

April 2025

# Land rights formalisation and farmers' decisions to invest in sustainable land management

## Insights from Benin



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## Authors

Check Abdel Kader Baba  
Frederike Klumper  
William Onura  
Cherifath Sinagnissiré  
Washe Kazungu

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This publication was made possible with the  
financial support by the German Federal Ministry for  
Economic Cooperation and Development (BMZ)

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# Executive summary

Sustainable land management (SLM) plays a pivotal role in land restoration and in achieving Land Degradation Neutrality. Despite steady efforts by governments and international development agencies to promote SLM, its rate of adoption remains low. While many reports and articles have addressed constraints on the adoption and upscaling of SLM, few have made the connection between land tenure security, land restoration and SLM, though there has been greater focus on this nexus since the UNCCD Decision 26 / COP 14 on land tenure.

Unfortunately, many policymakers continue to mistakenly reduce land tenure security to land tenure formalisation. While the latter may contribute to tenure security, it is not the only means and should not be the predominant approach. Legitimate tenure rights provide tenure security to the vast majority of farmers living in rural areas. It is therefore up to governments and development partners to recognise and protect those rights in ways that reflect communities' expectations and perspectives.

Building on data from the Responsible Land Policy (ProPFR) project<sup>1</sup> implemented by GIZ in Benin to secure community land rights, we examine the role of tenure formalisation in farmers' decisions to implement SLM practices. The research was conducted in Gounin, located in the commune of N'dali, Benin. This village participated in ProPFR. The findings of our study demonstrate that farmers' decisions to implement SLM practices on their land did not depend on the possession of a land certificate. More than 89 percent of the farmers surveyed for our study, regardless of gender, stated that their decision to implement SLM was not related to the possession of a land certificate or any formal document

to claim ownership over farmlands. All respondents confirmed that they implemented one or several SLM practices on their farms, including crop rotation (43.9 %), soya cultivation (16.75 %), crop residue management (7.9 %), pigeon pea planting (7 %), and the use of cattle dung as manure (5.3 %). Ninety-one percent of those who perceived their land tenure to be insecure and raised concerns about implementing agroforestry practices were women, who typically lease land or access it through their husbands.

Moreover, 97 percent of respondents, regardless of gender, reported that the land they cultivate belongs either to them or their families, emphasising a high level of trust and confidence in local societal values and customary rules on land governance. The land formalisation process relies on the so-called "contradictory land survey," which involves village leaders and neighbours. This survey confirms or informs the customary rights of any applicant for a land certificate and reinforces the legitimacy of customary values and institutions. Our findings showed that farmers are not keen to invest resources to obtain the land certificate (*Attestation de Détention Coutumière*), despite recognising multiple potential benefits of doing so (social protection, access to credit, revenue opportunities, safe transfer of rights to children or family members, etc.). While some farmers argue that the formalisation process is cumbersome and costly, we found that farmers are mainly reluctant to invest scarce financial resources in the formalization process because customary rules and institutions give them a sufficient sense of tenure security to continue working on their land and investing in SLM, despite risks of conflict and dispossession by the state.

<sup>1</sup> The project is referred to as ProPFR or *Projet Politique Foncière Responsable* in Benin



# 1 Introduction

The adoption at scale of sustainable land management (SLM) is crucial to achieving [Land Degradation Neutrality](#) (LDN) targets and land restoration goals (Cowie et al., 2018; Liniger et al., 2019). Despite consistent efforts by governments and various national and international development institutions to promote SLM practices, the rate of adoption remains low (Baba and Moumouni Moussa, 2020; Cordingley et al., 2015), especially in Africa where an estimated 65% of productive land is affected by degradation (Mansourian and Berrahmouni, 2021), with agriculture increasingly recognised as a key driver of land degradation (FAO, 2022; Kadoya et al., 2022), biodiversity loss (Peng et al., 2024), and climate change (Bardgett et al., 2021; M.J. Sanz et al., 2017). This raises concerns about how to reconcile food security with land degradation neutrality at a local scale and how to ensure that smallholder farmers, who manage up to 80 percent of all farms across Africa (AGRA, 2019, 2017), actively engage in land restoration by implementing and adopting SLM practices. What key enabling factors, likely to stimulate investment in land restoration, have been overlooked by policymakers and development agencies and NGOs working on the ground?

In 2019, over 196 countries<sup>2</sup> adopted the [UNCCD Decision 26 / COP 14](#) on land tenure which recognises tenure security as a key enabler of land degradation neutrality (FAO, 2023; UNCCD and FAO, 2024). Since then, various development and research institutions have channelled their efforts and resources into mainstreaming tenure security in the land restoration, biodiversity, and climate agendas (Higgins et al., 2018; Hilhorst et al., 2021; ANGOC and ALRD, 2023; Rakotonarivo et al., 2023). Despite the lack of a clear definition of tenure security and the means to achieve it for the benefit of smallholder farmers (Bromley, 2009; Swallow, 2021; Toulmin, 2009; Valkonen, 2021), a growing number of governments, supported by international development institutions, have been pushing for land formalisation (Benjaminsen et al., 2009; Totin et al., 2021), hoping it will stimulate investment in land restoration, help address gender disparities in accessing land, boost agricultural productivity and rural livelihoods, and reduce conflicts over land.

