description, while 'Neg' indicates a qualitative finding in the opposite direction as indicated in the indicator description.

NS: Indicates that there were no statistically significant findings on this indicator.

Shading indicates the magnitude of the significant effect: 1–10% difference is light blue; 11–30% difference is medium blue; 31% and above difference is dark blue. Because they use an interaction term, tables presenting differential impacts on subgroups are not shaded.

‡ Data sources are Panel statistical models, Cross-sectional statistical models, Descriptive statistics, and qualitative data. Please refer to the Evaluation Methods section for more information about analytic approaches.

12 Aggregated household survey data and leader survey data.

13 All community level governance perception data comes from aggregated household survey data.

TABLE 1: OVERVIEW OF SIGNIFICANT FINDINGS ON PRIMARY INDICATORS¹¹

Outcome Family	Indicator	Finding on households in treatment areas [†]	Finding on communities in treatment areas [†]	Source [‡]
	Increased household satisfaction with leaders	+	NS	Panel model
	Increased leader transparency	+	NS	Panel model
	Improved ethical behavior by leaders (do not take bribes)	+	+	Panel model
	Improved rule enforcement	+	+	Panel model
	Increased participation in rule creation	+	NS	Panel model
	Increased satisfaction with rules	NS	+	Panel model
	Increased satisfaction with land decisions	+	NS	Cross-sectional model
Community Land Development and Natural Resource Condition	Increased tree planting by households on community farm	—	NS	Cross-sectional model
	Increased rice planting by households on community farm	NS	+ ¹⁴	Cross-sectional model

In addition to primary outcomes indicators, we analyzed secondary indicators and explored qualitative data for each outcome family. The below sections summarize all midline evaluation findings by outcome family.

LAND GOVERNANCE

The evaluation finds compelling evidence that participation in CLPP is positively associated with perceptions of improved local land governance. Comparing treatment and control communities, there is a significant increase in trust, satisfaction, perceived accountability, capacity, and transparency of leaders. Households in treatment areas are more likely to express confidence in their leaders' ability to protect their forests, their ethical behavior, and in the clarity and fairness of their decision-making processes. The results hold in the qualitative and quantitative data.

We also find that the CLPP increased the systematic creation of land rules and their enforcement. We find that households in treatment communities are more likely to be involved in developing land rules, and that respondents in these communities are more satisfied with land rules, and more likely to believe that leaders punish rule-breakers.

COMMUNITY EMPOWERMENT

We see strong qualitative evidence that the CLPP increases community members' knowledge of community land boundaries as a direct result of the boundary identification component of the program, although we do not find statistically significant results in our survey data. We do find evidence of increasing knowledge of land boundaries and awareness of Liberian policy for community lands across all

¹⁴Aggregated household survey data.

the communities included in the study (both treatment and control). This suggests that changes throughout Liberia during the time of program implementation affect both treatment and control communities. Given the paucity of investment activity in communities included in our sample, results are inconclusive on measures of the relationship between communities and investors.

TENURE SECURITY

Overall, the evaluation fails to find clear evidence of a positive CLPP effect on tenure security in the 10 months since the program began. On individual land, no change is detected in perceived tenure security of, or fallowing practices on, household farmland, and only a very small change is seen on one measure of the household bundle of land rights—a decrease of the proportion of households in treatment communities who believe they have the right to use household farmland as collateral for a loan. On some types of communal land¹⁵, there are indications of reduced concerns of encroachment by government and investors in treatment versus control areas. The overall absence of change in perceptions of tenure security is notable and requires further explanation, although it is beyond the scope of the study at this stage to do so definitively.

One possible explanation for lack of improvement on tenure security indicators might be that the program is not yet complete. According to the CLPP theory of change, tenure security should improve at program completion. Another possibility is the CLPP has increased fear of expropriation by some actors (neighboring households and clans) in treatment areas. Treatment respondents are slightly—but significantly—more likely to report losing access to communal farmland¹⁶.

LAND CONFLICT

We find that the CLPP has no discernable effects on land dispute activity. Our qualitative analysis suggests some possible increase in land dispute incidence, but results are not statistically significant. These results could indicate that in the medium term (at midline) conflicts have increased due to the boundary harmonization component of the CLPP (and the opportunity to resolve unresolved cases) or raising awareness, but we cannot be sure¹⁷.

COMMUNITY LAND DEVELOPMENT AND NATURAL RESOURCE CONDITION

We find that, overall, households report participating less in communal development work in treatment communities. The result apparently driven by lower planting of some trees and rice on communal land by men. The finding suggests that the program does lead to changes to household allocation of work. We do not find a program effect on perceptions of forest resource conditions in either the quantitative or qualitative analysis. As resource conditions represent a long-term outcome, it may take additional

¹⁵ The midline data collection tools ask separately about four property types: town land (collective spaces in the settled "urban" areas); forest land; communal farmland (collective spaces used for agriculture outside of the town); and household farmland. Communal land types were disaggregated at midline due to 1) their confirmed presence in the study communities at baseline and 2) because different rules and regulations govern each type. We hypothesized that in some towns there may be more (or less) pressure on different kinds of property and that the program may have different effects on changing norms around natural resource management by property type. If we did not separate out these different types of property, we would not have identified successful changes to governance for one or some types of and instead (incorrectly) assumed the finding to be evidence for no change as a result of the program. This is evident in the evaluation results where we often do not see significant changes to communal land overall, but rather on only one type of communal land.

¹⁶ The reasons why these respondents report having lost access to communal farmland vary, however, and include restrictions by the government or investors, moving the planting due to soil fertility or another reason, and internal and external conflict.

¹⁷ It is worth noting that the process of boundary harmonization necessitates that conflicts are revived or inflamed, as a precondition to the harmonization process (Knight, et al. 2013).

time for program effects to emerge. Finally, the evaluation finds weak but positive evidence of higher value placed upon communal lands by respondents in treatment areas.

LIVELIHOODS

The evaluation does not find any qualitative or quantitative evidence of livelihood or welfare improvements. This is another long-term outcome and interpretation of possible program effects will benefit from additional time for the treatment to take effect.

GENDER

This report presents three categories of gender findings:

1. Changes or differences in how respondents overall (both men and women) respond to survey questions about women's land governance participation and property rights;
2. Changes over time and/or the program effect on women in treatment versus women in control communities;
3. Intra-community differences between men and women in treatment communities.

As is the case for the overall analysis of midline results, these three categories of results are measured using quantitative statistical models and qualitative data (descriptive statistics, focus group discussions [FGDs], and key informant interviews [KIIs]).

With respect to the first category (overall findings on perceptions of gender norms), evidence from the survey data overall suggests that there is a general trend upward for women's empowerment across all communities, but we are not necessarily seeing a program effect. Women trend a small amount upwards from baseline to midline on a ladder of power in community decision making that ranges from 1 to 10 (Mean placement of 6 at baseline and mean placement of 7 at midline),

The evaluation finds an uptick across both treatment and control groups for knowledge of formal laws related to women's inheritance. In addition to legal knowledge, a component of the CLPP's theory of change is shifts in norms. Without changes in norms, gains in knowledge may not be sufficient to change behavior or outcomes.

To test how norms have changed, and specifically how existing gender norms affect the CLPP's effort to successfully empower disadvantaged groups within communities, we used a survey experiment to test whether highlighting the women's rights component of legal reforms affects support of the reform. We find that respondents who received the prime that land reform will involve giving women equal rights to inherit, own, use, and sell land in their community were significantly less likely to report positive feelings about land reform¹⁸.

Moreover, in leader interviews, many leaders expressed initial support for women's equality or 'rights' but later qualified with a series of restrictions on women's inheritance requirements, such as the requirement that women must have had children or marry her husband's brother.

With respect to the second category (changes for women in treatment versus in control communities), we find modest program effects for women in treatment communities as compared to women in control communities. We find some evidence of positive differences between treatment and control

¹⁸ The survey experiment models use the same control variables as the other models, including gender.

communities for women. Women in treatment communities seem to participate in governance at higher rates than women in control communities; women in treatment communities are 11 percentage points more likely to report attending a land meeting (68% in treatment communities versus 57% in control communities)¹⁹. However, despite gains in participation, we do not see differences on other governance measures. We find no change attributable to CLPP in the number of women serving in community leadership due to treatment.

Women in treatment communities fall below women in control communities on several tenure security indicators. There are also indications that women perceive themselves as having fewer rights in treatment communities. Women in treatment communities are more likely to believe that customary authorities own their communal land (62% in treatment communities versus 53% in control communities). Women in treatment communities also believe they have fewer land rights on their individual farmland at midline, as compared to women in control communities, although the results are not significant. Women are ten percentage points less likely to report that they can use their household's farmland as collateral for a loan (8% in treatment communities versus 18% in control communities), and seven percentage points less likely to be able to plant rubber trees (75% in treatment communities versus 82% in control communities). However, women in treatment communities are 11 percentage points more likely to say they have a right to map their land (67% in treatment communities versus 56% in control communities). There is no difference in the proportion of women in treatment versus control communities who report having the ability to decide who inherits their household's land.

The focus group analysis does not reveal any gender differences between treatment and control respondents regarding community land expropriation. However, female participants in some treatment communities mentioned that they are hesitant or unable to comment on community land because either they do not go into the bush or because it is the men in the community who are involved in land issues. For example, one group of women in Lofa says, "It's not our topic, it's our fathers' and our grandfathers'... Woman can't talk about land business [land issues] here so much."

With respect to the third measure (gendered changes in behavior in treatment communities), the analysis shows that the program affected men and women differently in reports of work on communal land. Across other outcome areas we find little overall difference in the effect of the program on women.

In particular, we find that as hypothesized, women's participation in communal farming—largely rice planting—is higher in treatment communities both in relation to women in control communities and in relation to men in treatment communities. However, because male participation is far lower than the higher observed participation by women in treatment communities, the overall effect in treatment communities is less investment in communal land. This subgroup result promotes understanding of the large and significant difference in planting on communal land.

Women in treatment and control communities do not perceive their tenure security differently than men. Women overall (in treatment and control communities) are less likely to be involved in land conflicts, while men overall (in treatment and control communities) are more likely to be involved in a conflict (although the result is not statistically significant). In the statistical models, women in treatment communities are slightly (but significantly) less likely than both men in treatment communities and

¹⁹ However, when this question is asked to both women and men, respondents report that women in treatment communities are significantly less likely to attend land meetings (70% compared to 75% in control communities).

women in control communities to report that any land conflict they had been involved in was resolved, and they are less likely to report satisfaction with the conflict resolution process.

HETEROGENOUS EFFECT—OTHER VULNERABLE GROUPS

In our analysis of vulnerable groups, we find little overall difference in the effect of the program on members of minority groups, youth, and poor.

We find that minority respondents in treatment communities are less likely to report that they can decide who inherits their land, map their land, or plant rubber trees. At the same time, we find that the CLPP leads to increased reported participation by minorities in land governance mechanisms. Minorities in treatment communities are significantly more likely to report that they help to resolve conflicts.

Qualitative evidence suggests that poor households in treatment communities fare worse on measures of tenure security perception, as they are more likely to fear some types of land expropriation. We find that poor respondents also have significantly more negative perceptions of their leaders in communities participating in the CLPP, as compared to non-poor households in communities participating in the CLPP. Land governance participation results for poor respondents are mixed.

POLICY RECOMMENDATIONS

The evaluation findings provide a basis for the following policy recommendations:

OVERALL

- We were able to identify a sizeable impact of the program on the treated communities for several of the key outcome areas despite the relatively small sample size. At midline the evaluation found significant relationships between treatment and several pre-specified primary indicators. However, the study at midline was underpowered to detect changes on secondary and context indicators, and supporting our power calculations, we did not detect changes. Another potential explanation for the lack of positive findings is flaws in the program design or implementation. The study cannot disentangle the limitations of weak power and weak implementation. Instead, it employs a ‘hybrid’ evaluation methodology to supplement impact evaluation analysis methods with the extensive expanded qualitative data that was collected at midline.
- Longer term data collection is needed on several indicators to see how trends continue to develop across treatment and control communities. These currently inconclusive indicators include key indicators of tenure security such as perceived threat of encroachment, prevalence of land conflicts, and indicators of women’s empowerment. Only after intervention has been completed will we be able to fully understand these effects.
- The counties selected for inclusion in this study do have active land concessions, but they do not have agricultural concessions, as are found in other areas of Liberia. While, as detailed below, this evaluation finds encouraging evidence that several aspects of the CLPP process are good candidates for replication in other areas of Liberia, these findings should be understood to have likely (but unproven) external validity with respect to other counties in Liberia.

LAND GOVERNANCE

- Even at a comparatively early stage, the CLPP has had a striking effect on how community members perceive their leaders in treatment communities. This result provides important evidence in support

of the premise of the CLPP intervention that land governance programs are most successful when they involve long-term, on-going support, training, and capacity building for communities. The midline results of this evaluation are another data point in favor of the effectiveness of this embedded approach.

- The CLPP's effect on how community members perceive their leaders also provides evidence on the mutability of such perceptions of leaders. The fact that targeted support of leaders in a specific thematic area (communal natural resource management) increases overall perceptions suggests that the relationship between local leaders and community members in Liberia could benefit from programming in other domains.
- Nevertheless, results on community meeting attendance and participation in land governance are mixed. While the findings in CLPP areas show that people are more likely to be involved in helping make rules and there is greater community involvement in decisions about community farmland, we also see little change in meeting attendance and (descriptive) declines in rule monitoring and enforcement by household. These results—combined with underwhelming results on benefit sharing and decision-making authorities—could indicate that leader strengthening is occurring without democratization of land governance. Or they might simply indicate local leader empowerment during intensifying decentralization. These are critical indicators and trends to track at endline.

TENURE SECURITY

- Widespread community satisfaction²⁰ with the CLPP boundary harmonization process is evident in the qualitative data, including boundary negotiations with neighboring communities, identifying boundary landmarks, and planting boundary trees. These components are good candidates to be scaled-up wholesale to all of Liberia.

COMMUNITY EMPOWERMENT

- The lack of change in knowledge and awareness of community land laws and land rights for treatment communities suggests that it will take time to make people aware of their rights, and that the lack of passage of key legislation may have proved confusing for communities. Once the Land Rights Act passes, significant resources will be critically needed for consultation and outreach on these topics by NGOs such as SDI, donors, and the government of Liberia.
- However, the findings on communal farmland that communities participating in the CLPP have higher communal decision making and larger inputs by women could be an encouraging instance of empowering behavior changes stemming from the CLPP. These results suggest that even at partial completion, the CLPP model may produce inclusive, positive results for management of communal farmland. As such, at this stage it appears that this model may be viable blueprint or intervention template for future community development work.

GENDER

- The finding that women invest more time in planting rice on communal farmland as a result of the CLPP can be interpreted several ways. It could suggest that women are empowered to make use of communal lands they previously lacked access to (potentially in response to conservation behavior diminishing the amount of cash crop tree planting on those lands). However, further analysis is

²⁰ Including across men and women.

required to understand this result in conjunction with the finding that men are have lower investment in communal farmland, given the possible effects of the program on intra-household bargaining.

- The finding that changes to gender norms governing property rights are met with skepticism demonstrates the difficulty of seeking transformative change of community norms and power structures. This is true even in the context of slow-moving but progressive legal transformation ongoing in Liberia. Women, in particular, and vulnerable groups in general, will require support to obtain truly equal access to governance structures and property rights. This finding is consistent with IFRPI's recent review of the evidence on women's land rights (Meinzen-Dick, et al. 2017).
- Another implementation condition that may have factored into the weak gender findings to-date is the fact that during almost all of the implementation period captured at the study midline (2016–2017), the implementer was utilizing an all-male field team. A female field staffer has since started working in one of the three study counties, but it is possible that gender outcomes could be improved in the future by greater commitment on the part of the implementer to ensuring that female field staffers are employed across the study area.

OTHER VULNERABLE GROUPS

- Poor respondents in communities supported by the CLPP do report higher participation in some land governance activities, such as creating rules, and lower participation on other measures. This finding that less positive change occurred for poor households on the land governance and tenure security indicators is expected, given the difficulty of producing change for the least connected community members in a program that targets everyone. However, they still may suggest that the CLPP model could potentially be altered to do more to empower poor members of the community.
- This evaluation's inconclusive findings for youth, minorities and poor community members can also be understood as demonstrative of tension between the program as-designed—which was intended to have a strong focus on vulnerable populations—and the program as-implemented—the scope of which was culled several times based on funding constraints, and more importantly, based on assessments of what was feasible on the ground to implement in concert with local power structures. These evaluation results highlight the difficulty of promoting change within power structures that a program must rely upon for community access. Additional investigation and piloting should be undertaken to discern potential changes in program design to render assumptions surrounding this empowerment work more reasonable.

BACKGROUND AND CONTEXT

PROGRAM BACKGROUND

There were multiple causes of Liberia's 14-year civil war, which ended in 2003, including conflict over land and natural resource rights. This war unfolded within and in response to a land policy framework that permitted the state to transfer large areas of customary lands to private concessions and national parks, weakening community control of vital natural resources (USAID 2010). Liberia's post-war democratically-elected government has made a number of key reforms to the country's land tenure system that aim to address a number of the resulting inequalities and grievances. These include the development of a comprehensive new national Land Rights Policy, which was adopted by the government in 2013 and, most recently, the development of a draft Land Rights Act and other implementing legislation to realize the vision set forth in the Land Rights Policy. Passage of the Act had stalled but is now expected to occur imminently.

The CLPP is a 12- to 18-month project that is funded by the United Kingdom's Department for International Development, and implemented in partnership with the Sustainable Development Institute (SDI) in Liberia. Since Liberia's land reform process began in 2009, Namati, the International Development Law Organization, and SDI have been assisting rural communities through CLPP to demarcate and protect their land and resources according to the process set out in the draft Land Rights Act (Knight et al., 2013). The communities participating in this evaluation are in Lofa, Maryland, and River Gee counties, shown in Figure 1.

The CLPP approach is based on the argument that a thoughtful and effective formalization process for community lands held according to custom may help to protect rural communities' land claims, livelihoods, and way of life; reduce conflict and instability in the long term; and foster endogenously driven community development (Knight 2010). To achieve this goal, the program promotes an integrated community land protection model that supports communities to protect their lands and natural resources, as well as to leverage the community land documentation processes to strengthen intra-community governance and accountability. The program consists of five components:

1. Community empowerment, including provision of legal education regarding rights and responsibilities in the context of decentralized land management²¹;
2. Boundary harmonization and land conflict resolution, including boundary negotiation with neighbors (to define the limits of community land), boundary demarcation (GPS/surveying, planting boundary trees, signing memoranda of understanding), and comprehensive mapping of community land;
3. Strengthening good governance, with emphasis on strengthening the rights of women and marginalized groups by addressing intra-community power dynamics, including cataloguing, discussing,

21 This includes discussion of issues around commercializing community land during awareness training on provisions in the Community Rights Law and the Land Rights Act to support developing community land use and resource management plans and bylaws.

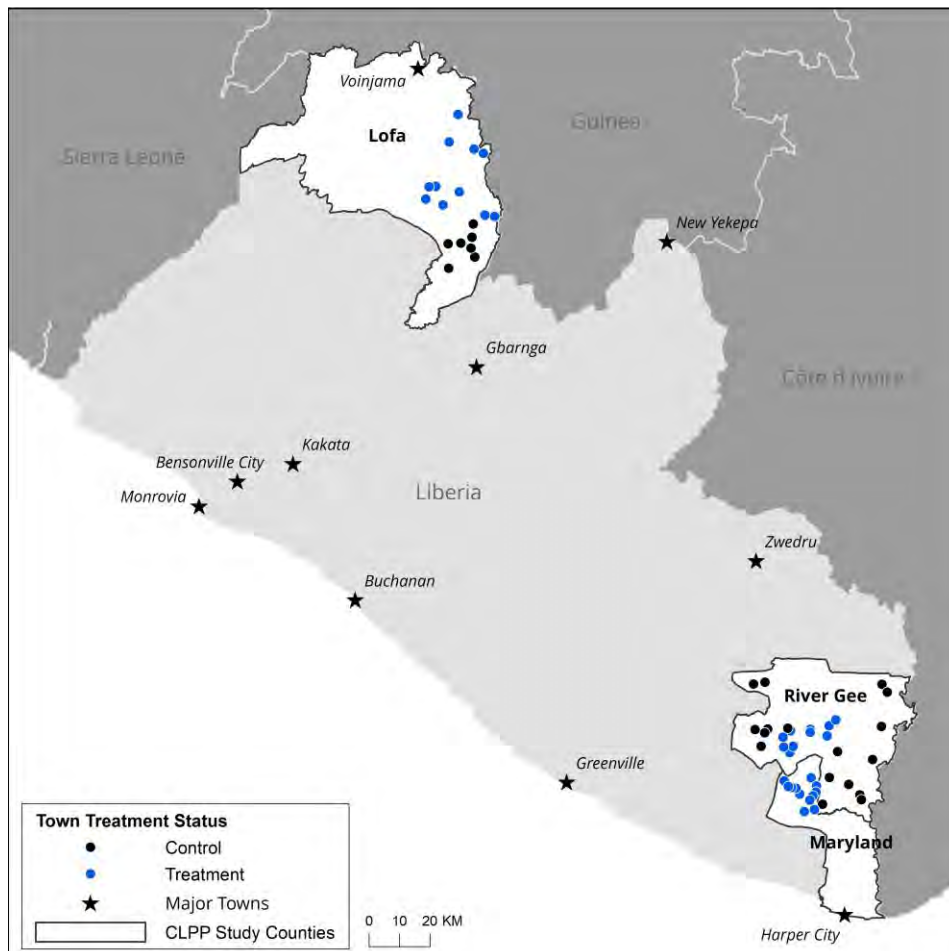
- amending, and adopting bylaws for community land and natural resource management and electing a diverse, permanent, accountable governing body to manage community lands and natural resources;
4. Completing government land registration procedures for communal lands; and
 5. Preparing communities to prosper by teaching basic negotiation tactics, creating Community Action Plans, integrating livelihood supports, and supporting communities to regenerate local ecosystems.

While the foundational goal of the CLPP is to empower communities to protect their lands, as designed the program considers meaningful participation by all community members (including women, members of minority groups, etc.) during all program stages essential to reach this goal:

“The entire community must take part in the community land protection process for it to be successful. All community members, including women, men, youth, elders, traditional leaders, seasonal users and members of minority groups should be invited to all meetings and encouraged to participate and speak their minds.” (Namati CLPP Facilitator’s Guide)

As the Land Rights Act remains under review and a formal process for legal certification does not currently exist, CLPP’s documentation procedures for customary land have remained informal in Liberia and focused on the first three components: **community empowerment, boundary demarcation and good governance.**

FIGURE I. COMMUNITIES PARTICIPATING IN THE CLPP PE



SDI implemented the CLPP with a field staff consisting of county coordinators (4; 2 in Lofa, 1 in River Gee, 1 in Maryland) and local county animators (3; one in each county). The first program component (Empowerment) consists of a series of community meetings during which community entry occurs and the entire community discusses the community definition and history, visioning for the future, terms of engagement, Community Land Mobilizer²² and Interim Coordinating Committee²³ (ICC) selection, and land valuation. During the land valuation exercise, community members undertake a basic calculation of the replacement costs of their common resources. These community meetings are open to the entire community, and everyone in the community is encouraged to attend. Another training meeting during this stage is held only with the Community Land Mobilizers and the ICC.

The second stage of the CLPP (Harmonization), involves the creation of hand-drawn sketch maps, agreeing upon the boundaries of the community and engaging in or planting to mark those boundaries, and the presentation of these boundaries to neighboring communities and the signing of MOUs to document the newly demarcated community boundaries. The map-making activity and MOU-signing ceremonies are open to the whole community. For the other activities, the community selects a boundary team support to meet with representatives of neighboring communities to discuss boundaries. The boundary team selected by the community should be representative of all community members and include traditional leaders, youth, women, elders, and Community Land Mobilizers.

The third program component (Strengthening Good Governance) consists of a four-part process. The process includes: a community meeting where all existing land rules, norms and practices are enumerated; a bylaws-drafting process, where the CLPP staff support the community to create the first written draft of its rules, norms and practices taking into account those that are in-line with or contradict national laws; and a by-laws amendment process, whereby the laws are written taking into account amendments, additions and deletions. The final step involves adopting the newly formal common pool resource rules either by community consensus or by a super-majority vote.

PROGRAM IMPLEMENTATION LIMITATIONS

Several setbacks in CLPP implementation affect the ability of the research team to assess the impact of the program.

First, due to the outbreak of the Ebola virus in Liberia in the second half of 2014, program implementation was put on hold in July 2014 and resumed in the first quarter of 2016. We believe that this delay in program implementation posed challenges to the CLPP's success, which in turn makes it more challenging to detect changes as a result of the program and increases our confidence in impact if we should identify it.

Second, due to the continued delay in passage of Liberia's Land Rights Act (for Stage 4) and funding constraints (for Stage 5) communities were exposed to only the first three of the five CLPP stages. Furthermore, all of the three planned program stages were still underway at the time of midline data

22 The Community Land Mobilizers work closely with the implementing organization to lead their communities through the community land protection process.

23 The ICC is composed of representatives from key stakeholder groups in the community who: 1) Spread news and updates about the community land protection work throughout their networks; 2) Seek out the ideas, comments and reflections of people in their network who cannot attend meetings, then share their contributions at meetings (to ensure that all voices are heard); and 3) Report what happened at each meeting back to their networks. The ICC is a temporary body: it will be replaced by an elected Land Management Committee (Land Governance Council) after the community drafts and adopts its bylaws.

collection. Table 2 below presents program implementation progress at the time of midline data collection.

TABLE 2: SUMMARY OF CLPP STAGE PROGRESS

Program Stage	Description	Level of completion at midline
Stage 1: Laying the Groundwork	Community empowerment, including provision of legal education regarding rights and responsibilities in the context of decentralized land management	Mostly Complete: 91% of treatment communities have completed this stage
Stage 2: Strengthening community governance	Documentation and formalization ²⁴ of community natural resource governance structures, including cataloguing, discussing, amending, adopting rules for community land and natural resource management, establishing bylaws for community land administration, and electing an accountable governing body to manage community lands and natural resources	Mostly Incomplete: 91% percent of treatment communities have started drafting bylaws, but none have adopted the bylaws nor elected Land Management Committees nor completed land use plans
Stage 3: Harmonizing boundaries and demarcating lands	Boundary harmonization and conflict resolution, including comprehensive mapping of community land and negotiation with neighbors (to define the limits of community land)	Midway completion: All treatment communities have created community 'sketch' maps, and 59% of treatment communities have begun boundary negotiations with neighboring clans, but none have completed this stage (which entails signing formal MOUs with neighboring clans)
Stage 4: Pursuing legal recognition	Completing government land registration procedures for communal lands	Not started
Stage 5: Preparing communities to prosper	Preparing communities for negotiations with investors by teaching basic negotiation tactics, creation of Community Action Plans, integration of livelihood Supports, supporting communities to regenerate local ecosystem	Not started

Third, in 2016, funding constraints prompted SDI to reduce the number of treatment communities in Lofa, Maryland, and River Gee counties from 45 to 23 by cutting communities from River Gee and Maryland counties. The reduced list of treatment communities was selected by SDI based on the following priorities:

- **Level of interest:** Assessed through previous efforts by community (2014 to 2015)—community has shown interest in the project, has started the process already by selecting community animators²⁵ and an interim coordinating committee²⁶;
- **On-the-ground challenges:** Number of land related conflicts, degree of urbanization, rate of concessions;

²⁴ Please note that communal land formalization through titling is Stage 4 of CLPP, but it will not be undertaken in these counties due to the delay in passage of the Land Rights Act in Liberia. In Stage 2, 'formalization of natural resource governance structures' refers to the adoption of written bylaws governing resource use and the election of a Land Management Committee to oversee land issues in the community.

²⁵ Community land animators work closely with the facilitating organization and help lead each land protection activity.

²⁶ The interim coordinating committee is composed of representatives from key stakeholder groups in the community who: 1) Spread news and updates about the community land protection work throughout their networks; 2) Seek out the ideas, comments and reflections of people in their network who cannot attend meetings, then share their contributions at meetings (to ensure that all voices are heard); and 3) Report what happened at each meeting back to their networks.

- **Accessibility:** How easy is it for the team to reach a community by car, bike, and footpath;
- **Clustering:** How a group of treatment communities are clustered to magnify program benefits²⁷.

This methodology of reduction in treatment communities may have introduced some selection bias. It would have been best to randomly cut both treatment and control sites, maintaining the randomized control trial and ensuring that treatment and controls sites would on average be similar in both observed and unobserved characteristics. We seek to mitigate any selection bias by matching the remaining treatment communities with comparable control communities based on the same reduction criteria used by SDI²⁸ and characteristics of interest. Please see the Pre-Analysis Plan in Appendix 3 for a full list of matching characteristics and a description of matching methodology. Note that the initial groups of treatment and control communities in Maryland and River Gee counties were blocked into quadrants and then randomly selected, and that treatment sites were removed from the quadrants assigned to treatment and control sites were removed from quadrants assigned to control such that control communities remain a strong counterfactual for treatment communities' trajectory on the outcomes of interest²⁹.

The matching was overall successful, as shown by the balance between control and treatment groups at baseline on the variables used for the matching. At baseline, control and treatment were also not statistically significantly different in terms of average age, poverty level, schooling, gender and minority composition³⁰. Please see Balance on these characteristics in Appendix 7—Balance Tables. However, there was a trend toward more land concessions and more minorities in the control areas. To double-check on top of the baseline balance that any potential differences are not driving results, the analyses were redone with propensity score weighing with Mahalanobis distance calculation to ensure similarity on the individual and community demographic variables. The results are similar, providing evidence that differences in baseline variables are not driving the results³¹.

27 Note that this does not apply to treatment spillover into control communities, which are geographically separated from treatment communities.

28 The first criteria above, level of interest, was not available for control sites. The matching did take into account the second criteria, on-the-ground challenges, by controlling for land conflicts (presence of land disputes at baseline) and concessions (presence of investor, distance to mining concession and distance to forestry concession). The urbanization rate was not controlled for as the sites are all extremely sparse and rural and population density is difficult to quantify precisely. One treatment site in River Gee is relatively more urban (population ~8,500 instead of ~1,400) and the results are similar or stronger with that site removed. The control sites were matched on the third criteria, accessibility, using distance to road. The original clustering was maintained as control sites were removed from throughout the original control group; no one geographic cluster of sites was removed. In addition, matching took into consideration ethnicity, forest cover hot spots, quality of life index, and an institutions and governance index.

29 In addition to the intact quasi-randomization, a placebo test on fake outcomes (outcomes known to be unaffected by the program) was done to test for parallel trends.

30 Please note that the full midline cross-sectional sample of 818 respondents is imbalanced in terms of the proportion of minorities.

31 In addition to the matched analysis, three further robustness checks were conducted on the DiD specification: separate analysis by region, analysis removing a clan observation considered an outlier because it is more urban than the other communities, and analysis removing randomly replaced households, and the results largely hold throughout these tests.

EVALUATION QUESTIONS AND HYPOTHESES

EVALUATION QUESTIONS

Our main research question is: **“What is the effect of strengthening community-based land management institutions on tenure security and governance?”**

The evaluation focuses on five broad inquiries listed below.

1. Whether and how the CLPP strengthens the land tenure security of rural communities;
2. Whether and how the CLPP improves perceptions of governance and increases accountability of local leaders;
3. Whether and how the CLPP helps communities to document their land and to codify rules;
4. Whether and how the program protects women’s land rights and the land rights of marginalized groups (substantive and procedural);³² and
5. Whether and how the program leads to conservation and sustainable natural resource use.

EXPECTED PATHWAYS TO IMPACT

CLPP operates under the following assumptions:

IF	Communities acquire knowledge of their legal rights, receive training and support on how to access those rights, resolve boundary disputes with neighboring towns, and demarcate the boundaries of their lands; and
	Communities agree on equitable and transparent community land and natural resource governance rules and elect diverse, representative community members to a land governance body.
THEN	Communities should feel more confident in their land tenure security;
	Communities should be empowered to protect their rights to the community land;
	Women and minorities should enjoy better protection of their rights and greater levels of participation; and
	Community resources should be used more efficiently, leading to increased productivity and development.

³² Members of minority groups include respondents of a non-majority religion and respondents of a non-majority ethnic group in their town.

OUTCOME FAMILIES, HYPOTHESES, AND INDICATORS

Following from the evaluation questions and program theory, our hypotheses focus around seven outcome ‘families’ of thematic groupings of expected program effects: land governance, community empowerment with investors, tenure security, land conflict, community land development and natural resource condition, and livelihoods. We also explore heterogeneous treatment effects by subgroups of interest, including women, members of minority groups, youth, and poor respondents. We test a series of hypotheses that link the expected effect of the program to outcomes in each family.

To understand how and why the CLPP changed attitudes, norms, and skills, we developed and pre-specified a set of indicators. All types of indicators (cross-sectional and panel) have been divided into four categories, ordered according to their importance for answering the evaluation’s central questions:

- Primary indicators: First-order indicators used to assess program impact on outcomes;
- Secondary indicators: Additional indicators analyzed to further assess program impact;
- Mechanism indicators: Elucidate hypothesized mechanisms for change in key indicators; and,
- Context indicators: Provide additional information about conditions related to outcomes.

Data on these indicators measure and track changes at the household and community level across baseline and midline data collection. Our hypotheses, as well as the primary and secondary indicators for each outcome family, are listed in Table 3. Please refer to Appendix 3—Pre-Analysis Plan for a full list of all evaluation indicators.

TABLE 3: EVALUATION HYPOTHESES AND KEY INDICATORS

Outcome Family	Hypothesis	Primary and Secondary Indicators
Land Governance	H. <u>Communities</u> receiving the CLPP intervention will have different local land governance.	Land governance index
Land Governance	H. <u>Households</u> in communities receiving the CLPP intervention will have different perceptions of local land governance.	- Changes in household perception of transparency in decision-making processes, including decisions with broad local understanding and agreement (specific to negotiations with investors) - Level of monitoring, enforcement, and sanctions for communal land and forest resources - Land governance index - Change in household perception of accountability of community leaders and decision makers over land and natural resources - Change in level of household satisfaction with land governance processes in the community - Change in household trust in village leaders involved in land and natural resource governance (fairness) - Change in household perceived capacity of village and other local leaders to manage communal natural resources sustainably - Level of monitoring, enforcement, and sanctions for communal land and forest resources - Changes in household perception of transparency in decision-making processes, including decisions with broad local understanding and agreement
Empowerment	H. <u>Communities</u> receiving the CLPP intervention will have different capacity to negotiate with government actors and outside investors in the instance of a proposed land concession.	- Receipt of benefits by community from investor activity (Context) - Knowledge of Liberian laws regarding decentralized lands and natural resource management, among leaders and households (Context)
Empowerment	H. <u>Households</u> in communities receiving the CLPP intervention will perceive different capacity of local leaders to negotiate with government actors and outside investors in the instance of a proposed land concession.	- Knowledge of laws regarding decentralized lands and natural resource management - Knowledge of Liberian property law for women - Knowledge of individual and community rights around engaging with outside investors and land concession processing - Knowledge of laws regarding decentralized lands and natural resource management - Change in households' knowledge of communal land boundaries
Tenure Security	H. <u>Communities</u> receiving the CLPP intervention will perceive different levels of tenure security over communal lands and natural resources in their community.	- Perceived risk of encroachment on communal land by government or investors - Perceived risk of encroachment on communal land, among leaders and households
Tenure Security	H. <u>Households</u> in communities receiving the CLPP intervention will perceive different access rights, levels of tenure security, and protection of land their household customarily uses.	- Confidence in household ability to access and use household farmland and resource assets, as measured by length of time farmland is left fallow - Frequency of loss of household rights to communal land - Perceived risk of encroachment on communal land, among households (by land type) - Perceived risk of encroachment on communal land, among households (by actor) - Confidence in household ability to access and use household farmland and resource assets - Change in perception of informal/customary rights over forest resources or communal land

TABLE 3: EVALUATION HYPOTHESES AND KEY INDICATORS

Outcome Family	Hypothesis	Primary and Secondary Indicators
Land Conflict	H. <u>Communities</u> receiving the CLPP intervention will have different community-wide incidence of land conflicts	• Prevalence of land and natural resource-based conflicts
Land Conflict	H. <u>Households</u> in communities receiving the CLPP intervention will experience a different number of land conflicts.	• Number of land and natural resource-based conflicts that involve households • Household satisfaction with the process to resolve land and natural resource conflicts
Community Land Development and Natural Resource Condition	H. <u>Communities</u> receiving the CLPP intervention will have different levels of natural resource conservation and community land development.	• Change in perceptions of availability and quality of forest other communal natural resources, including timber, fuel wood, rivers/streams, animals, etc. (Context) • Change in perceptions of forest conditions and degradation (Context) • Frequency of engaging in unsustainable forest practices (Context) • Level of, frequency of and community participation in investment in communal land and natural resources (Context) • Conservation as community priority (Context)
Community Land Development and Natural Resource Condition	H. <u>Households</u> in communities receiving the CLPP intervention will report different levels of natural resource conservation and community land development.	• Participation index • Household participation in investment in communal land and natural resources (disaggregated by type of land and/or activity) • Conservation as household priority • Change in perceptions of availability and quality of forest other communal natural resources, including timber, fuel wood, rivers/streams, animals, etc. • Change in perceptions of forest conditions and degradation • Frequency of engaging in unsustainable forest practices • Level of, frequency of and household participation in investment in communal land and natural resources
Livelihoods	H. <u>Households</u> in communities receiving the CLPP intervention will have different livelihood and welfare outcomes.	• Size of household land • Income/prevalence of poverty and overall welfare

EVALUATION METHODS

EVALUATION DESIGN

This evaluation adopts two statistical approaches at midline to estimate³³ the average treatment effects (ATEs) on the outcome families described above: a difference-in-difference (DiD) approach and a cross-sectional (midline only) fixed effects linear model. In addition to these statistical approaches, this evaluation also presents qualitative findings, preliminary results of several survey experiments included in the midline survey instrument, and context information from descriptive quantitative summary statistics.

The evaluation is designed to rigorously assess the direct and joint effects of the land protection intervention on the seven outcome families described in the preceding section. The analysis tests the impact of CLPP on the primary and secondary indicators outlined previously at the household and community level, as well as context and mechanism indicators. The community-level unit of analysis for the evaluation is the clan. Please see Appendix 3—Pre-Analysis Plan for a more detailed discussion of the selection of the community unit of observation for the evaluation.

We explore differential effects of treatment for the following groups:

- Gender of respondent
- Respondent baseline wealth status (lowest quartile vs. others);
- Age of respondent at baseline (under 35 vs. others); and
- Minority status of respondent.

Given the number of outcomes that we test in the evaluation, our panel and cross-sectional statistical results report both uncorrected p-values and corrected p-values using the Benjamini & Hochberg (1995) False Discovery Rate (FDR) Correction. FDR corrections adjust p-values reporting significance to reduce the likelihood of type I errors, or false positives, in studies that employ multiple statistical models. Our main findings and summary sections rely on the uncorrected values, because we are analyzing several closely related interdependent outcomes and, therefore, the standard corrections for the false discovery rate are likely too conservative (Gelman, Hill, and Yajima, 2012). We present full regression results with corrected and uncorrected p-values in Appendix 6—Regression Tables.

This plan for the midline analysis was pre-specified in a Pre-Analysis Plan that was drafted and registered with Evidence in Governance and Politics prior to the commencement of midline data collection. For the full pre-specified analysis plan, please see Appendix 3—Pre-Analysis Plan.

This midline phase of data collection occurred while implementation was still underway in the reduced set of 23 treatment communities versus the full 45 treatment communities. For that reason, the midline study suffers from limitations in power and from the inability to measure the full program effect, as it

³³ These models are presented numerically in Appendix 6. They estimate how much the value of Y (the variable) changes when X (treatment status) moves from 0 to 1 (control to treatment) and in what direction. If the sign of the treatment effect is positive, then the value for the treatment group is higher, and if the sign is negative the value for the treatment group is lower. The p-value indicates whether the estimated relationship is statistically significant, or probably not due to chance. Critical values for the p-values are generally set to three different “alpha levels,” .01, .05, and .1. If a p-value is below the alpha level of .1, it means the effects are statistically significant.

had not yet been completed. However, as described in the program implementation section, the original IE structure of the evaluation remains intact. Pending available funding for additional implementation and data collection, we plan to conduct another endline round of data collection in an expanded sample after the intervention has been completed. Additional resources for implementation and evaluation present a valuable opportunity to study the effect of the total CLPP intervention as designed³⁴. A third round of data collection would also clarify unanticipated midline findings and assess additional causal impacts by improving the study's power and by increasing the number of indicators for which we have panel data, as we will have a full panel for all indicators at endline.

PANEL DATA DIFFERENCE IN DIFFERENCE

We apply the DiD approach to estimate causal effects using panel data. Our DiD model estimates the *treatment effect on the treated* across household and community level indicators for each set of outcomes, controlling for a range of covariates. Since virtually all individuals who reside in treatment communities participated in the CLPP interventions, we do not assess the ITT (Intention to Treat). There are 683 panel household survey observations and 36 panel community observations. Given clustering, we prefer our model to the simplified difference in means estimator (Aronow & Middleton, 2013). Analysis of the quantitative and qualitative data at midline does not indicate that widespread spillover has occurred (we find little evidence of program steps occurring in control communities), and the evaluation team does not believe that there is a necessity for alternative calculations of the ATE. These model specifications are presented in Appendix 3—Pre-Analysis Plan.

CROSS SECTIONAL ANALYSIS OF MIDLINE DATA

Second, this evaluation uses the midline data to test whether treatment status predicts midline-only outcome variables at the household and community level, controlling for time invariant household and community characteristics. This model involves a higher risk of selection bias than the panel DiD specification, and therefore findings from this model should be interpreted cautiously.

These control variables are discussed in more detail in the following section. The cross-sectional outcome indicators are constructed from questions that were not asked at baseline³⁵. There are 818 midline household survey observations and 43 midline community observations. To account for clustering, robust standard errors are clustered at the level of intervention (the clan). These model specifications are also presented in Appendix 3—Pre-Analysis Plan.

Several town level characteristics were included as controls in the cross-sectional analysis, as summarized in Appendix 5—Descriptive Tables. These town level controls are 1) key geospatial measures of community connectivity and access (distance to road in kilometers, distance to forestry or mining concession in kilometers), 2) presence of investor as reported by leaders, 3) presence of cell service as reported by enumerators, and 4) a treatment progress indicator (community has started

³⁴ At the time of this report's drafting the Land Rights Act is close to passage and communities may soon be eligible to receive formal documentation.

³⁵ Additional indicators were included at midline because (1) there was sufficient space to add indicators to the instruments and keep the survey length under 60 minutes and (2) there were weaknesses in the baseline instruments' ability to rigorously measure some of the original outcomes of interest - namely household level land disputes, community development, quality of life and communal land investment. Based on the baseline results, the research team also hypothesized that in study communities with customary property rights there may be more (or less) pressure on different kinds of property (including more common property versus more individuated property) and that the program may have different effects on changing norms around natural resource management and usage by property type. Where outcomes might plausibly differ by land or natural resource type, the questions were broken out at midline to ask about each type of land or resource in turn. These types included communal town land, individual town land, forest land, communal farmland, and individual farmland.

boundary harmonization)³⁶. Key household demographic characteristics were controlled for in the cross-sectional analysis. These household level control variables are also summarized in Appendix 5—Descriptive Tables.

SURVEY EXPERIMENTS

To assess the perspectives of survey respondents on several key issues, we also include four survey experiments in the midline survey and analysis. For a list and description of these survey experiments, please see Appendix 3—Pre-Analysis Plan. The experiments follow a priming/endorsement experiment logic whereby survey respondents are randomly divided into two groups during the survey. Each group receives one version of the experimental question set and differences between average group answers provide information about validity of the prime or the endorsement (as applicable) embedded in the experiment.

QUALITATIVE ANALYSIS

Pre-specified qualitative data themes were coded from the KII and FGD transcripts. For a list of these pre-specified themes, please see Appendix 3—Pre-Analysis Plan. After the transcription of the qualitative audio files, the research team coded the qualitative transcripts according to the specified codes. The information is stored in a qualitative data collection matrix. The matrix has two parts: treatment communities and control communities.

To provide additional tests of the hypothesized links between the CLPP intervention and the outcomes of interest, the research team conducted a comparative analysis of the qualitative data. For each hypothesis, a specific mechanism linking the treatment to the outcome is specified, as well as the observable implications in the qualitative data. We wrote a short comparative case study of the situation in the treatment communities versus the situation in the control communities and make a case about whether there is sufficient evidence to confirm the pre-specified hypothesis. Where evidence of other mechanisms or additional variables of interest emerged during this comparative analysis, this is included in the large analysis of the project, but it is labeled as “exploratory.” This analysis was pre-specified in the Pre-Analysis Plan (Appendix 3) and its included Qualitative Pre-Analysis Amendment.

In this report, we also present descriptive summary statistics to illustrate the magnitude of significant changes in outcomes and to provide qualitative context information on indicators for which no measurable change occurred. Descriptive summary statistics, also referred to as comparative trends, can provide interesting information about trends over time, but it is important to remember that no inferences about causality or impact can be drawn from these estimates.