The ProPFR project<sup>3</sup> was implemented within this context. The project aimed to help rural communities, and especially women, register their farmlands and attain a customary land certificate (*Attestation de Détention Coutumière*), which gives its holder an assumption of ownership (*présomption de propriété*) under the [Benin Land and Estate Code](#)<sup>4</sup>. (*Code Foncier et Domania*). Based on this project, TMG Research and APIC initiated this research to examine the role of tenure formalisation in farmers' decisions to implement SLM practices and to explore how land formalisation shapes farmers' perception of tenure security.

<sup>2</sup> <https://www.unep.org/events/conference/convention-combat-desertification-cop-14>

<sup>3</sup> <https://gopa-afc.de/news/inauguration-propfr-promotion-dune-politique-fonciere-responsable-office-parakou-benin>.

<sup>4</sup> Loi n° 2013-01 portant code foncier et domania en République du Bénin



Farm preparation in northern Benin, © Check Abdel Kader Baba

## 2 Methodological notes

### 2.1 Overview of the research area

The research focuses on the village of Gounin, one of 33 villages in northern Benin where the ProPFR project was carried out. Located in the commune of N'dali (see Figure 1), the population is mainly composed of Bariba ethnic communities who rely on farming for their livelihood needs and income generation. Gounin benefited from the so-called 'grouped systematic' approach, an initiative aimed at reducing the transaction costs associated with obtaining the customary land certificate. The project also introduced two processes aimed at formalising secondary land use rights, including the leasing of agricultural lands (*contrats types*), and the collection of non-timber forest products by women (*conventions locales*). It is assumed that farmers holding these certificates would be more inclined to implement SLM practices.

### 2.2 Research objectives and data collection methods

This goal of the research was to analyse the links between communities' perceptions of tenure security, land formalisation, and investment in land restoration, with a focus on SLM. We pursued four specific research objectives:

- 1 To assess farmers' land assets and farming priorities;
- 2 To analyse SLM practices used and perceived tenure security of farmland;
- 3 To assess the importance of land rights formalisation and its influence on farm investment decisions (crop selection and SLM);
- 4 To explore other enabling conditions for farmers' engagement in land restoration.