SAMPLING STRATEGY

BASELINE SAMPLING STRATEGY

At baseline, the research team designed specific guidelines for selecting the sample of households and community leaders within each town. Based on power calculations at the design stage (Appendix 1—Baseline Report), it was determined that 15 household heads would be selected in each study town for

³⁶ Since this is a program progress indicator for treatment communities, the value is zero (has not started) for all controls. In treatment communities, the value of this variable is one if the community has begun the process of harmonizing boundaries with neighboring clans. This is the final activity that SDI, the CLPP implementing organization, intended to complete in treatment communities, so this is a good indicator of whether a community received full or partial treatment at the time of data collection. Fifty-nine percent of treatment towns have begun boundary harmonization.

the household survey. Households for the household survey were randomly selected following a standard protocol that involved making a simple map of the community and selecting respondents based on the size of each “quarter” or neighborhood (for more details, see Appendix I—Baseline Report)³⁷.

Three community leaders were asked to complete the leaders’ survey in each town. These leaders included the Town Chief, as well as the youth, women, and minority leader (if applicable) for a community. Selection of community leaders was relatively straightforward, as each community leader, or town chief, was automatically eligible for an interview. In addition to the Town Chief, the enumerators were instructed to ask for the most senior female leader and the minority leader for inclusion in the survey. These leaders were selected because they provide important information on women and minority group rights and participation, two key outcomes of the evaluation.

Please refer to Appendix I—Baseline Report for more detailed sampling information on baseline data collection.

MIDLINE SAMPLING STRATEGY

At midline we constructed a panel dataset of respondents by re-interviewing as many original respondents from baseline as possible at midline. If original household survey respondents could not be tracked, a replacement household was randomly selected from the immediate area around the household to be replaced.

Three FGDs were conducted in each of the towns where data was collected at midline. Key sub-groups of interest for the FGDs included women, youth (men and women), members of minority groups (men and women), hunters³⁸ (men), and elders (men and women). Women’s and youth groups were conducted in every town. The third subgroup was assigned based on the presence of sufficient members of minority groups or hunters at baseline. Table 4 below presents the numbers of each type of FGD conducted during this round of data collection by county.

TABLE 4: FGDS CONDUCTED

County	Group:				
	Women	Youth	Members of minority groups	Hunters	Elders
Lofa	18	18	5	5	8
River Gee	25	25	2	5	14
Maryland	11	11	0	6	9
Total	54	54	7	16	31

³⁷ At baseline, in each household the enumerators interviewed the head of the household and the most “important” female, or the female who makes the most decisions. This population is of specific interest to the evaluation, because this population is most likely to be involved in community-level decision making around land and natural resource usage. However, due to budget considerations it was only feasible at midline to return and reinterview household heads.

³⁸ In communities where hunting continues to be an important livelihood activity (more common in the Southeastern regions of Liberia, including River Gee and Maryland counties), hunters play a specific role in community governance and, in particular, in natural resource governance and access to forest resources. Hunters are subject to community rules about forest use, and in communities where hunting is a common livelihood activity, hunters make and enforce their own rules about hunting to ensure safety and avoid depleting forest resources. Additionally, since the forest is the location where they seek their livelihoods, hunters are often the members of the community most intimately attuned to changes in forest condition.

Each group discussion included six to eight pre-selected participants. Participants were recruited by enumerators with assistance from community leaders such as the Town Chief, youth leader, and women's leader, who were interviewed separately for the Leader Survey. To encourage discussion enumerators selected participants, when possible, who were of similar age and position in the town. Additionally, whenever possible one of the two facilitators of the FGD was a female enumerator.

MIDLINE DATA COLLECTION

Parley, a Liberian NGO, conducted the midline data collection in close cooperation with ERC. Then ERC hired the Reliable Enumerator's Network to transcribe the audio recordings from qualitative interviews and FGD.

On February 1, 2017, transcribers were trained on word-for word transcription best practices, transcription formatting guidelines, and qualitative data management in Monrovia, Liberia. Enumerator training began on February 2, 2017, and continued through February 6, 2017, including a pilot day, in Gbarnga, Liberia. The Parley field manager led the training, with assistance from the ERC Project Manager and an ERC Evaluation Specialist. Twenty-one enumerators (17 men and 4 women) were trained on best practices for interviewing, the ethics of research with human subjects, the household survey instrument and the Namati spotcheck instrument. Both survey instruments were practiced in Liberian English. Training contained lectures, role plays, and group exercises and provided three days for enumerators to practice the survey in small groups, share their questions and advice, and practice using Survey CTO, the survey platform selected for this project. Feedback from this training allowed ERC to improve the instruments and further adapt them to the local context before data collection.

After several days of general training, the qualitative team was trained separately on best practices for qualitative data collection, the ethics of research with human subjects, the FGD instrument and objectives, respondent selection and recruiting, and qualitative data management. Each team of qualitative enumerators consisted of one female enumerator, to ensure that women's FGDs would be led by a female enumerator. A team of two mobilizers were selected and trained to prepare communities for survey team arrival, track baseline respondents, and when necessary, carry out the randomized selection of replacement households. Survey team supervisors were also selected, and trained on the quantitative and qualitative leader surveys, data and device management, and the randomized replacement process. A pilot was conducted in Gbarnga on February 5, 2017, to give all team members direct experience using the survey instruments. The data collected from this pilot also led to several minor improvements in the survey instruments.

In total the survey team consisted of one field manager, two mobilizers, two supervisors, ten quantitative enumerators, and four qualitative enumerators. The team was divided into two smaller teams of five quantitative enumerators (at least one of whom was female), two qualitative enumerators (one of whom was female), and one supervisor. The teams traveled together with the field manager, who worked alongside the teams for the duration of data collection. Each small team was responsible for surveying one town (15 households, three leaders, three FGD, and possibly 10 spot check surveys) every one or two days. All enumerators were fluent in American English and Liberian English, and the majority had at least some post-secondary education.

In line with the requirements for human subjects' protection, approval was received from the Clark University Institutional Review Board (IRB) in December 2016 and from the University College London IRB in January 2017. Verbal informed consent was received from each participant after reading a

statement about the purpose of the research, the content of the survey, any risks or benefits, and the time commitment. Participants were assured their participation was voluntary and could be withdrawn at any point and their answers would be kept confidential. They were also informed that their responses would be shared through public posting and publication in a way that protected their identities. Participants who agreed to participate in the research gave their consent orally, and consent was recorded in the electronic survey device.

Midline data collection took place between February 2017 and March 2017. The household, leader, and Namati spotcheck data³⁹ were collected through a cloud-based mobile data collection effort. Data was entered directly into Android phones using a mobile data collection platform, SurveyCTO, and downloaded and formatted into Excel spreadsheets.

DATA QUALITY

The CLPP midline data collection effort utilized the following quality control measures: observation of enumerators by supervisors and the field manager, site presence by the field manager, daily quality control checks by ERC staff, and auditing/re-interviewing of respondents. Each enumerator was observed by their supervisor and the field manager a minimum of two times each week, and the supervisor or field manager was present for the entire interview. This observation exercise had an accompanying checklist through which the supervisor or field manager scored the enumerator on a scale from 1–5 on their surveying technique, including the informed consent process, probing ability, and relationship with the respondent. The checklist was designed by ERC, and the scores could be used for positive incentives (bonuses) or for reprimanding (verbal warning, or in extreme cases, dismissal), as the firm saw fit. Feedback from the field manager and supervisors was continuously used to improve enumerator performance and discourage data falsification.

Finally, the most thorough checks were back-checks conducted by the ERC evaluation team. These checks were conducted on 100% of all household, spotcheck, and leader surveys using SurveyCTO, and results were compiled and shared with the survey firm. The back-checks compared survey responses by each enumerator to search for patterns indicating data falsification or systematic errors that should be corrected, including short survey times, missing responses, a low average number of “other, specify” responses or multiple selections, low average number of rows completed on each roster, and any other significant irregularities by day, town, team, or enumerator.

MIDLINE DATA COLLECTION CHALLENGES

The study communities in this evaluation are in rural areas that can be difficult to reach by car. Where necessary, survey teams walked to reach communities by foot and hired guides to assist in locating communities. Additionally, most households in study communities rely on agriculture as a livelihood activity. While November–April typically make up the dry season in Liberia (making roads more accessible), this time of the year also encompasses the farming season, and farms are often two or more hours’ walk from a community. To account for the farming schedule, the survey team adjusted their logistical plan to stay the night in communities (as opposed to returning to a central base at the end of every day) and make themselves available to the farming respondents outside of farming hours. In cases

³⁹ The evaluation team integrated the Namati/SDI Spot Check M&E form into midline data collection, administering this Namati/SDI Spot Check M&E tool to a subsample of households in each treatment town. This data will primarily be used by Namati to understand specific changes of interest to the organization in treatment households’ beliefs and perceptions about natural resource conditions and community self-identification.

where the respondent was staying several days at the farm site, enumerators traveled to interview respondents at their farms.

Due to the time between baseline data collection and midline data collection (three years), the survey team encountered some difficulty tracking all baseline respondents. Whenever possible, mobilizers and supervisors were instructed to first try to replace missing respondents from someone within the household, and then to replace the respondent using the randomized protocol. In total, 11% of panel households from baseline were replaced at midline through randomization. These observations were kept in the panel dataset for analysis because they were randomly replaced in the immediate vicinity of the lost household, and thus replacement outcomes are believed to be highly correlated with those of the lost observation⁴⁰.

SAMPLE CHARACTERISTICS

HOUSEHOLD SURVEY

Table 5 shows the breakdown of panel household and clan observations by county and treatment group.

TABLE 5: PANEL HOUSEHOLD AND CLAN OBSERVATIONS

Group	Lofa		River Gee		Maryland		Overall	
	Panel Households	Panel Clans	Panel Households	Panel Clans	Panel Households	Panel Clans	Households	Clans
Treatment	158	3	142	10	60	3	360	16
Control	105	3	218	17	0	0	323	20
Total	263	6	360	27	60	3	683	36

Table 6 shows the breakdown of midline household and clan observations by county and treatment group.

TABLE 6: MIDLINE HOUSEHOLD AND CLAN OBSERVATIONS

Group	Lofa		River Gee		Maryland		Overall	
	Panel Households	Panel Clans	Panel Households	Panel Clans	Panel Households	Panel Clans	Households	Clans
Treatment	165	3	148	10	166	10	479	23
Control	105	3	234	17	0	0 ⁴¹	339	20
Total	270	6	382	27	166	7	818	43

⁴⁰ As a robustness check, panel models were also run without the replaced households, and the results are extremely similar. Please refer to Appendix 8—Attrition Supplement for a more detailed analysis.

⁴¹ There are no control communities in Maryland due to the 'quadrant randomization' method for assigning treatment in Maryland and River Gee counties. The study communities in River Gee and Maryland were broken into 4 geographic quadrants, 2 of which were randomly assigned to treatment and 2 of which were randomly assigned to control. The 2 quadrants that included communities in Maryland were chosen for treatment. Please see Appendix 3 (Pre-Analysis Plan) for a more detailed description of the quadrant randomization process.

At midline (2017), the average age of respondents is just under 47 years (sd=14), and this is consistent across the treatment and control groups. Similarly, the proportion of youth respondents does not vary substantially between treatment groups (39% in treatment areas and 36% in control areas). There is also no significant difference in socioeconomic status, as measured by an index of household assets and lands. One third of household survey respondents are women, and this includes female heads of household or primary females in the household who were interviewed when the male head of household was unavailable. In 71% of households, the respondent has no formal schooling. Thirty-one percent of respondents are a member of a minority ethnic group or religion. Minority respondents are more common in control areas, where 39% of household survey respondents are members of a minority group, as opposed to treatment areas, where 26% of respondents are members of a minority group ($p=0.03$)⁴².

Tribal certificates⁴³ among households appear most common in Lofa county, but holding any type of documentation for household townland or farmland is rare. Eight percent of households (N=65) have documentation for their land, and of those respondents, 69% (N=45) report having a tribal certificate for their household town land or farmland (or both). Specifically, about half of households with documentation for their land in town (52%, N=17) and three quarters of households with documentation for their farmland (77%, N=37) indicate that the document is a tribal certificate. In Lofa county, among households who hold any document for their land, the percentage of those documents that are tribal certificates rises to 91% for townland (N=10) and 89% for farmland (N=25). Figure 2 displays the number of households per town who report having a tribal certificate.

LEADER SURVEY

A smaller dataset of leader survey responses is also used as a source of quantitative community level data and as a source of descriptive data. Table 7 shows the breakdown of leader observations by county and treatment group.

TABLE 7: LEADER OBSERVATIONS

Group	Lofa	River Gee	Maryland	Overall
Treatment	33	33	33	99
Control	21	42	0	63
Total	54	75	33	162

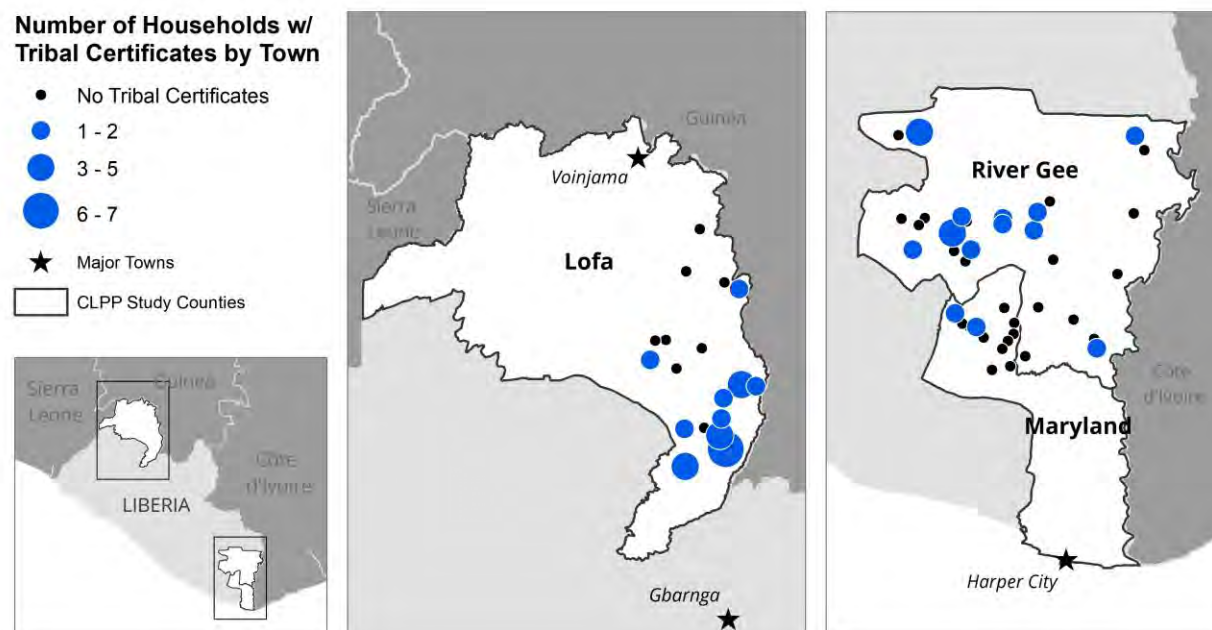
42 Please note that the panel sample of 683 respondents is balanced in terms of the proportion of minorities.

43 Although parts of Liberia's land mass have been documented through "a patchwork of deeds and other quasi-legal documents, called tribal certificates," there is no comprehensive and up-to-date information on the exact number of these documents, nor on the nature of rights they convey or the exact location of the claims held (Toe and Stevens, 2014, p. 5). Most concretely, a tribal certificate is understood to be the first step in the public land sale process that denotes the community's consent to a purchaser's acquisition of the land.

Households in this study who are holders of tribal certificates do not differ significantly from households without tribal certificates on measures of perceived tenure security of household or communal lands. These households also do not differ significantly on household perception of the bundle of land rights associated with household land, including exclusion rights, land access, and land management.

Monitoring and Evaluation data with SDI field staff confirms that tribal certificates are a frequent question raised by communities who received the program. Field staff recount that they must clarify with participants that their program focuses on community lands only, rather than all types of disputed land. When tribal certificates are brought up, they communicate that resolving these types of disputes between individuals are not a goal of the program at hand, but the skills they learn could be used later by community members to resolve private land issues. However, they also note that in their experience, some documents referred to as tribal certificates by community members, are not actually true tribal certificates (for example the document creating the city).

FIGURE 2. MAP OF EXTENT OF TRIBAL CERTIFICATES IN STUDY AREA



The type of leader interviewed at midline is comparable across study areas, as roughly one quarter of respondents are the Town Chief (24% in treatment areas and 29% in control areas), one quarter are the women's leader or chairlady (25% in treatment areas and 31% in control areas), one quarter are the youth leader (22% in treatment areas and 28% in control areas), and the remainder of respondents serve as another type of leader. As a result of this sampling strategy, thirty percent of leaders interviewed are women.

At midline (2017), on average community leaders are only slightly older than respondents overall (mean 49 years). Members of minority groups are also more common among leaders in control areas, as 41% of leaders in control areas are members of a minority group and 32% of leaders in treatment areas fall into this category. Leaders have substantially more schooling than respondents overall, as only 35% of leaders have no formal schooling.

COMMUNITY CHARACTERISTICS

All communities in the study area are fairly or entirely rural. On average, communities are about seven kilometers from the nearest road ($sd=9$) and two kilometers from the nearest concession ($sd=2$). Fifty-seven percent of communities have cellphone service, and there is no large difference on this measure between treatment and control communities. Investors are rare, and 8% of survey respondents live in communities reporting the presence of an investor.

FINDINGS: LAND GOVERNANCE

SUMMARY

The evaluation finds that participation in the CLPP is positively associated with improved local land governance. Comparing treatment and control communities, there is a positive, significant increase in trust, satisfaction, perceived accountability, perceived capacity, and perceived transparency of leaders. Households in treatment areas are more likely to express confidence in their leaders' capacity to protect their forests, ethical behavior, transparency in decision-making processes, and fairness in decision-making. The results are consistent across the qualitative and quantitative data.

We also find significant effects of the CLPP on land rules, a result of the bylaws drafting process, which 91% of the treatment communities had started at the time of mid-line data collection. Respondents in treatment communities report more involvement and higher satisfaction with land rules, and are more likely to believe that leaders punish rule breakers.

Table 8 presents a summary of key findings in the panel and cross-sectional analysis, descriptive comparison of trends, and qualitative analysis at the household and community level. We present governance findings on survey respondents' perceptions of their leaders, self-reported household participation in governance systems, and the status of written land rules in the community. We also report differential effects of the program for women, minorities, youth, and the poor.

TABLE 8: SUMMARY OF FINDINGS ON PRIMARY AND SECONDARY LAND GOVERNANCE INDICATORS⁴⁴

Indicators	Finding in treatment areas [†]	Source [‡]
<i>H. <u>Communities</u> receiving the CLPP intervention will have different local land governance.</i>		
equal distribution of benefits	+	Panel model

⁴⁴ ^ 'P' denotes primary indicator; 'S' denotes secondary indicator. In cases where there are none, context indicators are listed and labeled as such.

[†] A plus sign (+) indicates a quantitative finding in the direction indicated in the indicator description, while a minus sign (-) indicates a quantitative finding in the opposite direction as indicated in the indicator description. Size and bold font indicate the level of statistical

significance: **+/**:-: p<0.1; **+/**:-: p<0.05; **+/**:-: p<0.01.

'Pos' indicates a qualitative finding in the direction indicated in the indicator description, while 'Neg' indicates a qualitative finding in the opposite direction as indicated in the indicator description.

NF: Indicates that there were no significant findings on this indicator.

Shading indicates the magnitude of the significant effect: 1–10% difference is light blue; 11–30% difference is medium blue; 31% and above difference is dark blue. Because they use an interaction term, tables presenting differential impacts on subgroups are not shaded.

[‡] Data sources are Panel statistical models, Cross-sectional statistical models, Descriptive statistics, and qualitative data. Please refer to the Evaluation Methods section for more information about analytic approaches.

TABLE 8: SUMMARY OF FINDINGS ON PRIMARY AND SECONDARY LAND GOVERNANCE INDICATORS⁴⁴

Indicators		Finding in treatment areas [†]	Source [‡]
Improved perception of leaders ⁴⁵	ethical behavior by leaders	+	Panel model
	capacity to punish rule breakers	+	Panel model
	satisfaction with land rules	+	Panel model
<i>H. <u>Communities</u> receiving the CLPP intervention will have a different likelihood of having written by laws governing communal lands and natural resource use, and different community-wide knowledge and perceived transparency over these rules.</i>			
Improved land governance rule practices ⁴⁶	leaders punish rule breakers	+	Panel model
	satisfaction with rules	+	Panel model
Increased occurrence of written bylaws ⁴⁷		NF	NA
<i>H. <u>Households</u> in communities receiving the CLPP intervention will have different perceptions of the transparency, accountability, and representativeness of legal and customary governance institutions.</i>			
Improved perception of leaders	leader capacity	+	Panel model
	ethical behavior by leaders	+	Panel model
	households satisfied with leaders	+	Panel model
	leaders punish rule breakers	+	Panel model
	leader transparency	+	Panel model
	leaders land decisions are fair	+	Cross-sectional model
	leader accountability	Pos	Descriptive statistics
<i>H. <u>Households</u> in communities receiving the CLPP intervention will have different knowledge and awareness of written bylaws governing communal lands and natural resource use, and different awareness and perceived transparency over these rules.</i>			
Improved land governance rule practices	rule enforcement	+	Panel model
	participation in rule creation	+	Panel model
	satisfaction with rules	+	Panel model
	people follow rules	Pos	Descriptive Statistics
	people punished for breaking rules	+	Panel model
Increased occurrence of written bylaws		+	Panel model

* Please see Footnote #44 for clarification on symbols used within this table.

⁴⁵ Aggregated household survey data.

⁴⁶ Aggregated household survey data.

⁴⁷ Leader survey data.

PERCEPTION OF LEADERS

TABLE 9: FINDINGS ON LEADER PERCEPTION

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved perception of leaders	Leaders protect forest (P)	+	NF	Panel Model
	Households satisfied with leaders (P)	+	NF	Panel Model
	Leaders do not take bribes (P)	+	+	Panel Models
	Leaders consult community (P)	+	NF	Panel Model
	Leaders punish rule breakers (P)	+	+	Panel Models
	Leaders do not act in secret (P)	+	NF	Panel Model
	Households satisfied with rules (P)	NF	+	Panel Model
	Land governance index (binary) (P)	+	+	Panel Models
	Land governance index (scale) (P)	+	NF	Panel Model
	Leaders land decisions are fair (P)	+	NF	Cross-sectional model
	Leaders are not lazy (P)	Pos	NF	Descriptive statistics
	Community can remove leaders (P)	Pos	NF	Descriptive statistics
	Leaders equally distribute benefits (P)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

Table 9 shows findings on community and household perceptions of leaders. Treatment households believe their leaders have greater ability to protect forests. Forests provide communities with important economic resources for hunting, building construction, tree products (rubber, palm, etc.), and mining of valuable natural resources (gold, diamonds, etc.). Access to this land and resources is especially important because these are rural, agrarian communities, where at midline 82% of respondents relied on farming or hunting as their main source of income. At baseline 76% of household respondents overall (65% treatment and 88% control) agreed that their leaders can protect their forests, and at midline this figure had risen 27 percentage points in treatment households to 92% and remained constant in controls (87%).

Treatment households also have higher *satisfaction with leaders*. Over the same time overall household satisfaction with leaders remained constant in treatment households but fell 11 percentage points (from 32% to 21%) in control households.

Treatment households are more likely to report that their leaders behave in an ethical manner, as measured by the *likelihood of taking bribes* and by the *likelihood of acting in secret* without the involvement of the community. In treatment households, reports that leaders do not take bribes increased 12

percentage points (from 60% to 72%), while reports that leaders do not act in secret increased 14 percentage points (from 57% to 71%). In contrast in control sites, the percentage of households who report that their leaders do not take bribes fell 11 percentage points (from 80% to 69%), whereas those reporting that their leaders do not act in secret fell 7 percentage points (from 77% to 70%).

Households also report that *leaders consult the community in land decision-making more often* in treatment communities. While the percentage of treatment households reporting that leaders consult the community rose 11 percentage points (from 60% to 71%), the percentage of control households reporting that leaders consult the community fell 12 percentage points (from 75% to 63%).

Households in treatment communities are also significantly more likely to report that the *decisions their leaders make about land use and access are fair* (92% of treatment households versus 83% of control households).

Figure 3 shows the land governance perception of leader indicators with significant regression results at midline for treatment versus control households. When these indicators are aggregated into an index, the result is an increase of 15 percentage points (51% to 66%) of treatment households falling above the index mean, versus a decrease of 8 percentage points (62% to 54%) for control households.

FIGURE 3. HOUSEHOLD LEADER SATISFACTION

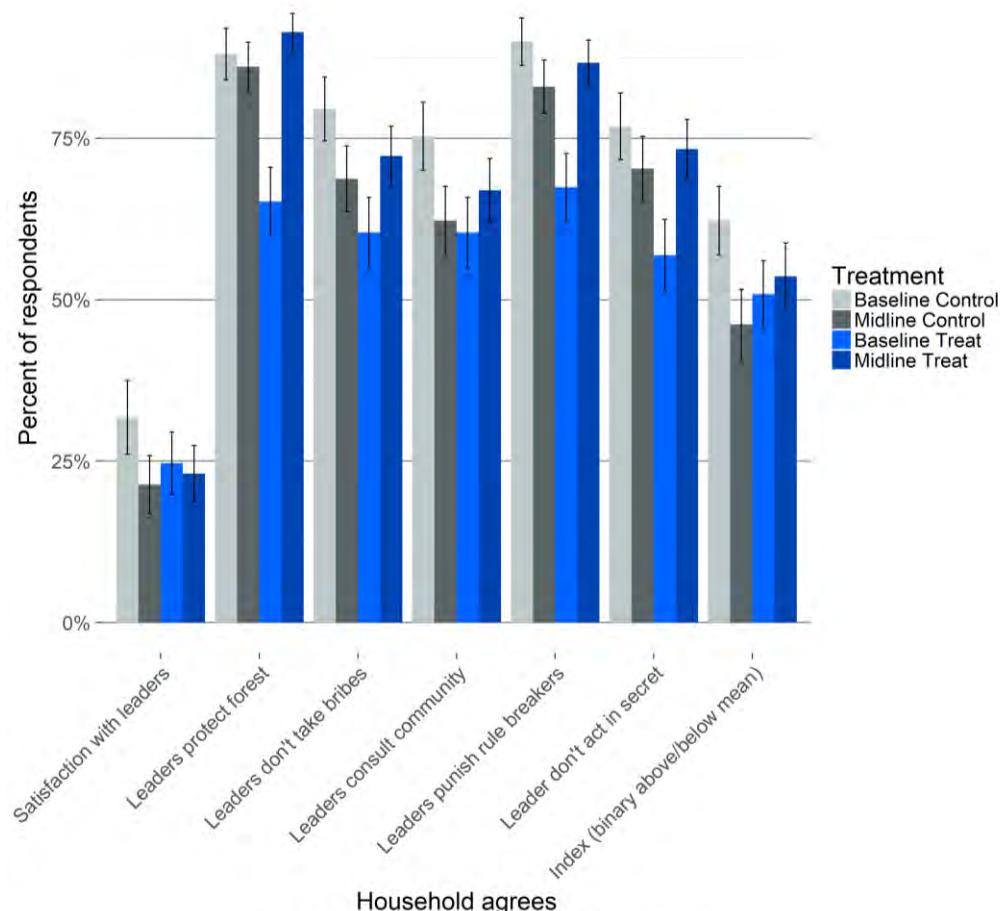


Figure includes the 95% confidence interval generated from a t-test of difference in means.

We also find evidence of a significant effect at the community level, as aggregated households CLPP-supported communities have higher satisfaction with leaders, as measured by the perceived *ethical behavior by leaders* (leaders don't take bribes).

Other governance outcomes without statistically significant model results display positive trends between baseline and midline, but because they are not statistically significant we do not know whether changes in means over time reflect a change brought about by the program. Our surveys show an increase of 6 percentage points in treatment households reporting that they could remove a leader who acted against their interests (58% to 64%), while the proportion of households in control communities who agree that they could do this remained constant at 62%. The proportion of households who agree that leaders equally distribute benefits rose 5 percentage points, from 57% to 62%, for treatment households and decreased 5 percentage points, from 61% to 56%, for control households. The percentage of treatment households who agree that their leaders are not lazy rose 14 percentage points (from 66% to 80%), to meet control households (where 80% agree across data collection waves). Finally, the proportion of treatment households who agree that their leaders are trusted rose by 22 percentage points, from only 67% of households to 89% of households agreeing with this statement at midline.

Overall, the findings on leadership suggest that partial program implementation of the land governance intervention has already produced significant improvements in household perception of leaders' involvement in local land and natural resource governance.

LAND GOVERNANCE PARTICIPATION

TABLE 10: FINDINGS ON LAND GOVERNANCE PARTICIPATION

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved perception of leaders	Households help create rules (P)	+	NF	Panel Model
	Women attend land meetings (S)	—	NF	Cross-sectional model
	Households help enforce rules (P)	Neg	NF	Descriptive Statistics
	Households attend meetings (P)	Neg	NF	Descriptive statistics
	Households participates in meetings (P)	NF	NF	NA
	Households help monitor for rule breaking (P)	NF	NF	NA
	Households help resolve conflicts (P)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

Table 10 shows findings on community and household land governance participation. Households in treatment communities are significantly more likely to participate in *creating land rules*, but some of the trends relating to household participation in land governance are mixed. Household participation in creating land rules rose across the study area between baseline and midline, 31 percentage points (from 32% to 63%) for treatment households and 15 percentage points (from 38% to 53%) for control households. However, over the same time, treatment household participation in enforcing land rules fell

11 percentage points (from 39% to 28%) for treatment households and 15 percentage points (from 44% to 29%) for control households. The proportion of households who help monitor for rule breaking also decreased 7 percentage points (from 38% to 31%) overall in CLPP communities.

We did not find that households in treatment communities report differences in dispute resolution, but the total proportion of households who help resolve conflicts increased from 36% to 51% (34% to 53% of treatment households and 38% to 50% of control households). As discussed further in the next subsection, the reason for these observed decreases in community participation in rule monitoring and enforcement could be that leaders were completing these tasks themselves more effectively, people were following the rules more (necessitating less enforcement), or that the program emboldened community members to oppose laws they consider ‘bad’.

The presence of government programs focusing on dispute resolution in control communities may explain the comparative lack of effect found in treatment communities. For example, a group of minorities in a control town in Lofa detail the increased involvement of the ‘Land Commission’⁴⁸, particularly in the resolution of land disputes:

“Actually they’re [the government is] ...taking part in the land disputes now. Through their talking now, especially the group I was talking about. The land commission. [They say], ‘Anything you don’t understand in your town or on your own private land, come tell it to the landlord and relate it to us. Please tell us anything... don’t get into a conflict with people. Anything concerning land tell the man, then they will inform us. We are the rightful authority, and we will come and help you in the process’... They have shown the people their rights to own their own land... They can also act like facilitator in meetings... They involved the paramount chief, the clan chief. Everybody came to the table and then they educated us. They talked and explained the purpose and how to own land.”

The proportion of treatment households overall reporting that they attend community meetings decreased 11 percentage points over this time, from 43% to 32% of treatment households (it also decreased even more—23 percentage points—in control households, from 59% to 36%), but these differences are not statistically significant⁴⁹. It is possible that this decrease is a result of the 2014 Ebola virus in Liberia, as people were explicitly discouraged from congregating in large groups to stem the spread of the disease.

We do find that survey respondents overall in treatment communities are significantly less likely to report that women attend land meetings (70% compared to 75% in control communities). However, in contrast, women (themselves, as opposed to the sample as a whole) in treatment communities are 11 percentage points *more* likely to report attending a land meeting (68% in treatment communities versus

48 It is possible that respondents are referencing the National Land Commission, which is evidence that the consultations and outreach by the Commission from 2009 is having some effect. This may also be a positive benefit of USAID’s Land Conflict Resolution Project. The National Land Commission set up a Land Coordination Center in several counties, including Lofa and Maryland counties. Through this work the National Land Commission’s LCC took part in some CLPP meetings and provided support to communities in Lofa county. However, there is an existing entity in each county called the ‘Land Commission’ that is separate from the National Land Commission in Monrovia. County Land Commissioners provide support to the county authorities to address land related issues. They give out tribal certificates, verify land claims, and address land conflicts.

49 However, when the models are run separately by region (Lofa and the Southeast of Liberia), there is a positive significant treatment effect of the CLPP on meeting attendance in Lofa. As such, the finding of no change appears to be driven by a lack of change in attendance in River Gee and Maryland, where the remoteness of communities may be a larger barrier to attendance than in Lofa. Note that this finding is speculative as we did not pre-specify this type of analysis and it may be an artifact of our econometric analysis.

57% in control communities). Since these findings are contradictory and they are not in-line with the above overall rates of meeting attendance, they require further investigation.

LAND RULES

TABLE 11: FINDINGS ON LAND RULES

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved land governance rule practices	People are punished for breaking land rules (S)	+	NF	Panel Model
	Leaders punish rule breakers (S)	+	+	Panel Model
	Satisfaction with land rules (S)	+	+	Panel Model
	People follow land rules (S)	Pos	NF	Descriptive statistics
Increased occurrence of written bylaws	Community has written land rules (bylaws) (S)	+	NF	Panel Model

* Please see Footnote #44 for clarification on symbols used within this table.

We also find that the CLPP program has second order effects as captured by our secondary indicators on land rules (see Table 11). Treatment households are significantly more likely to report that *their community has written land rules (bylaws)* and that *people in their community are punished for breaking land rules*. The program also has a significant effect on *satisfaction with land rules* and reports that *leaders punish rule breakers*. The percentage of households reporting that their leaders punish people who break land rules rose 23 percentage points (from 67% to 90%) among households in treatment communities from baseline to midline and declined slightly (from 88% to 84%) in control communities during that time.

Finally, although not statistically significant, more households in treatment communities fall above the mean in reporting that people follow land rules as compared to households in control communities (54% of treatment households versus 49% of control households).

Expressions of positive and recent changes in local land governance were evident in the treatment towns where FGDs took place. FGD respondents in treatment towns were more likely to mention that they now had stricter rules and processes in place over granting outsiders access to their land. This is the key difference related to changes in governance between treatment and control communities.

A group of youth in one treatment town in Maryland explained new rules and regulations surrounding forest access in their town:

“There are changes... in the days of old our forefathers never had these rules and regulations in place, so anybody just used to come from anywhere, enter any other forest, and just start hunting at any time, without even asking [about] the views of anybody [else]. But since those rules have been put into place and we are implementing them, nobody just comes in from anywhere now and just starts going into the forest without asking for instructions.”

In contrast, changes to rules are rarely mentioned in control towns, though they too describe that land governance their community has benefitted generally from increasing community cohesion. One elder in

River Gee explains, “There are great changes now. It’s understanding. There is law and order within the town, so there is understanding. Really there is a love and unity within the town [now]. ”

DECISION MAKING ACTORS

TABLE 12: FINDINGS ON DECISION MAKING ACTORS

Indicator [^]	Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
<i>H. Communities receiving the CLPP intervention will have different governance representation of women, youth and minority group members.</i>			
Community as a whole makes decisions about communal land	+	NF	Cross-sectional model

* Please see Footnote #44 for clarification on symbols used within this table.

Households in treatment communities are also significantly more likely to report that the *community as a whole makes decisions about their communal farmland* although the effect is not as strong for communal town land, forest land, or an aggregated index (see Table 12). One possible explanation for greater community involvement in decisions about community farmland compared with forests is that while community farm management is an internal community activity, decisions regarding forests more often involve outsiders and, despite the efforts included in the CLPP, communities still usually designate a leader as the figure to approach about such requests.

The CLPP has no significant effects on community actors involved in granting authorization to use any type of communal land. The program also did not lead to significant changes in aggregated household survey respondents’ perceptions of who makes decisions about land management and allocation at the community level. In general, the allocation of farmland to individuals occurs at the level of the town quarter (by land owning families), not at the general town level, but forest areas and common resources are allocated by the town collectively. Leaders did not report changes to land allocations for outsiders⁵⁰.

Another possible explanation for why we see movement in community participation in decisions about farmland but not forests has to do with the sacred uses of communal land for traditional practice. This use often involves restricting certain areas to a specific subset of the community, such as elders, youth, men, or women, and is generally presided over by elders. One Town Chief in Lofa explains how decisions about traditional practice are different from other decisions about communal land,

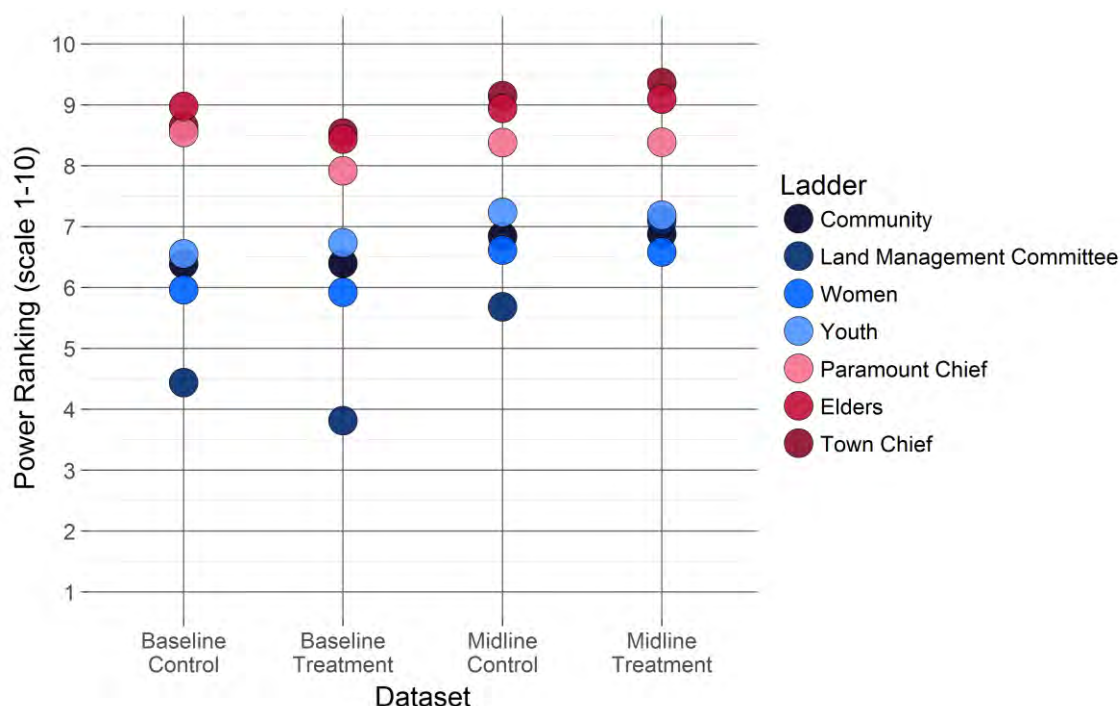
“The only one [rule restricting who can access land] is we have our forest..., our Zoe forest [‘poro and sande society’ allocated land, commonly called ‘man bush and woman bush’], and we have places for women to go, and for men to go. These are the only places that are limited. All the other areas that we have here with community land, we are all on the same line of decision making.”

Additionally, there are no statistically significant model results on perceptions of power relations in the community as measured by the ‘ladder of power’, where households and leaders are asked to rank

50 There were several null results at the community level related to decision making actors. There was no significant change in results for the quantitative models related to land rules or land allocation practices for outsiders as reported by leaders at the community level. There was also no change in the time to resolve conflicts or community involvement in conflict resolution as reported by leaders at the community level. There is also no change in whether leaders report that the community as a whole would be involved in negotiations with investors.

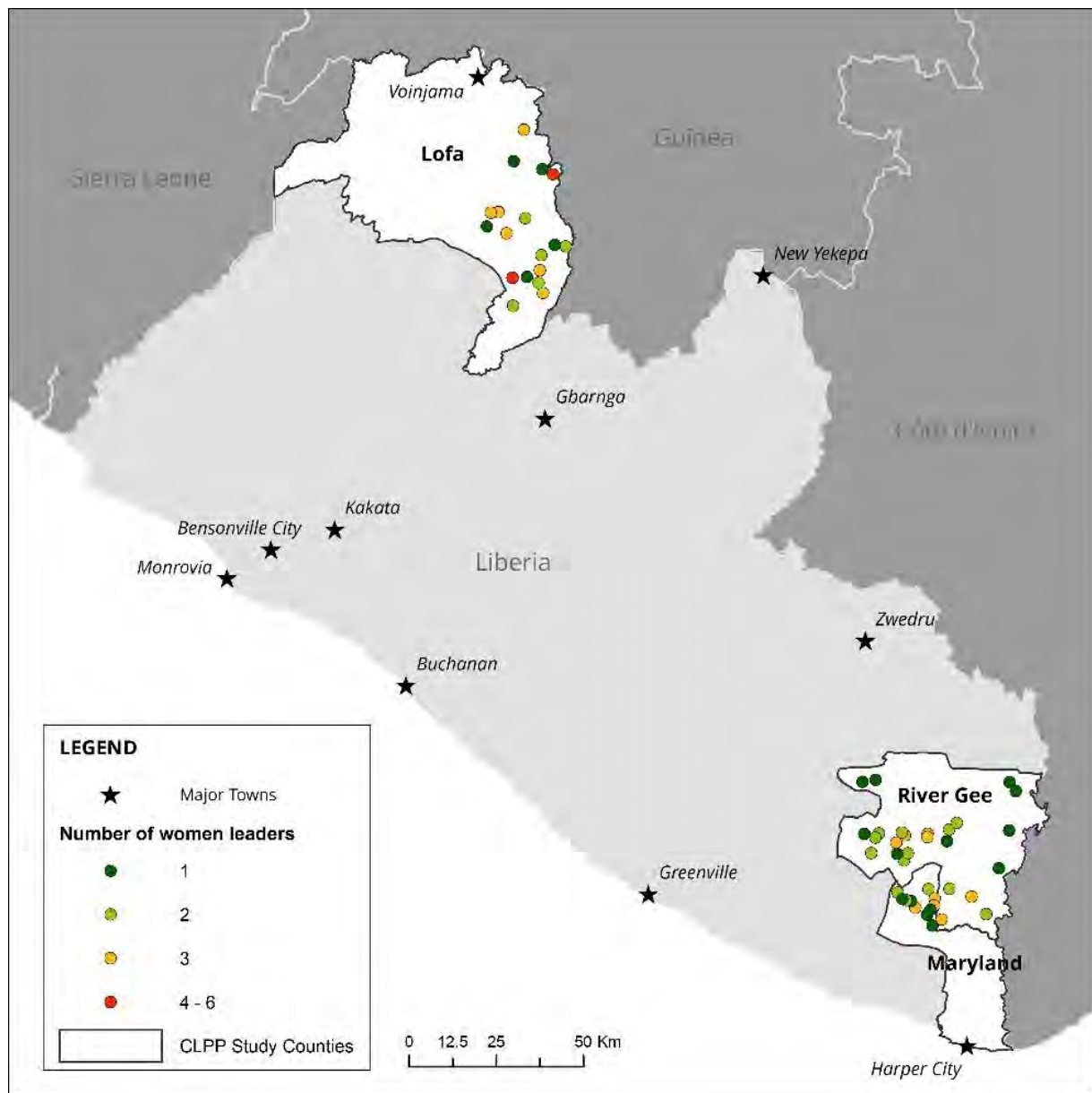
different community leaders and community groups on a scale where a higher ranking means greater decision-making power in the community. The placement of different community actors on the Ladder of Power at baseline and at midline is displayed in Figure 4. In terms of descriptive trends, the comparative power of the Town Chief rose across both treatment and control groups, from an average ranking of 8 at baseline to 10 at midline. This is a suggestive but inconclusive evidence of an increasing role for local government in land matters. The ranking of the Land Management Committee (LMC) also rose significantly from 5 to 7, but it is important to note that in treatment communities the LMC remains an informal body of community members tasked with supporting the community dealing with land matters, as the implementing organization had not reached the stage of electing a formal LMC at the time of midline data collection.

FIGURE 4. HOUSEHOLD SURVEY LADDER OF POWER



Women also trend a small amount upwards from baseline to midline on the ladder of power (Mean placement of 6 at baseline and mean placement of 7 at midline), but there is no difference between treatment and control respondents. We find no change attributable to CLPP in the number of women serving in community leadership due to treatment. The geographic distribution of women in leadership positions is shown in Figure 5. This evidence suggests that there is a general trend upward for women's empowerment, but we are not necessarily seeing a program effect.

FIGURE 5. DISTRIBUTION OF WOMEN IN LEADERSHIP POSITIONS



SUBGROUP EFFECTS

TABLE 13: SUMMARY OF LAND GOVERNANCE SUBGROUP EFFECTS

Indicator [^]		Finding	Source ⁺
Increased participation	by women	+	Cross-sectional model
	by youth	+	Cross-sectional model
	by minorities	+	Cross-sectional model
	by poor	+/-	Cross-sectional model

* Please see Footnote #44 for clarification on symbols used within this table.

We find that the CLPP program had modest differential effects on respondents based on their status in the community (see Table 13). Except for women, lower status groups report at least some increased participation in community land governance (though poor respondents also report decreased participation on some measures). Youth in treatment communities are significantly more likely to report that they help monitor rule breaking, and minorities in treatment communities are significantly more likely to report that they help to resolve conflicts. Poor respondents in treatment communities are significantly more likely to report that they help create land rules.

FINDINGS: COMMUNITY EMPOWERMENT

SUMMARY

For the family of indicators that measure community empowerment, or community members' knowledge of their rights and their ability to engage in activities that promote their interest, we find mixed results. We see strong qualitative evidence of increases in knowledge of community land boundaries among participants in CLPP communities, a direct result of the boundary identification component of the program. We also find that both treatment *and* control communities show an increase in knowledge and awareness related to Liberian laws governing communal lands. We do not find that the CLPP changes the ways community members perceive their interactions with outside investors, largely because there were few external investors active in the communities included in the sample. Efforts to empower vulnerable groups in the community that constitute a core component of the CLPP's design face some resistance as demonstrated by the results of a survey experiment on attitudes towards land reform.

Table 14 presents a summary of key findings and the rest of this subsection explores results on legal knowledge, knowledge of boundaries, relationships with investors and perceptions of the norms embedded in the new land policy.

TABLE 14: SUMMARY OF FINDINGS ON SECONDARY AND CONTEXT COMMUNITY EMPOWERMENT INDICATORS

Indicators	Finding in treatment areas*	Source*
<i>H. <u>Communities</u> receiving the CLPP intervention will have different capacity to negotiate with government actors and outside investors in the instance of a proposed land concession.</i>		
Increased capacity to negotiate with investors	Inconclusive	Descriptive statistics, Qualitative data
<i>H. <u>Households</u> in communities receiving the CLPP intervention will perceive different capacity of local leaders to negotiate with government actors and outside investors in the instance of a proposed land concession.</i>		
Increased boundary knowledge	Pos	Descriptive statistics, Qualitative data

* Please see Footnote #44 for clarification on symbols used within this table.

LEGAL KNOWLEDGE AND AWARENESS

TABLE 15: FINDINGS ON LEGAL KNOWLEDGE AND AWARENESS

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Increased knowledge of rights, policies, and laws on communal lands	Knowledge of Liberian laws regarding decentralized lands and natural resource management, among leaders and households (S / Context)	NF	NF	NA
	Knowledge of Liberian property law for women (S)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

The evaluation results show that community leaders are more knowledgeable about Liberian law for community land, in comparison to households (see Table 15). However, as Figure 6 below illustrates, we do not find that household respondents answer legal knowledge and awareness questions about community land rights differently in treatment versus control. This is also the case at the community level for aggregated household survey data and for leader survey data. Minorities in CLPP communities are more knowledgeable about who owns their community's lands, but this is the only significant finding from our indicators that the program changed levels of knowledge.

FIGURE 6. KNOWLEDGE OF COMMUNITY LAND RIGHTS

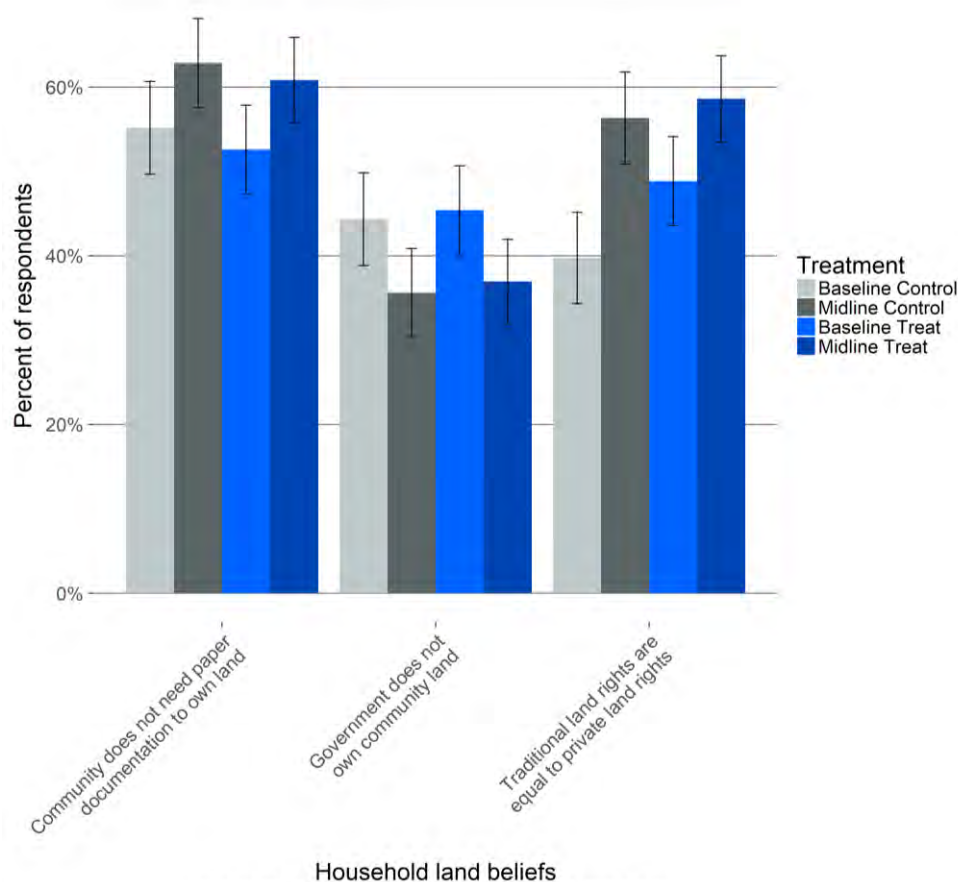


Figure includes the 95% confidence interval generated from a t-test of difference in means.

Although not significant in the quantitative models, a comparison of descriptive statistics shows a general upward trend across both treatment and control households with respect to legal knowledge. A greater percentage of respondents at midline affirmed that a community does not need a paper document to be considered the owners of the land, and that legally, traditional rights are equal to private land rights. Knowledge and awareness surrounding government ownership of community land is the exception, and it has *decreased* across CLPP communities. At midline, more respondents in treatment communities indicated their belief that the government owns their community land.

The evaluation finds an uptick across both treatment and control groups for knowledge of formal laws related to women's inheritance. In addition to legal knowledge, a component of the CLPP's theory of change is shifts in norms. Without changes in norms, gains in knowledge will not be sufficient to change behavior or outcomes.

To test how norms have changed and specifically how existing gender norms affect the CLPP's effort to successfully empower disadvantaged groups within communities, we used a series a survey experiment to test whether highlighting the women's rights component of legal reforms affects support of the reform. We find that respondents who received the prime that land reform will involve giving women equal rights to men to inherit, own, use, and sell land, just like men, in their community were significantly less likely to report positive feelings about land reform⁵¹.

Moreover, in leader interviews, many leaders express initial support for women's equality or 'rights' but later qualify with a series of restrictions on women's inheritance requirements, such as the requirement that women must have had children or marry her husband's brother. For example, one female leader in River Gee explains:

"Women get to have some say sometimes, but not always. Of course, women have the right [to land], but men [have the right] more than women. When husbands die, women get the property and [they] may sometimes marry their husband's brother. When a man dies... that man's brother will give [the land] to you [the woman]."

It also occurred that leaders initially indicated that there were no different land rules for women, but then they later stated that women cannot own land, in fact, as explained by one Town Chief in Maryland, "A woman that [has a] man can have land but not a woman [alone]. Because the woman is married to a man, so any thing that is for the man, it is for the woman". There were some instances where the land rules regarding women had changed, including specific assertions that it was no longer a requirement that women have children to inherit land, but treatment communities do not perform better on this measure than controls.

⁵¹ The survey experiment models use the same control variables as the other models, including gender.

BOUNDARY KNOWLEDGE

TABLE 16: FINDINGS ON BOUNDARY KNOWLEDGE

Indicator [^]	Finding [*] on households in treatment areas	Finding [*] on communities in treatment areas	Source ⁺
Increased boundary knowledge (S)	Pos	NF	Descriptive statistics, Qualitative data

* Please see Footnote #44 for clarification on symbols used within this table.

Table 16 shows findings on household and community knowledge on boundaries, and Figure 7 on the following page depicts the percentages of treatment and control respondents who indicate that they know some or all of their community's land boundaries at midline. The majority of households in both treatment and control communities (86% for each) already knew at least some of their community's boundaries at baseline, but we do see an increase of 5 percentage points (from 86% to 91%) of households in treatment communities reporting that they know some of the boundaries of their community land. This is suggestive, but inconclusive, evidence that the CLPP may have affected boundary knowledge, as there is no ATE for community boundary knowledge. However, we do find some improvements for women's knowledge of boundaries in CLPP communities.

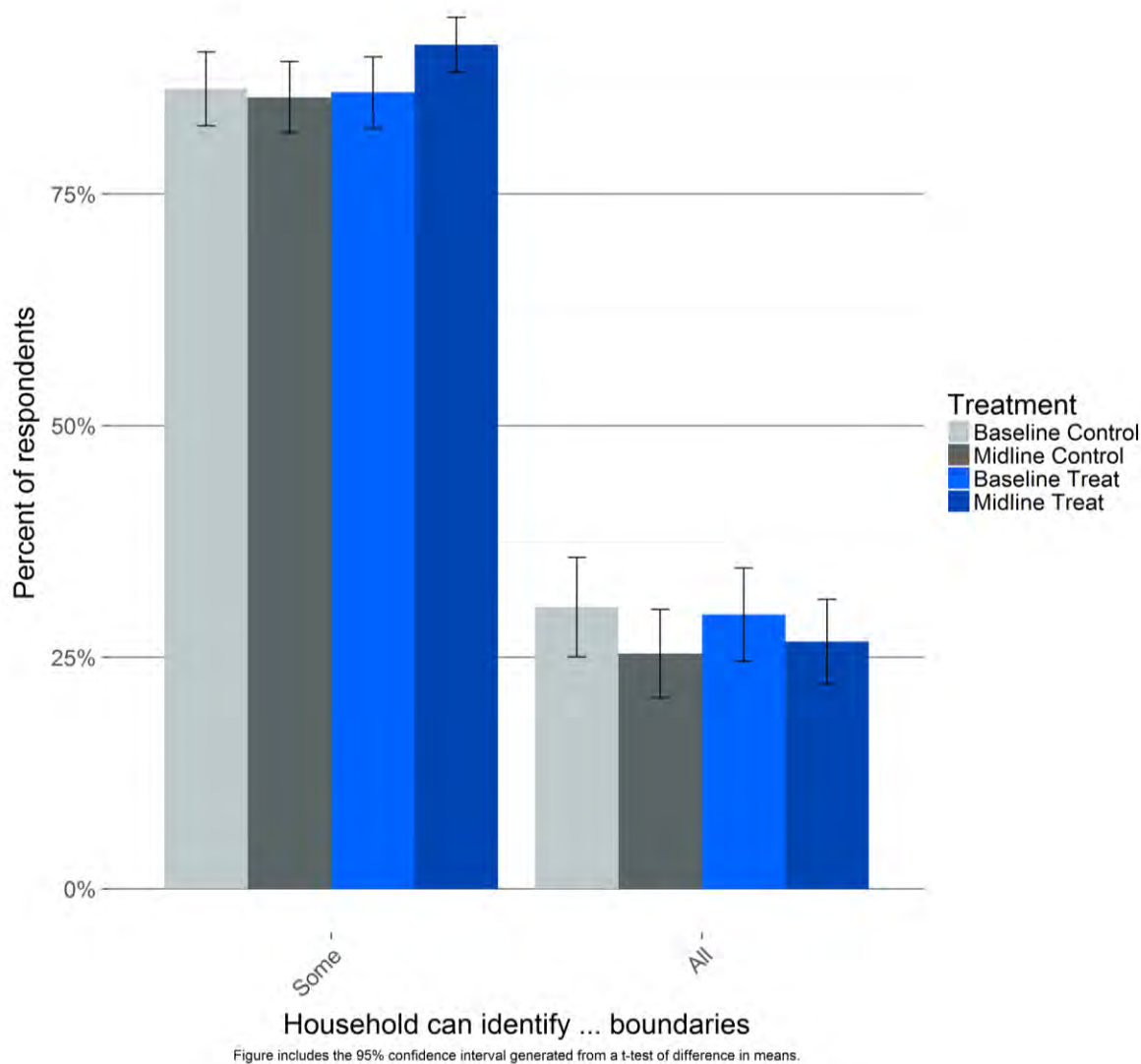
Qualitative evidence does suggest that CLPP has successfully improved knowledge of community boundaries by creating visible boundary markers to reinforce these boundaries. One youth in a treatment community in Maryland explains how knowledge of community boundaries has been transferred from elders to the whole community:

"I believe all the people around here know their boundary line, so for you to cross your boundary and [encroach on] your friends place it can't happen now. So, we believe that there will be no forcing of land business [land conflicts] again ... As I said I felt too sure [very secure] because we didn't used to go to the nearby towns to have boundary understanding like this, although our fathers did used to tell us that this is the boundary. The understanding is coming now, and everybody getting the idea concerning the boundaries, so we started going to the nearby towns to have boundary talks...For them to understand that, yes, truly your fathers told you about that boundary... This water or this particular tree or this particular hill, and it is true that's the same boundary. Now we see that I have my boundary there, so we are very happy now that everything is understood concerning the boundaries."

The active and clear demarcation of community land boundaries with neighboring communities—especially by planting trees—was a notable point of difference between FGDs in treatment versus control areas. This discrepancy was especially notable for female participants. FGD participants in treatment towns were more likely to express that their boundaries were clearly demarcated by natural features, such as water or trees, or by the recent planting of "live trees".⁵² FGD participants directly attribute progress on boundary clarification to the involvement of CLPP.

⁵² These findings are discussed further in the community empowerment section.

FIGURE 7. HOUSEHOLD CAN IDENTIFY COMMUNITY LAND BOUNDARIES



For example, a group of youth in a treatment town in Maryland explains:

“The group that came [in] from... Monrovia..., they are making people understand [their boundaries] and get peace... We [are] trying to love each another through building the boundaries. When this [program] finishes without confusion [disputes], it will mean that the two towns have a good relationship. So that is how everything has been going on these past two to three years now. People are here who are educating us on that.”

The same group of youth goes on to explain that, as a result of the boundary clarification process, they have now resolved a boundary conflict that previously existed with a neighboring community.

A group of Elders in another treatment town in Maryland also mentions their involvement with the CLPP program throughout their discussion of community boundaries. They explain that boundaries have subsequently been clarified with three neighboring communities, but that there are still two neighboring communities that have not agreed to the newly clarified boundaries. Nonetheless, the group seems

satisfied with the boundary clarification process and more secure in their boundaries as a result, explaining: “We are feeling too sure [very secure], [as opposed to] a little bit sure [somewhat insecure] in the past time, about the [land] boundary business... Now we are feeling happy that we have settled our boundary lines between our various neighboring communities.”

NEGOTIATIONS WITH INVESTORS

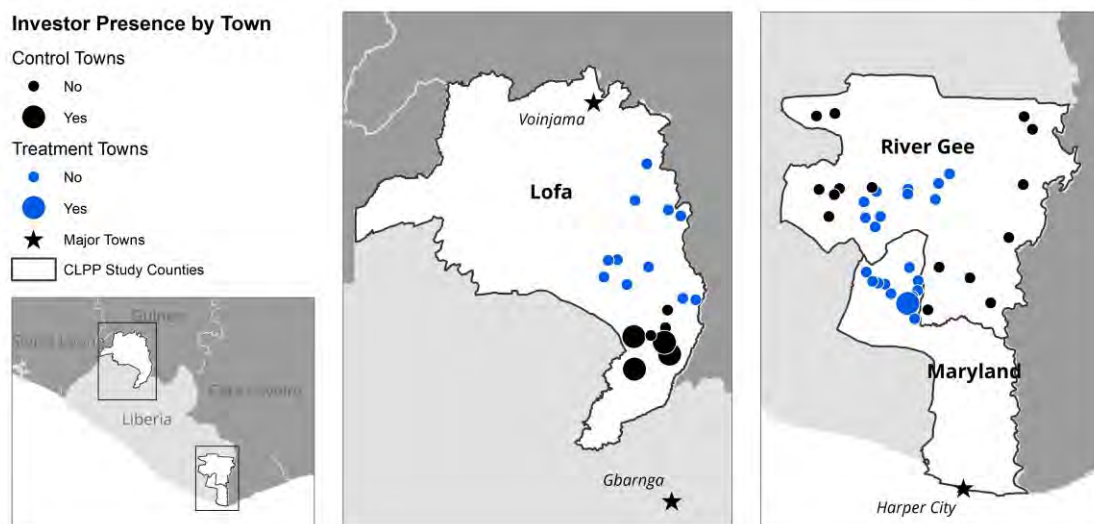
TABLE 17: FINDINGS ON NEGOTIATIONS WITH INVESTORS

Indicator [^]	Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Increased capacity to negotiate with investors (Context)	Pos	Inconclusive	Descriptive statistics, Qualitative data
Increased receipt of benefits by community from investor activity (Context)	Inconclusive	Inconclusive	Descriptive statistics, Qualitative data

* Please see Footnote #44 for clarification on symbols used within this table.

Table 17 shows findings on household and community negotiations with investors. Investors are rare overall and nonexistent in treatment communities, according to survey data. The number of communities reporting an investor remained constant between baseline and midline at four clans, or 9%. Three of these four clans are in Lofa, all four reported an investor at both baseline and midline, and all are controls⁵³. As such, no treatment communities report the presence of an investor⁵⁴. Figure 8 on the following page displays all evaluation communities whose leaders reported the presence of an investor.

FIGURE 8. EVALUATION COMMUNITIES WHOSE LEADERS REPORTED THE PRESENCE OF AN INVESTOR



53 The activities undertaken by these investors are logging (2), pit sawing (1), and plantation agriculture (1).

54 It does appear that during the study period at least one treatment community was approached by an investor and refused to work with the company.

There are indications in the qualitative FGDs that treatment communities have been approached by investors, but they were not able to reach a mutually agreeable arrangement regarding community benefits. These occurrences could be indication that, when possible, investors may avoid negotiating with organized communities that have planned for how they will secure benefits for their community. For instance, a company once approached a treatment community in Lofa to dig for gold, but left once community said they must first build road and school: "They [the company] came, and they said... they must dig for gold here. So, the people told them, 'You must build us our road, and build us our school before we can give you the land for you to dig for gold on it'... They [the company] didn't come back again."

The evaluation cannot assess whether the CLPP brings about a significant shift in interactions between communities and investors given the absence of active concessions, as reported by households and leaders. The percentage of households reporting that all community members, more or less equally, would benefit from investment fell 14 percentage points (from 23% to 9%) in treatment communities and 9 percentage points (17% to 8%) in control communities. The difference is not significant, but the decline is surprising and the qualitative data provides a different picture. In treatment and control communities with previous or current experience with investors, respondents indicate that the community would share the benefits from an investor. It is possible that this decline in belief that communities would share benefits stems from greater awareness of the challenges of realizing any benefits at all from investors, but it is difficult to arrive at a full picture of community benefit sharing given the low number of investors in the midline study areas.

While there was no observed change in the proportion of households who agree that the whole community together has a right to tell an investor what to do and what not to do on community land, there is some suggestive evidence that households in CLPP-supported communities feel more able to hold their leaders and investors accountable to making sure that the whole community participates in negotiations with investors. In the hypothetical event that a community leader signed a contract with an investor without discussing the proposal with the community, treatment households were 9 percentage points more likely to say they would tell their leaders that unilateral action with investors is a violation of community bylaws, 5 percentage points more likely to call SDI for support, 8 percentage points more likely to say they would go to the investor and tell them that their leader did not consult the community, and 6 percentage points more likely to consider chasing the investor away.

These survey findings on the extent of investors in the study area do not align perfectly with AidData amalgamated geospatial data⁵⁵ on the extent of land concessions in the study areas. Figure 9 displays communities' location relative to mining and forest concessions⁵⁶ and appears to show a number of communities are located within concessions and no concessions in the communities that did report an investor presence. One likely explanation for this disparity is that while companies may hold permissions to work in these areas, they are not actively operating. This is a common occurrence in studies of investor activities in sub-Saharan Africa. It is also possible that communities report small-scale individual

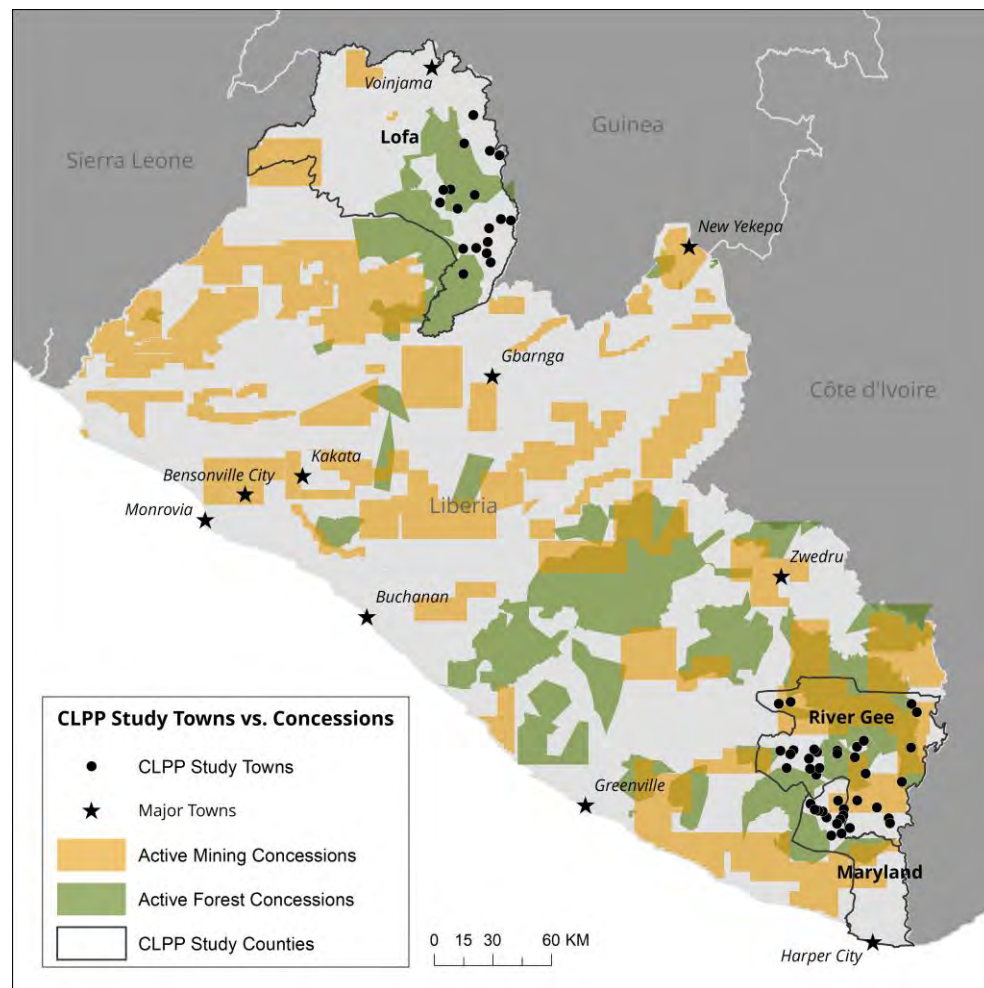
55 Data on natural-resource concessions in Liberia from 2004 to 2015. Data is sourced from the Liberian Extractives Industries Transparency Initiatives, the Liberian Ministry of Lands, Mines, and Energy's Mining Cadastre Administration System, and the National Bureau of Concessions' Liberia National Concessions Portal, alongside additional open-source searches from AidData researchers.

56 There were no agricultural concessions present in the study counties.

‘investors’ who negotiate private agreements to operate on their land without the knowledge of national government authorities.

Further analysis of the relationship between the distance of a community to a concession as coded in the AidData data set does suggest a weak relationship between distance from any concession on perceived tenure security. Distance to concessions is a significant covariate in the cross-sectional model on risk of encroachment on town land⁵⁷. As such, households in communities that are farther from concessions appear more likely to have better perceived tenure security on some measures, but the magnitude of this effect is small (about 5% better).

FIGURE 9. CONCESSIONS IN STUDY AREAS



⁵⁷ P-values on control covariates were not adjusted using a FDR correction. This analysis should be considered descriptive, since it was not pre-specified.

FINDINGS: TENURE SECURITY

SUMMARY

The survey explores household perceptions of land tenure security for different types of communal land, including town land, farmland, and forest as well as changes to rights over individually managed farmland. Overall, we do not find strong evidence that the CLPP shifted perceptions of tenure security in the 10 months since the program began. It may be that the hypothesized changes in tenure security do not manifest until the well after program is completed, when the community has had chance to integrate the effects.

Overall, we find that treatment households report less concern about government or investor encroachment of communal land. At the same time, we find that treatment households report increased fear of expropriation by some actors (neighboring households and clans). Moreover, treatment respondents are slightly—but significantly—more likely to report losing access to communal land.

For individual farm plots⁵⁸, we find no change in perceived tenure security or in fallowing practices, and only very small change is seen in one measure of the household bundle of land rights—a decrease of the proportion of households in treatment communities who report having the ability to use individual farmland as collateral for a loan.

Table 18 presents a summary of key findings. The section proceeds with detailed information on for tenure security on communal land, access to communal land, ownership of communal land, and changes to rights over individual farmland.

TABLE 18: SUMMARY OF FINDINGS ON PRIMARY AND SECONDARY TENURE SECURITY INDICATORS

Indicators		Finding in treatment areas*	Source*
<i>H. Communities receiving the CLPP intervention will perceive different levels of tenure security over communal lands and natural resources in their community.</i>			
Perceive a reduced risk of encroachment on communal land ⁵⁹	by another clan	—	Panel model
	by government	Pos	Descriptive statistics
	by investors	Pos	Descriptive statistics
	by any group (among leaders)	Pos	Descriptive statistics
<i>H. Households in communities receiving the CLPP intervention will perceive different access rights, levels of tenure security, and protection of land their household customarily uses</i>			
Perceive a reduced risk of encroachment on communal land	by neighbors	—	Panel model
	by another clan	—	Panel model
	on forestland	Pos	Descriptive statistics

58 Overall (owned by men or by women).

59 Aggregated household survey data and leader survey data.

TABLE 18: SUMMARY OF FINDINGS ON PRIMARY AND SECONDARY TENURE SECURITY INDICATORS

Indicators		Finding in treatment areas*	Source ⁺
	on farmland	Pos	Descriptive statistics
Improved household rights to communal land	on farmland	—	Cross-sectional model
Improved perception of bundle of land rights	use of collateral	Neg	Descriptive statistics
Improved perception of informal/customary rights over forest resources or communal land	government owns	—	Panel model
	landlord owns	—	Panel model

* Please see Footnote #44 for clarification on symbols used within this table.

RISK OF ENCROACHMENT ON COMMUNAL LAND

TABLE 19: FINDINGS ON TENURE SECURITY PERCEPTION

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Perceive a reduced risk of encroachment on communal land	by neighbors (P)	—	NF	Panel Model
	by another clan (P)	—	— ⁶⁰	Panel Model
	by investor (P)	Pos	NF	Descriptive Statistics
	by government official (S)	Pos	NF	Descriptive Statistics
	by elites (P)	NF	NF	NA
	by any actor, as reported by Leaders (S)	NF	Pos	Descriptive Statistics
	on communal forestland (P)	Pos	NF	Descriptive Statistics
	on communal farmland (P)	Pos	NF	Descriptive Statistics
	on household farmland (P)	NF	NF	NA
	on communal townland (P)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

To assess tenure security, we measure the perceived likelihood of encroachment on communal land, disaggregated by actor (neighboring households, neighboring clans, elites, investors, and government officials). There is some evidence that the CLPP changes perceptions of the probability of encroachment by neighboring households and clans, which may be due to the program reviving a discussion of dormant land disputes (see Table 19). If so, the uptick may be temporary, and we could see improvements in perceived tenure security once the boundary harmonization processes are complete. It is not clear whether the CLPP leads to increases in the perception that communal land is at risk because the

⁶⁰ Aggregated household survey data.

program alerts community members to risks that would have been unappreciated without treatment or whether the program itself increases risk.

We find that treatment households and leaders perceive an increasing risk of encroachment on communal land by neighboring households and by neighboring clans compared with control households and leaders. The below plot (Figure 10) depicts the threat of encroachment by actor and treatment group, as reported by households at baseline and midline. The plot shows that these tenure security findings are driven by the fact that the perceived threat of expropriation by these actors decreased more in control communities during this time than in treatment communities. Twenty-two percent of treatment households reported that encroachment by a neighboring another clan was likely at baseline—with a decrease of 11 percentage points, to 11%, at midline (the reported likelihood by control households declined 14 percentage points during this time).⁶¹ The perceived likelihood of encroachment by elites and investors rose in both treatment and control communities, but this change is not statistically significant.

FIGURE 10. HOUSEHOLD BELIEVES EXPROPRIATION IS LIKELY BY DIFFERENT ACTORS

Household believes expropriation likely by:

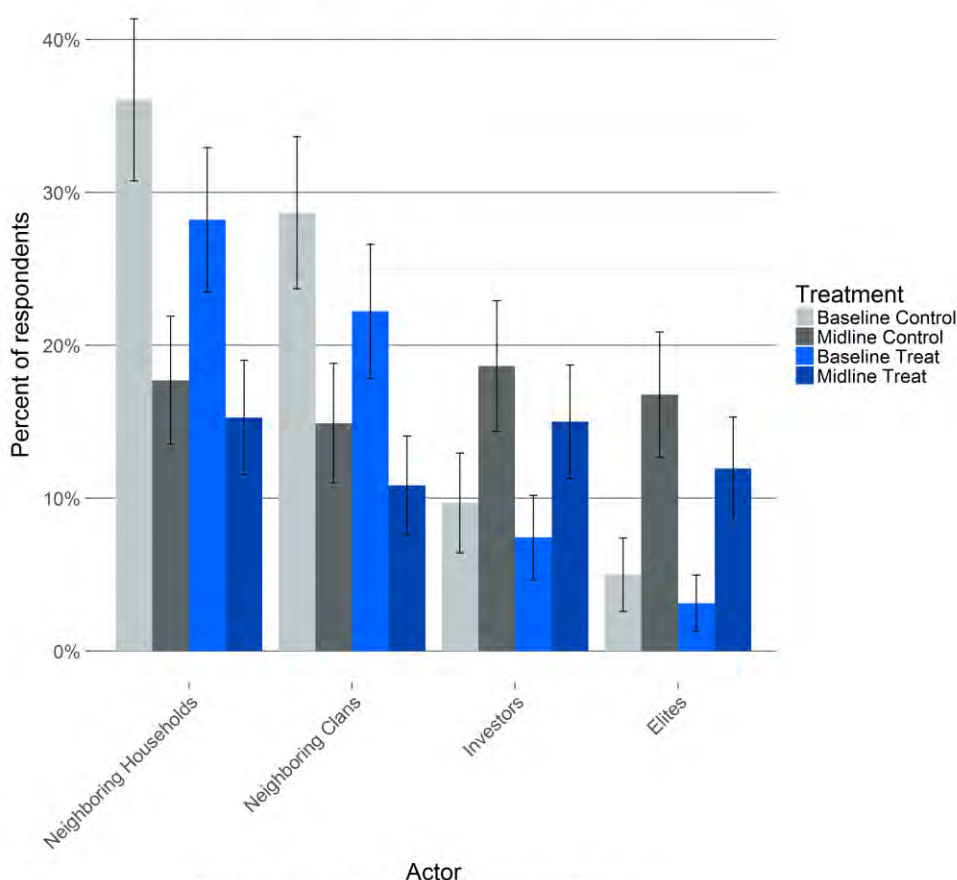


Figure includes the 95% confidence interval generated from a t-test of difference in means.

⁶¹ When these results are aggregated with the perceived likelihood of encroachment by other actors (elites, another clan, investors), there is no significant impact overall in the panel models. Descriptively, the mean number of encroachment scenarios (by actor) rated as 'likely' decreased by about the same amount in treatment and control household survey responses, from 0.59 to 0.48 (out of a minimum of 0 scenarios and a maximum of 4 scenarios) in treatment households and from 0.79 to 0.66 in control households.

Leaders did report a lower risk of encroachment. Much of this trend is observable in both treatment and control communities—as reported risk of encroachment declined in both—but notably, reported risk of encroachment by elites declined more among leaders in treatment communities than among leaders in control communities (from 27% falling above the mean to 18%, versus 28% falling above the mean to 24%).

We also collected information by communal land type and household's perception of tenure security, but we do not find significant impact on this set of outcomes. Figure 11, below, illustrates these results for communal land type. Overall, the contradictory findings on effects of the CLPP on tenure security perception and the overall lack of a significant pattern mean that the evidence on this outcome is mixed and inconclusive.

FIGURE 11. HOUSEHOLD BELIEVES EXPROPRIATION IS LIKELY ON TYPES OF COMMUNAL LAND

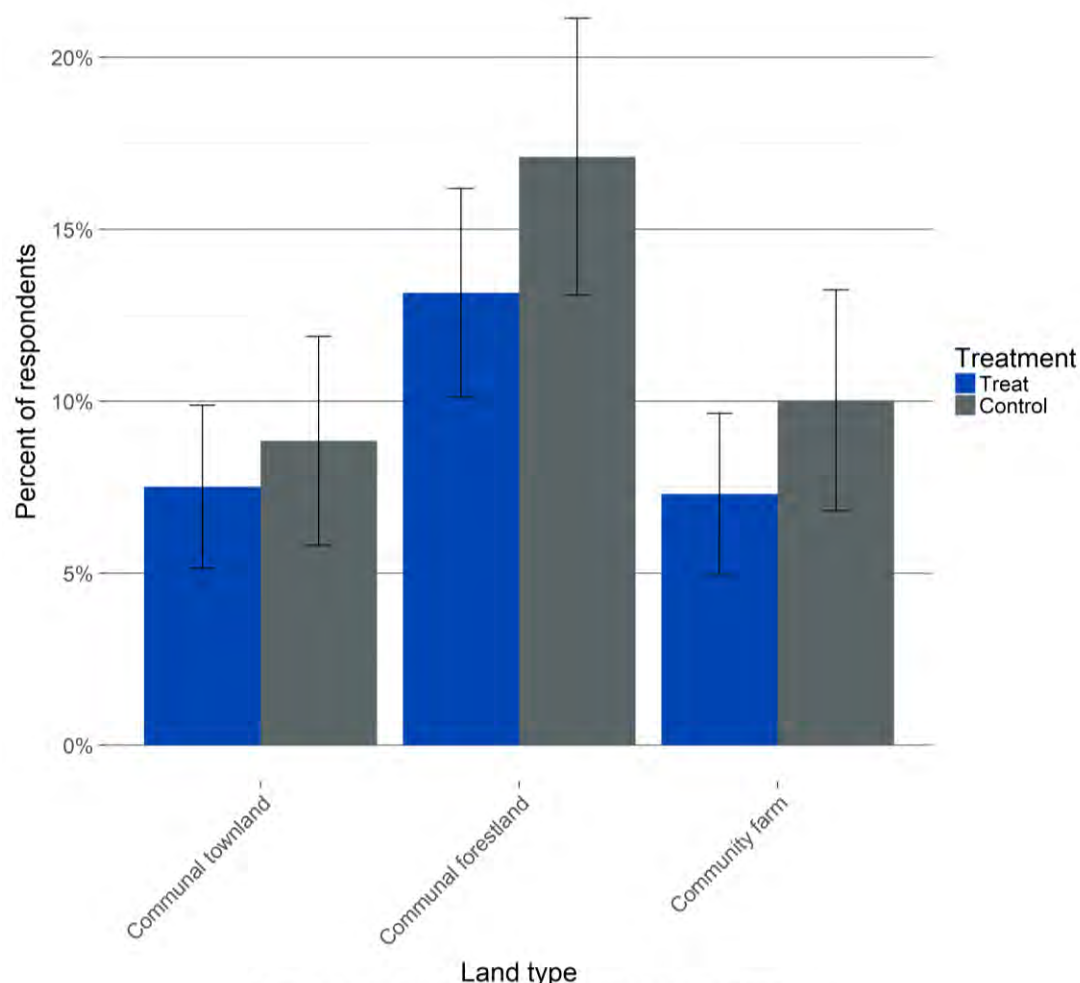


Figure includes the 95% confidence interval generated from a t-test of difference in means.

When we analyze heterogeneous treatment effects, we find that the CLPP does not significantly change perceptions of tenure security for specific subgroups. The average perceived threat of encroachment by investors is lower overall (for treatment communities relative to controls) and for men but has remained constant for women. Poor respondents in treatment communities report above average perceptions of expropriation by neighboring clans than households overall (48% above the mean versus 42%), although the results are not significant and therefore inconclusive.

LOST ACCESS TO COMMUNAL LAND

TABLE 20: FINDINGS ON RIGHTS TO COMMUNAL LAND

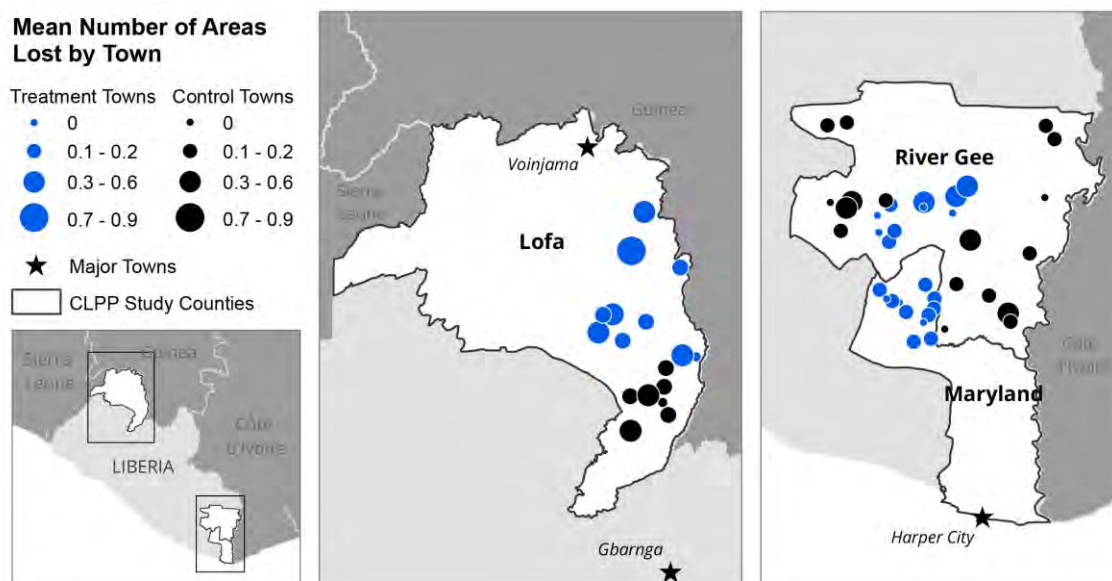
Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Increased household rights to communal land	on farmland (P)	—	NF	Cross-sectional model
	on forestland (P)	NF	NF	NA
	on townland (P)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

We do not find a significant difference in household rights to communal townland or forest land as a result of the program (see Table 20). However, we do see a small but significant increase in the likelihood that a respondent reports that they lost access to communal farmland in treatment areas. Figure 12 displays the geographic dispersion of reported incidents of lost access to communal land. These results are driven by 30 households in 16 communities, mostly in Lofa, that report losses of communal farmland.⁶² The reasons why households report having lost access to communal farmland vary and include restrictions by the government or investors (27%, N=8), moving the planting due to soil fertility or another reason (23%, N=7), and internal and external conflict (6). In the qualitative data, there appears to be a notable conservation effect that may be influencing this finding, as treatment communities choose to restrict some areas from cash cropping.

⁶² This is not found at the community level for aggregated household or leader data, however.

FIGURE 12. GEOGRAPHIC DISPERSION OF REPORTED INCIDENTS OF LOST ACCESS TO COMMUNAL LAND



Minorities and youth do not report greater incidence of communal land expropriation (see Table 21). Moreover, poor respondents in CLPP communities are significantly less likely to report expropriation of communal townland. At midline 15% of poor households in control communities report lost access to communal townland versus none in poor households in treatment communities.

We find that women report loss of access to communal farmland at a higher rate in treatment communities, but the magnitude of this difference is quite small (7% of women in treatment communities versus 2% of women in control communities). Much of this observed difference is due to the higher incidence overall of lost access to communal farmland in treatment communities, as this was reported by 4% of male respondents and 5% of respondents in treatment areas overall.

TABLE 21: SUBGROUP FINDINGS ON RIGHTS TO COMMUNAL LAND

Indicator [^]		Finding	Source ⁺
Improved household rights to communal land	for women	—	Cross-sectional model
	for poor	+	Cross-sectional model
	for youth	NF	NA
	for minorities	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

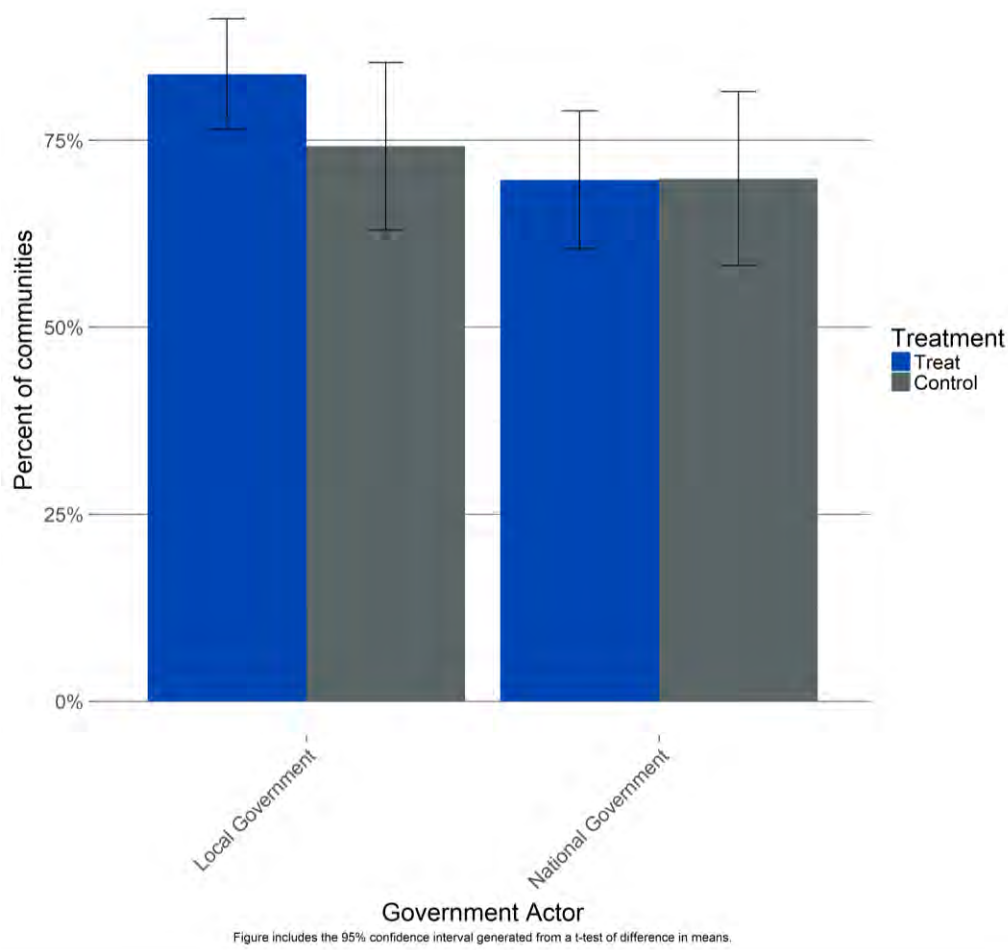
In addition to asking survey respondents about their perceived risk of encroachment, we also ask about whether land boundaries are respected. We have data from community leaders about whether different government actors respected community boundaries (see Table 22), as well as information from FGDs on neighboring communities.

TABLE 22: FINDINGS ON RESPECT OF BOUNDARIES

Indicator [^]	Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Increased perception by leaders that land boundaries are respected (S)	NF	Pos	Descriptive statistics

* Please see Footnote #44 for clarification on symbols used within this table.

Leaders in treatment communities are 11 percentage points more likely than those in control communities to agree that their *local* government officials respect their land boundaries, as 84% of leaders in treatment communities and 73% of leaders in control communities agree with this statement (see Figure 13 below). This result is suggestive of improved boundary security, although the finding is not significant and therefore inconclusive. We find no difference in the proportion of leaders who agree that their community's boundaries are clear and respected by *national* government authorities between treatment and control communities.

FIGURE 13. BOUNDARIES RESPECTED BY GOVERNMENT ACTORS

In interviews, leaders in both treatment and control communities list the paramount chief, clan chief, district commissioner, magistrate, and superintendents as important local government officials who work with them to resolve boundary conflicts and provide oversight to negotiations with investors. For example, in one control community in Lofa, the youth leader explains that local government officials work to resolve land disputes before they become violent, "The local government will come in the community to observe... They will be minding you because they do not want violence. They will come and give you an idea how to carry on your community forward." The Youth Leader of another control community in Lofa expresses satisfaction with this involvement, "The local government has been doing well concerning our land business, especially when it comes to land disputes. Sometimes we call upon them to come and settle it."

Similarly, a youth leader in a treatment community in Lofa describes how the local government assisted with a dispute with an investor, "A typical example is the first company that came here. They were working here and they were not really doing what we wanted them to do, so we carried a report to the clan chief and the clan chief took the report to the paramount chief and they talked for us. Even when they [the investor] damaged our road here we ended up in [court] and these people talked on behalf of us. They advocated for us... Those are the things that they [local government officials] can do for us, and we look at it that the local government is working for us".

FGDs with community members do not reveal any obvious differences between treatment and control communities regarding instances of encroachment. In most treatment and control FGDs, land boundaries are perceived as clear, well-known and respected, and fear of encroachment on community boundaries was expressed rarely by respondents. A group of minorities in a control town in Lofa explains that boundaries are well-known, "To be frank everybody [knows] traditional land business [land issues] in this place. Everybody who was born here knows the limits [of the land], and when a stranger comes to you, you will show him where he is supposed to stop. I've not seen people come to intrude onto somebody's own land. Everybody knows their boundary traditionally, so that no conflict has come. I've never seen people in conflict on that."

The focus group analysis does not reveal any gender differences between treatment and control respondents regarding community land expropriation. However, female participants in some treatment communities mentioned that they are hesitant or unable to comment on community land because either they do not go into the bush or because it is the men in the community who are involved in land issues. For example, one group of women in Lofa says, "It's not our topic, it's our fathers' and our grandfathers'... Woman can't talk about land business [land issues] here so much."

OWNERSHIP OF COMMUNAL LAND

TABLE 23: FINDINGS ON CUSTOMARY RIGHTS TO COMMUNAL LAND

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved perception of informal/customary rights over forest resources or communal land	whole community owns (S)	NF	+ ⁶³	Panel model
	landlord owns (S)	—	NF	Panel model
	government owns (S)	—	NF	Panel model

* Please see Footnote #44 for clarification on symbols used within this table.

Table 23 shows findings on community and household customary rights to communal land. We find that treatment households are more likely than control households to indicate that the government or landlord⁶⁴ owns their communal land. The number of respondents in both treatment and control communities who indicate that the whole community owns their communal land increased from baseline to midline⁶⁵ 67 percentage points (14% to 81%) in treatment households and 70 percentage points (14% to 84%) in control households. This sizeable jump contrasts with the proportion of household survey respondents who indicated that the government owns their community land, which remained relatively constant at about 10% of respondents (9% of respondents at baseline and 13% of respondents at midline). The proportion of respondents indicating that the landlord or first settlers owned their community land rose 13 percentage points (40% to 53%) for treatment households and decreased 14 percentage points (59% to 45%) for control households. Women and youth in treatment communities, in particular, are more likely to believe that the landlord owns their communal land and less likely to believe the whole community owns their communal land, although this result is not significant. Conversely, in the descriptive statistics more poor households report that the whole community owns their communal land and fewer report that the landlord owns their communal land.

In the community level analysis, leaders are more likely to indicate that the community as a whole owns their community land, an increase from 24% to 85% in treatment communities and 35% to 62% in control communities, although the result is not significant. Given these conflicting results between households and leaders surveyed, it is difficult to identify the reason behind these observed changes, especially at the household level. While the leaders appear to be internalizing the CLPP legal education training, the household level results could be indicative of some elite capture occurring as part of CLPP, or this finding could indicate greater awareness among treatment households of the current legal ambiguity in the status of communal lands since the passage of the Land Rights Act has been delayed.

⁶³ Leader survey data.

⁶⁴ Landlords are typically elders with specific real or imagined ties to first settlers or indigenous groups who created a particular community.

⁶⁵ Percentages sum to greater than 100% because this survey question allowed respondents to select multiple owners at midline.

HOUSEHOLD LAND RIGHTS

TABLE 24: FINDINGS ON PERCEPTION OF BUNDLE OF HOUSEHOLD LAND RIGHTS

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved perception of bundle of land rights	to use land as collateral for loan (P)	Neg	NF	Descriptive statistics
	to fallow land (P)	NF	NF	NA
	to plant rubber trees on their land (P)	NF	NF	NA
	to decide who will inherit land (P)	NF	NF	NA
	to sell land (P)	NF	NF	NA
	to map land (P)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

We do not find a treatment effect on household ability to access and use household farmland and resource assets, as measured by length of time farmland is left fallow, or on household perception of land rights, including exclusion rights, land access, and land management (see Table 24). The bar plot on the following page (Figure 14) presents household responses about their bundle of land rights on their household farmland at midline.

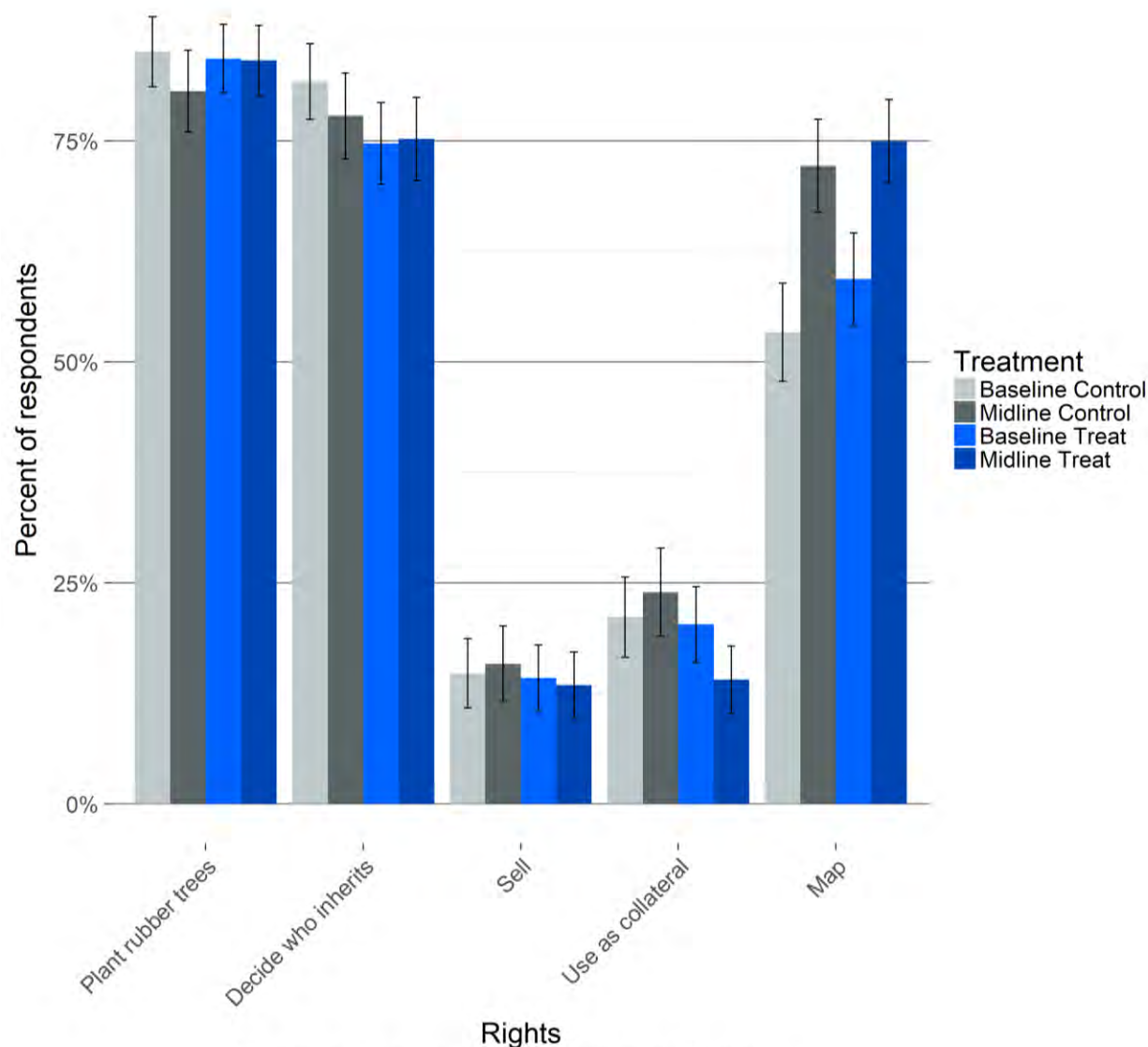
However, descriptive statistics do not present a simple story. Firstly, the percentage of treatment households who state they have the right to use their household farmland as collateral for a loan⁶⁶ decreased 7 percentage points (from 20% to 13%), without a similar decrease in control communities. This result may be due to CLPP training in treatment communities on this topic relating to individual land and not only commercial land, or it could be a result of some misunderstanding in treatment communities of the program training surrounding the commercialization of communal land.

We find a marked increase in households' perceived ability to map their farmland in both treatment and control households (a 15 percentage point increase from 59% to 74% in treatment households and a 19 percentage point increase from 53% to 72% in control households).

We find that members of vulnerable groups report having less land rights than household survey respondents overall. Women are seven percentage points less likely to report that they can use their household's farmland as collateral for a loan, eight percentage points less likely to be able to decide who inherits their household's land or map the land, and nine percentage points less likely to be able to plant rubber trees. Similarly, poor households are 15 percentage points less likely to be able to decide who inherits their household land and eight percentage points less likely to have the right to map their farmland. Minority respondents are also less likely than respondents overall to report that they can decide who inherits their land, map their land, or plant rubber trees, though they are 14 percentage points more likely than minorities in control communities to believe they have the right to map their land.

⁶⁶ Formal or informal, as the type of loan was not specified in the survey question.

FIGURE 14. HOUSEHOLD HAS RIGHT ON HOUSEHOLD FARMLAND TO CONDUCT ACTIVITIES



We also find that poor households are more likely to perceive an increased risk of expropriation of their individually held farmland compared with survey respondents overall (47% above overall mean versus 40% above mean). Poor households in treatment communities also report a higher risk of expropriation compared to similar households in in control communities (47% above mean versus 36% above mean), though these results are not statistically significant. We cannot determine whether the CLPP actually increases expropriation risk for poor households (the opposite of the intended impact of the program) or whether it simply increases awareness of the possibility of expropriation, which would be in line with empowering poor households to understand their rights (and subsequent risks to their rights) as part of the program.

FINDINGS: LAND CONFLICT

SUMMARY

This section analyzes land conflict. In the short term, we expect that land conflicts may increase due to the boundary harmonization process. In the long term, we expect a decrease. However, we find no evidence that CLPP affected land dispute activity using our measures. Table 25 presents a summary of key findings.

TABLE 25: SUMMARY OF FINDINGS ON LAND CONFLICT INDICATORS

Indicators	Finding in treatment areas*	Source ⁺
<i>H. <u>Communities</u> receiving the CLPP intervention will have different community-wide incidence of land conflicts.</i>		
Reduced incidence of conflict (S)	Pos	Descriptive statistics
<i>H. <u>Households</u> in communities receiving the CLPP intervention will experience a different number of land conflicts.</i>		
Reduced incidence of conflict (S)	Inconclusive	Panel model, Cross-sectional model, Descriptive statistics, Qualitative data

* Please see Footnote #44 for clarification on symbols used within this table.

LAND CONFLICT

TABLE 26: FINDINGS ON DECISION MAKING ACTORS

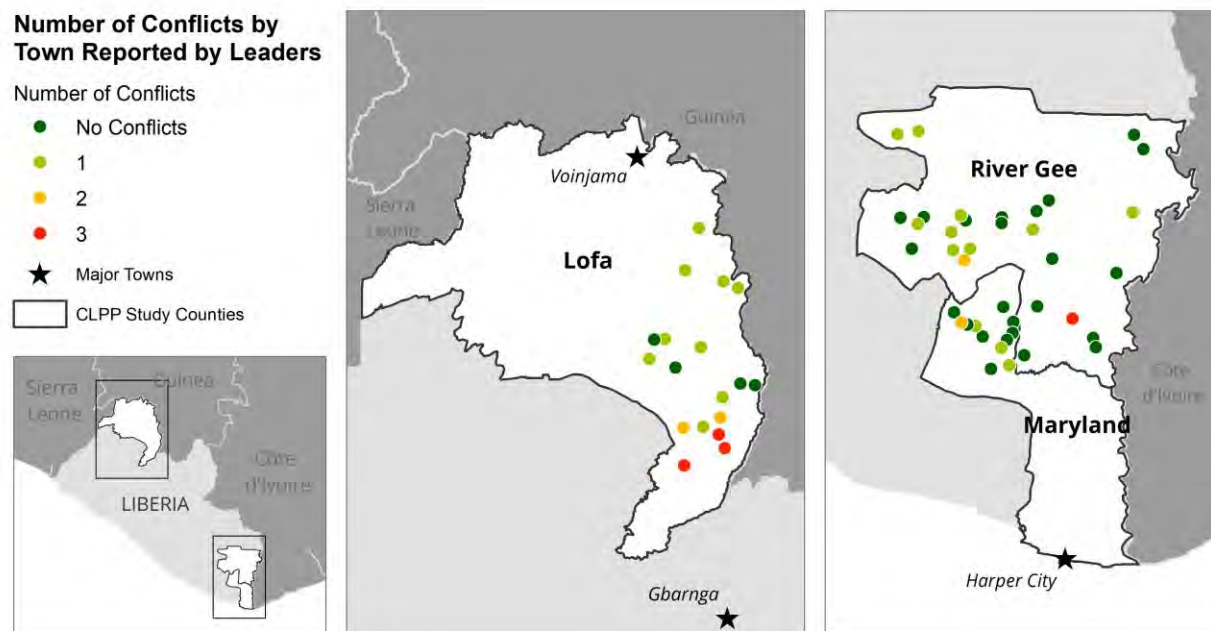
Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Reduced incidence of conflict	Household satisfaction with the process to resolve land and natural resource conflicts (S)	NF	NF	NA
	Number of land and natural resource-based conflicts that involve households (S)	NF	Pos	Descriptive Statistics

* Please see Footnote #44 for clarification on symbols used within this table.

We did not find the household's probability of reporting a land conflict was statistically different in treatment communities compared to control (see Table 26). Approximately 40% of households report experiencing a land conflict in the last year, and this proportion is consistent across treatment and control households. We find no effect of the CLPP on *household satisfaction with the dispute resolution process and severity of dispute* (as measured by incidence of violence or destruction of property or by self-reported severity).

At the community level, the analysis of the leader's survey suggests that conflicts have decreased at midline. While the proportion of leaders reporting at least one conflict fell in both treatment and control communities from about two-thirds at baseline (63% of clans overall) to half (50% of clans overall) at midline, there is no significant difference. Figure 15 below displays the geographic dispersion of land conflicts in the study communities at midline, as reported by leaders.

FIGURE 15. GEOGRAPHIC DISPERSION OF LAND CONFLICTS IN THE STUDY COMMUNITIES AT MIDLINE, AS REPORTED BY LEADERS



In the qualitative data, despite positive feelings about land tenure security, the lived experience of encroachment on community boundaries was commonly mentioned in FGDs in both control and treatment communities, perhaps due to the boundary harmonization process. The most common dispute reported by household survey respondents is over boundaries with nearby communities. Instances of conflicts between members of the same community were mentioned rarely.

We find that vulnerable groups did not present a consistent picture of their experience with land conflict. Women and the poor in treatment communities are less likely to be involved in land conflicts (although the result is not statistically significant), while men, youth and minorities in treatment communities are more likely to be involved in a conflict (also not significant). Minorities and the poor in treatment areas are more likely to report violence associated with their dispute, although the result is not significant. In the statistical models, women in treatment communities are significantly less likely to report that any land conflict they had been involved in was resolved, and they are less likely to report satisfaction with the conflict resolution process (see Table 27). The direction of the effect was also the same for poor respondents, but it was not significant.

TABLE 27: SUBGROUP FINDINGS ON LAND CONFLICT

Indicator [^]		Finding	Source ⁺
Larger number of conflicts resolved	reported by women	—	Cross-sectional model
	reported by minorities	—	Cross-sectional model
Increased satisfaction with resolution process	reported by women	—	Cross-sectional model
	reported by minorities	—	Cross-sectional model

* Please see Footnote #44 for clarification on symbols used within this table.

FINDINGS: COMMUNITY LAND DEVELOPMENT AND NATURAL RESOURCE CONDITION

SUMMARY

This section analyzes community land development practices and natural resource condition. We find markedly lower household participation in communal development work in CLPP communities overall, apparently driven by lower planting of some trees and rice on communal land in treatment communities and important differential effects by gender. Due to uncertainty about the mechanism driving this change, assigning a positive or negative interpretation to this difference in treatment versus control communities is difficult. On the one hand, reducing economic activity is not a goal of the program unless that activity is not in the community's interest. If a reduction occurred in activity that benefited the community, this would be negative outcome. Similarly, if higher women's investment in communal property represents a reallocation away from more productive activities (or activities over which they have more control), this could also have a negative effect. On the other hand, if the changes in investment patterns reduce harmful activity, this could be a positive development, and provides some evidence of the program's ability to change economic behavior.

We do not find that the CLPP has a strong effect on perceptions of forest resource condition in either the quantitative or qualitative analysis. As resource condition represents a long-term outcome, it may take additional time for program effects to emerge. Finally, we find a weak but positive association between treatment status and the improved valuation of communal land.

Table 28 presents a summary of key findings and this section presents the findings for work on communal land, the condition of natural resources, and land valuation.

TABLE 28: SUMMARY OF FINDINGS ON PRIMARY AND SECONDARY COMMUNITY LAND DEVELOPMENT AND NATURAL RESOURCE CONDITION INDICATORS

Indicators		Finding in treatment areas*	Source*
<i>H. Communities receiving the CLPP intervention will have a different level of development in communal lands and resources.</i>			
Increased participation in community development ⁶⁷	planted rice on communal farmland	+	Cross-sectional model
	worked on communal town land	+	Cross-sectional model
<i>H. Communities receiving the CLPP intervention will have different natural resource conditions, including increased availability of communal land resources and reduced degradation of communal lands and resources.</i>			
Improved condition of communal resources		NF	NA
<i>H. Households in communities receiving the CLPP intervention will contribute different amounts to community development in communal lands and resources.</i>			
Increased participation in community development	planted palm trees on communal farmland	—	Cross-sectional model
	planted cocoa trees on communal farmland	—	Cross-sectional model
	planted coffee trees on communal farmland	—	Cross-sectional model
	worked on communal farmland	Neg	Descriptive statistics
<i>H. Households in communities receiving the CLPP intervention will perceive different levels of natural resource conditions, including increased availability of communal land resources and reduced degradation of communal lands and resources.</i>			
Improved condition of communal resources		NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

⁶⁷ Leader survey data.

WORK ON COMMUNAL LAND

TABLE 29: FINDINGS ON WORK ON COMMUNAL LAND

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Increased participation in community development	Worked on communal town land (P)	NF	+	Cross-sectional model
	Community work index (binary above/below mean) (P)	—	NF	Cross-sectional model
	Planted palm trees on communal farmland (P)	—	NF	Cross-sectional model
	Planted cocoa trees on communal farmland (P)	—	NF	Cross-sectional model
	Planted coffee trees on communal farmland (P)	—	NF	Cross-sectional model
	Planted rice on communal farmland (P)	NF	+	Cross-sectional model
	Planted rubber trees on communal farmland (P)	NF	NF	NA
	Worked on communal farmland (P)	Neg	NF	Descriptive statistics
	Fenced communal farmland (P)	Neg	NF	Descriptive statistics

* Please see Footnote #44 for clarification on symbols used within this table.

Since there are several types of communal land in the study communities, we collect data on several types of communal work. These include planting of trees and rice on communal farmland, fencing of communal farmland, and work on communal areas in town such as contribution to maintenance of community structures and road brushing.

In one of our key findings, we show that *household participation in work on communal lands* is significantly lower in treatment communities. Treatment households plant palm trees, cocoa trees, and coffee trees on their communal farm land less often than control households. The finding is significant for an index of all types of communal work included in our survey (see Table 29). Overall, 28% of households in treatment communities report contributing work on their community farm, in contrast to 34% of control households. The effect of treatment on planting of other crops (rubber trees and rice) is also negative but not statistically significant.

These observed negative trends could be occurring due to capture of individual farm land by elites or increased awareness of the value of conserving communal space from cash cropping. As such, assigning a positive or negative interpretation to this difference in treatment versus control communities is difficult. On the one hand, the fact that women have reallocated their work towards community farms could be a negative outcome if the returns to such work (compared with investments in household farm land or market businesses) are lower. In the latter cases, she can directly claim the produce of her labor whereas, with the community land, her contribution may or may not get recognition from the community. On the other hand, if the overall lower investment in communal property is the result of

increased awareness about restricting investments in that property to public goods (the change is concentrated in activities with asymmetrical benefits) then it might be a sign that the program leads to positive changes in economic behavior.

TABLE 30: SUBGROUP FINDINGS ON WORK ON COMMUNAL LAND

Indicator [^]		Finding	Source ⁺
Increased participation in community development	by women	+	Cross-sectional model
	by minorities	+	Cross-sectional model
	by poor	NF	NA
	by youth	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

Disaggregating the effects of the CLPP on communal work by membership in a vulnerable group provides some additional information about this result (see Table 30). When we disaggregate by gender, we find that the difference in communal work is driven by men, who farm less when they live in treatment communities. Women in treatment communities, on the other hand, contribute more to communal land than women in control communities, but not enough to offset the reduction in contributions by men. In particular, men in treatment communities report planting lower amounts of rice and some types of trees on communal farmland.

We also find some evidence that the CLPP has a similar impact on minorities in treatment communities, although the results are not statistically significant. Poor and youth in control areas report contributing fewer days to fencing on community farmland in treatment communities (nine and ten days, on average, in control communities versus three and four, respectively for treatment areas). FGDs indicate a higher incidence of boundary conflict between neighboring communities in control areas, so increased fencing in control areas might be explained as a way to improve boundaries and tenure security.

CONDITION OF NATURAL RESOURCES

TABLE 31: FINDINGS ON WORK ON RESOURCE CONDITION

Indicator [^]	Finding ⁺ on households in treatment areas	Finding ⁺ on communities in treatment areas	Source ⁺
Improved condition of communal resources (S)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

We did not find that the CLPP had any effect on the *number of forest animals, water quality, forest size, forest density, change in types of trees found, nor the overall forest condition* (see Table 31). These are long-term indicators, so it is not entirely surprising that quantitative effects were not found at this stage. This will be an important area of inquiry at endline.

Analysis of the descriptive statistics suggests that the absence of treatment effects could be due to resource condition improvements since baseline in both treatment and control communities along some measures (number of animals, water quality, forest density, and overall forest assessment). However,

these results conflict with parallel decreases on some resource condition measures (forest size, decreasing number of tree types).

Moreover, note that in the FGDs respondents expressed a strong belief across both treatment and control communities that natural resource condition is declining. Participants noted that animals in the bush and fish in the rivers are increasingly scarce. Three main reasons are given as explanation, including over-hunting, over-fishing and the cutting of forests. These factors are often attributed to human population increase, as an elder in a control community in Lofa asserts, "People are increasing here, and they are using the forest. People are taking the mineral from the ground too, and as they take it out it doesn't come back. To me, the resources are finishing [being used up]... We used to have forest from here all the way, but they are cutting it down now... We get people from other land coming onto this land, taking some of this land because they want to make farms."

When discussing changes in the condition of natural resources, crop yields are also commonly mentioned to have decreased in comparison to the past, with lack of rain and reduced soil fertility given as the main reasons. In a small number of FGDs, participants mentioned that the number of trees, including palm, in their communities had decreased due to over-harvesting and increases in human population.

Though the statistical models are not significant, the raw proportions of households who affirm that people in their community engage in unsustainable forest practices, as measured by asking whether people cut more palm than they need and let it rot, decreased 7 percentage points (from 70% to 63%) in treatment communities and 5 percentage points (from 56% to 51%) in control communities. Rules surrounding this issue were mentioned frequently in FGDs, and both treatment and control communities could have made changes on this measure over the last couple of years, although the results are speculative.

VALUATION OF COMMUNAL LAND

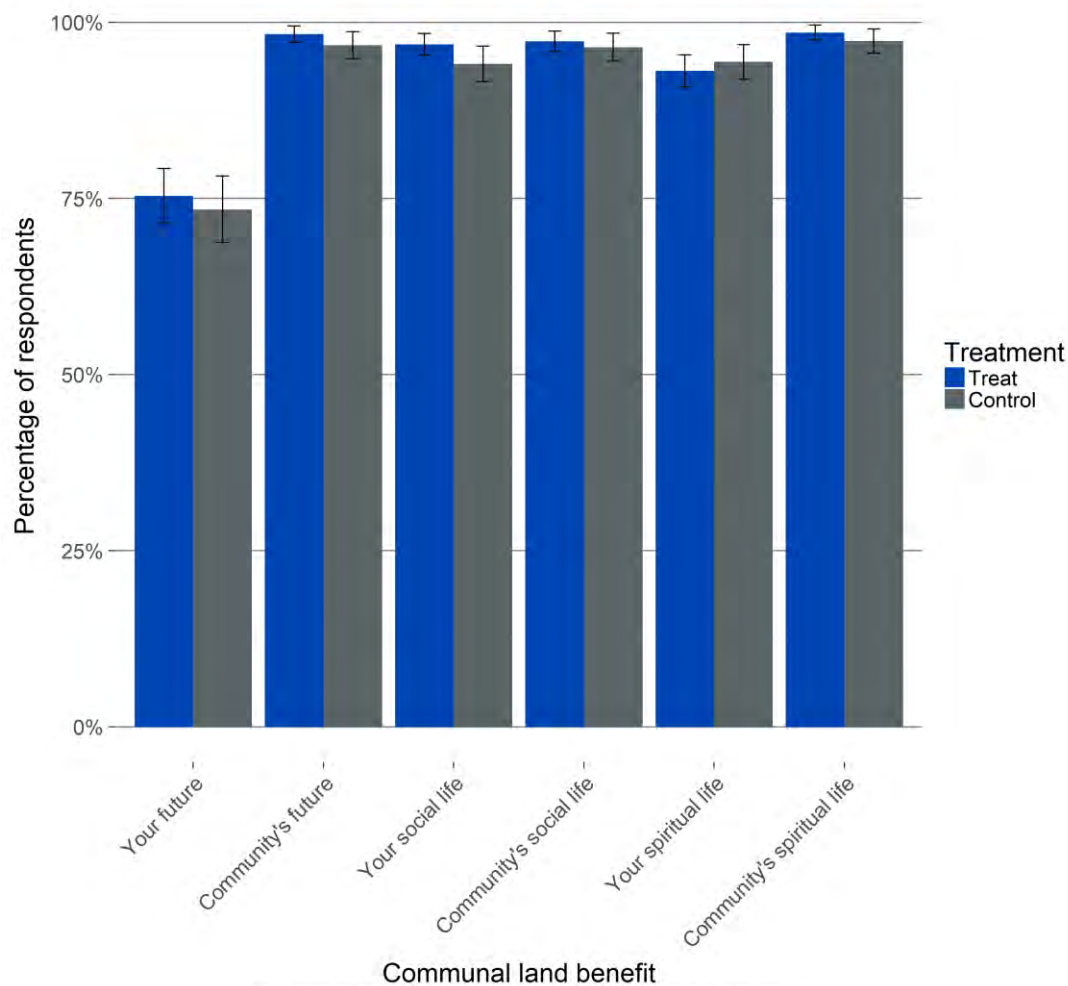
TABLE 32: FINDINGS ON VALUATION OF COMMUNAL LAND

Indicator [^]		Finding* on households in treatment areas	Finding* on communities in treatment areas	Source ⁺
Improved knowledge of communal land value	Communal land most important for community's future (Context)	+	NF	Cross-sectional model
	Communal land most important for community's social life (Context)	+	NF	Cross-sectional model
	Conservation as a community/household priority (S)	NF	NF	NA

* Please see Footnote #44 for clarification on symbols used within this table.

We find some evidence that the CLPP changes the way that households value their community land. CLPP households are significantly more likely to rate communal lands as important for their community's future and important for their community's social life (see Table 32). The proportion of households who rated a communal land type as most important for each purpose is shown in Figure 16.

FIGURE 16. COMMUNAL LAND IS MOST IMPORTANT FOR WHICH COMMUNITY ACTIVITIES



We also find that respondents at midline were more likely to choose protecting land for their children to farm on in the future over a paid plantation job now than those at baseline (Figure 17), although we do not find a significant difference between treatment and control areas, or between women and men.

However, we see some indication that advocating to protect land for the community's children is a land governance contribution that men expect women to make, even though the data do not suggest that women's views on this issue differ from men's. For example, one male Youth Leader in a treatment community in Maryland explains, "The present rule [here] about women's land right is that they [women] too must agree upon the boundary harmonization business that we carry out with our neighboring communities... Even if conflict comes [out of the situation], they can tell us that we shouldn't do that because the land that you have is what you own for your future, for your children. [They say] don't go beyond it [your land boundary] or conflict will come. They give strong advice."

FIGURE 17. HOUSEHOLD WOULD ENSURE CHILDREN HAVE FARMLAND OVER PLANTATION JOB NOW

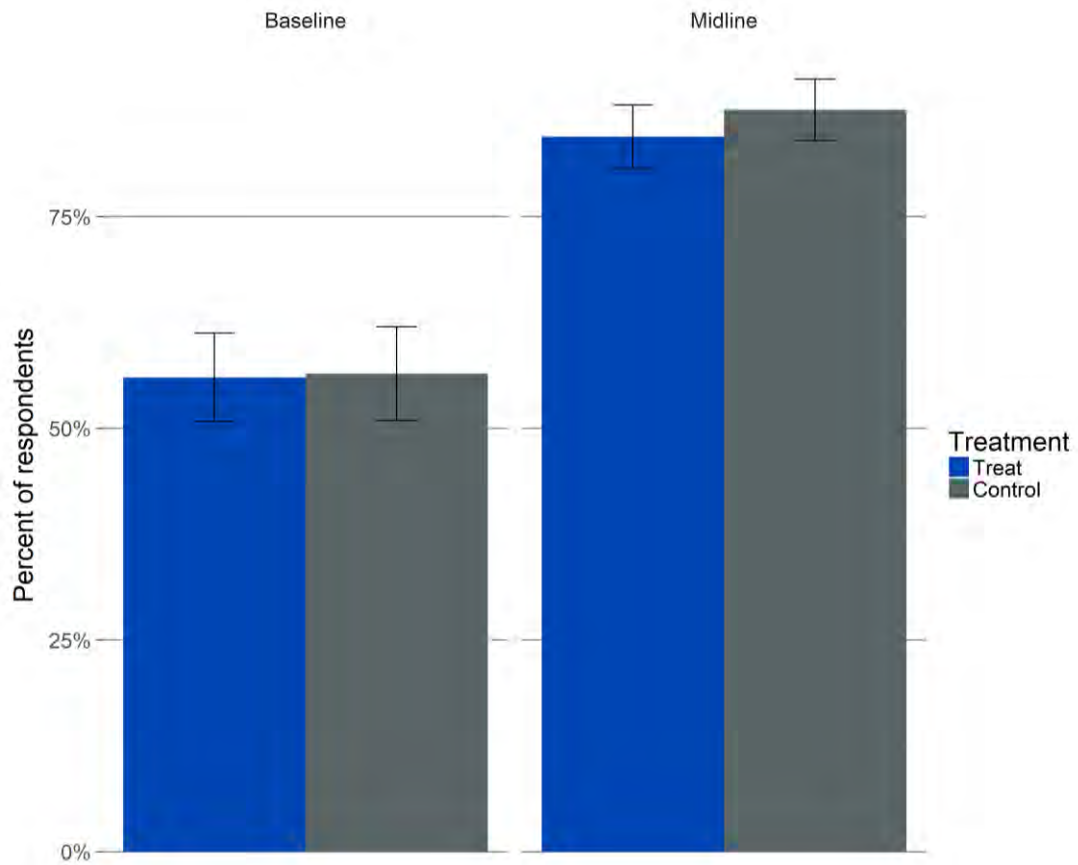


Figure includes the 95% confidence interval generated from a t-test of difference in means.

FINDINGS: LIVELIHOODS

We do not yet find that the CLPP affected our measures of livelihood and welfare (see Table 33). The amount of land cultivated by households increased by roughly the same amount across all communities (about one lot⁶⁸). Some limited qualitative evidence of positive effects of the CLPP is that the proportion of poor households (in the bottom quartile of an asset index) decreased from 28% to 20% in treatment sites while increasing from 22% to 30% in control areas.

TABLE 33: SUMMARY OF FINDINGS ON LIVELIHOODS INDICATORS

Indicators	Finding in treatment areas*	Source*
<i>H. <u>Households</u> in communities receiving the CLPP intervention will have different livelihood and welfare outcomes.</i>		
Improved livelihoods outcomes	Size of household land (S)	NF
	Income/prevalence of poverty and overall welfare (S)	Pos
		Descriptive statistics

* Please see Footnote #44 for clarification on symbols used within this table.

68 1 hectare=9.88 lots

CONCLUSIONS AND POLICY RECOMMENDATIONS

The CLPP assumes that increased community empowerment and better, more inclusive governance of communal land in the short- to medium-term will permit Liberian communities to improve community governance, reduce land conflicts, strengthen land tenure security, increase sustainable natural resources management and conservation, increase community members' legal empowerment, and protect the rights of women and other vulnerable groups. We find encouraging evidence that in the medium-term, the CLPP has a significant impact on community governance. However, our assessment cannot yet reveal whether the changes 10 months into programming will persist and whether the mechanisms hypothesized to bring about longer-term changes will prove to be effective.

The key findings of this evaluation are widespread initial governance improvements and good qualitative evidence that education on community land boundaries and strategies for boundary demarcation occurred. There are also some encouraging indications of improved communal management of community farmland.

However, the changes in community empowerment for treatment communities, including legal knowledge and awareness, that we see are weaker than we would expect at this stage. Although we find evidence of a general trend in the qualitative data of improvements in some community empowerment indicators, there are not notable changes for ATEs on empowerment indicators or for subgroups. It is possible that the program is not advancing community knowledge and awareness because of intervention limitations. In particular, the lack of legal clarity with respect to the Land Rights Act at the time of the intervention may have stymied successful knowledge and awareness training. An alternative explanation is that changes are occurring in control communities that could be increasing their levels of knowledge and awareness to such an extent that we do not see a difference with CLPP treatment areas.

There are also other outcomes that we would have expected to see positive effects for at this time horizon that have either not changed or moved in the opposite direction. The mixed findings on tenure security are the most important that fall into this category. While there is some qualitative evidence that the program has made communities more confident in their tenure security in dealings with investors, respondents in treatment areas still report significant anxiety about the threat of encroachment from neighboring households and clans.

It is also possible that changes to perceptions of tenure security in CLPP communities are limited by the delay in passage of the Land Rights Act up to this point. While this legislation is expected to be enacted imminently, it must be noted that significant changes were made in the version of the bill that was passed by the House of Representatives in August 2017. In that version, 30% of identified customary land would be converted to public land without any benefit to communities. The House's version also empowers the Government of Liberia to extend land concessions (existing on customary land prior to the enactment of the bill) indefinitely. There is a little room in this process for inputs from communities, as the bill mandates that their views on the negotiation and extension of concession agreements will be overseen by a new government agency that does not yet exist. If these problematic changes survive into

the final version of the bill, the study's hypothesized changes to tenure security as a result of the CLPP may need to be reexamined.

The negative effect on household planting on communal land also raises some concern, especially taken with the findings about increased instances of expropriation of communal farmland. It may be that the CLPP actually raises awareness about the importance of tenure security and resource conservation and that this what the evaluation is picking up, rather than decreases in security itself. Longer term data collection is needed on these indicators to see where these tenure security trends develop across treatment and control communities.

Initial results on women's empowerment also require a longer-term research perspective. It is to be expected that the effect of CLPP on women's rights would not yet be realized given the short time since the start of program implementation. However, there is strong evidence that despite the program, women still have a harder time realizing their rights and that norms around women's empowerment remain firmly rooted unequal status. Similarly, members of minority groups did not report changes in their engagement with land governance or tenure security. Although there are several possible interpretations of this finding of no change, we believe that it is suggestive evidence of the challenge of changing local power structures, especially those entwined with notions of citizenship and belonging. The evidence of subgroup effects at this stage is particularly incomplete because boundary mapping and negotiation were prioritized up to this point by the implementing organization over the governance and norms change component of the program.

POLICY RECOMMENDATIONS

The evaluation findings provide a basis for the following policy recommendations:

OVERALL

- We were able to identify a sizeable impact of the program on the treated communities for several of the key outcome areas despite the relatively small sample size. At midline the evaluation found significant relationships between treatment and several pre-specified primary indicators. However, the study at midline was underpowered to detect changes on secondary and context indicators, and supporting our power calculations, we did not detect changes. Another potential explanation for the lack of positive findings is flaws in the program design or implementation. The study cannot disentangle the limitations of weak power and weak implementation. Instead, it employs a 'hybrid' evaluation methodology to supplement impact evaluation analysis methods with the extensive expanded qualitative data that was collected at midline.
- Longer term data collection is needed on several indicators to see how trends continue to develop across treatment and control communities. These currently inconclusive indicators include key indicators of tenure security such as perceived threat of encroachment, prevalence of land conflicts, and indicators of women's empowerment. Only after intervention has been completed will we be able to fully understand these effects.
- The counties selected for inclusion in this study do have active land concessions, but they do not have agricultural concessions, as are found in other areas of Liberia. While, as detailed below, this evaluation finds encouraging evidence that several aspects of the CLPP process are good candidates for replication in other areas of Liberia, these findings should be understood to have likely (but unproven) external validity with respect to other counties in Liberia.

LAND GOVERNANCE

- Even at a comparatively early stage, the CLPP has had a striking effect on how community members perceive their leaders in treatment communities. This result provides important evidence in support of the premise of the CLPP intervention that land governance programs are most successful when they involve long-term, on-going support, training, and capacity building for communities. The midline results of this evaluation are another data point in favor of the effectiveness of this embedded approach.
- The CLPP's effect on how community members perceive their leaders also provides evidence on the mutability of such perceptions of leaders. The fact that targeted support of leaders in a specific thematic area (communal natural resource management) increases overall perceptions suggests that the relationship between local leaders and community members in Liberia could benefit from programming in other domains.
- Nevertheless, results on community meeting attendance and participation in land governance are mixed. While the findings in CLPP areas show that people are more likely to be involved in helping make rules and there is greater community involvement in decisions about community farmland, we also see little change in meeting attendance and (descriptive) declines in rule monitoring and enforcement by household. These results—combined with underwhelming results on benefit sharing and decision-making authorities—could indicate that leader strengthening is occurring without democratization of land governance. Or they might simply indicate local leader empowerment during intensifying decentralization. These are critical indicators and trends to track at endline.

TENURE SECURITY

- Widespread community satisfaction⁶⁹ with the CLPP boundary harmonization process is evident in the qualitative data, including boundary negotiations with neighboring communities, identifying boundary landmarks, and planting boundary trees. These components are good candidates to be scaled-up wholesale to all of Liberia.

COMMUNITY EMPOWERMENT

- The lack of change in knowledge and awareness of communal land laws and land rights for treatment communities suggests that it will take time to make people aware of their rights, and that the lack of passage of key legislation may have proved confusing for communities. Once the Land Rights Act passes, significant resources will be critically needed for consultation and outreach on these topics by NGOs such as SDI, donors, and the government of Liberia.
- However, the findings on communal farmland that communities participating in the CLPP have higher communal decision making and larger inputs by women could be an encouraging instance of empowering behavior changes stemming from the CLPP. These results suggest that even at partial completion, the CLPP model may produce inclusive, positive results for management of communal farmland. As such, at this stage it appears that this model may be viable blueprint or intervention template for future community development work.

GENDER

- The finding that women invest more time in planting rice on communal farmland as a result of the CLPP can be interpreted several ways. It could suggest that women are empowered to make use of

⁶⁹ Including across men and women.

communal lands they previously lacked access to (potentially in response to conservation behavior diminishing the amount of cash crop tree planting on those lands). However, further analysis is required to understand this result in conjunction with the finding that men have lower investment in communal farmland, given the possible effects of the program on intra-household bargaining.

- The finding that changes to gender norms governing property rights are met with skepticism demonstrates the difficulty of seeking transformative change of community norms and power structures. This is true even in the context of slow-moving but progressive legal transformation ongoing in Liberia. Women, in particular, and vulnerable groups in general, will require support to obtain truly equal access to governance structures and property rights. This finding is consistent with IFRPI's recent review of the evidence on women's land rights (Meinzen-Dick, et al. 2017).
- Another implementation condition that may have factored into the weak gender findings to-date is the fact that during almost all of the implementation period captured at the study midline (2016–2017), the implementer was utilizing an all-male field team. A female field staffer has since started working in one of the three study counties, but it is possible that gender outcomes could be improved in the future by greater commitment on the part of the implementer to ensuring that female field staffers are employed across the study area.

OTHER VULNERABLE GROUPS

- Poor respondents in communities supported by the CLPP do report higher participation in some land governance activities, such as creating rules, and lower participation on other measures. This finding that less positive change occurred for poor households on the land governance and tenure security indicators is expected, given the difficulty of producing change for the least connected community members in a program that targets everyone. However, they still may suggest that the CLPP model could potentially be altered to do more to empower poor members of the community.
- This evaluation's inconclusive results on the subgroup effects of CLPP can also be understood as demonstrative of tension between the program as-designed—which was intended to have a strong focus on vulnerable populations—and the program as-implemented—the scope of which was culled several times based on funding constraints, and more importantly, based on assessments of what was feasible on the ground to implement in concert with local power structures. These evaluation results highlight the difficulty of promoting change within power structures that a program must rely upon for community access. Additional investigation and piloting should be undertaken to discern potential changes in program design to render assumptions surrounding this empowerment work more reasonable.

APPENDIX I—BASELINE REPORT

The CLPP Baseline Report can be found online at the following URL:
<https://land-links.org/evaluation/community-land-protection-program-clpp-liberia/>.

APPENDIX 2—BASELINE INSTRUMENTS

The CLPP Baseline Instruments can be found online at the following URL:
<https://land-links.org/evaluation/community-land-protection-program-clpp-liberia/>.

APPENDIX 3—PRE-ANALYSIS PLAN

The CLPP Pre-Analysis Plan can be found online at the following URL:
<https://land-links.org/evaluation/community-land-protection-program-clpp-liberia/>.

APPENDIX 4—MIDLINE INSTRUMENTS

The CLPP Midline Instruments can be found online at the following URL:

<https://land-links.org/evaluation/community-land-protection-program-clpp-liberia/>.

APPENDIX 5—DESCRIPTIVE TABLES

The CLPP Midline Descriptive Tables can be found in the “Appendix 5” folder within this Midline Report’s zipped file.

APPENDIX 6—REGRESSION TABLES

The CLPP Midline Regression Tables can be found in the “Appendix 6” folder within this Midline Report’s zipped file.

APPENDIX 7—BALANCE TABLES

The CLPP Midline Balance Tables can be found in the “Appendix 7” folder within this Midline Report’s zipped file.

APPENDIX 8—ATTRITION SUPPLEMENT

The CLPP Midline Attrition Tables can be found in the “Appendix 8” folder within this Midline Report’s zipped file.

As presented in the ‘Sample Characteristics’ section of this report, overall 11% of original panel baseline respondents were replaced through randomization at midline. Fifty-eight percent (N=45) of these attritted respondents were in treatment communities (representing 6.5% of the total panel sample), and the remaining 42% (N=32) were in control communities (representing 4.5% of the total panel sample). This roughly corresponds to the overall sample distribution of treatment (53%) and control (47%) households at midline, and this difference is not statistically significant. Both the overall and differential attrition rates at midline are well within the conservative threshold set by the What Works Clearinghouse⁷⁰ to qualify as low attrition with a minimal risk for bias.

Sheet one of the tables in this annex shows the baseline balance on primary panel indicators for attritted versus non-attritted households. Only 4% (N=1) of primary panel indicators are significantly imbalanced at baseline for attritted versus non- attritted households. Sheet two of the tables in this annex shows the baseline balance by treatment status on primary panel indicators for the non-attritted (final panel) subset only. This table shows that the non-attritted (final panel) sample contains about the same number of imbalanced variables at baseline as the full sample that includes replacement households, indicating that attrition does not appear to have introduced bias into the sample⁷¹. Additionally, as stated in the report body, as a robustness check panel models were also run without the attritted households’ replacements, and the results are extremely similar. Sheets three through six of the tables in this appendix present the model findings on primary panel indicators with the attritted households removed (on the non-attritted sample only). All nine primary significant governance results remain, in addition to one of the two significant tenure security perception results.

Together, the tables in this supplement provide additional evidence that the observed evaluation results capture changes in outcomes over time as intended, as opposed to differences between households for the attritted cases that were replaced through randomization.

⁷⁰ https://ies.ed.gov/ncee/wwc/Docs/referenceresources/wwc_standards_handbook_v4.pdf (page 13).

⁷¹ As discussed in the body of this report, as a robustness check analyses were redone with propensity score weighing with Mahalanobis distance calculation to ensure similarity on the individual and community demographic variables. The results are similar, providing evidence that differences in baseline variables are not driving the results.

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