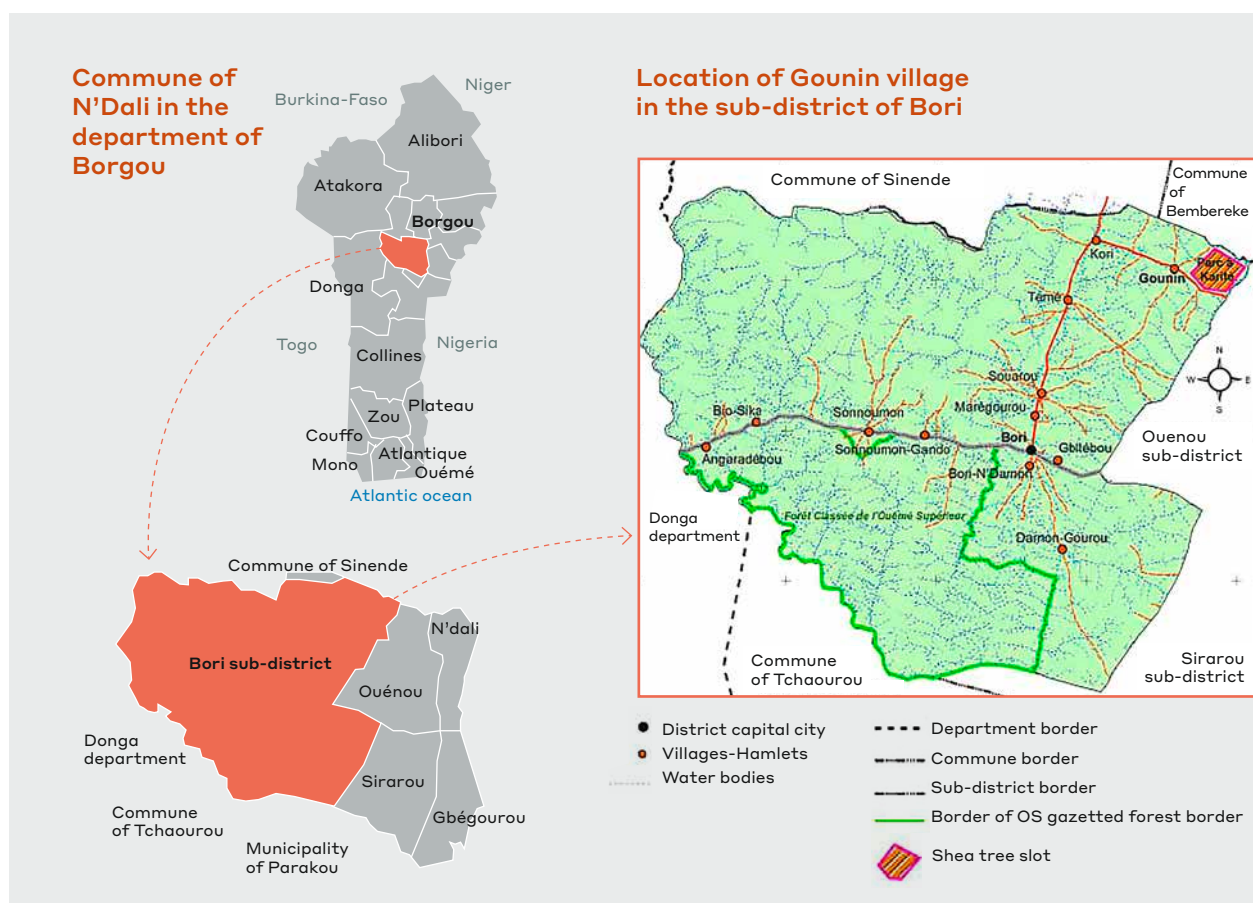
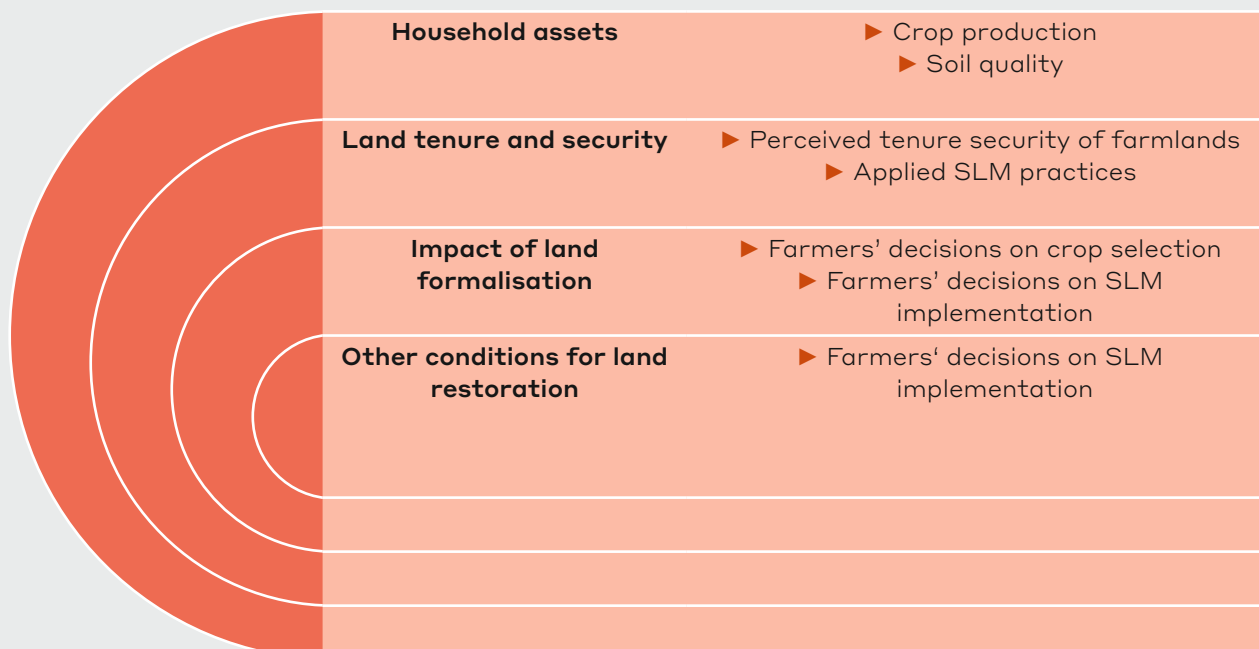


Figure 1 Location of Gounin village

Source: base map IGN F1, 2018 Realisation: TMG Research, 2022





**Figure 2** Summary of research steps and objectives

Figure 2 provides a graphic visualisation of the research steps and objectives.

A total of 57 farmers were interviewed using a semi-structured questionnaire. A stratified sampling method was used; the first level of stratification was farmers' participation or non-participation in the above-named project, the second level was gender. Because the village of Gounin is primarily occupied by Bariba people, our sample covers mainly this ethnic group, although some members of the Fulani community were also surveyed. Thirty-nine percent of all respondents were women. The average household comprised a male head of household, two wives and about eight (08) children, including two (02) under the age of 12, two (02) teenagers (aged between 12 and 17), and four (04) young adults above 18 years of age. This information is crucial because as each young adult matures, she or he is likely to require a plot of land for future household needs or other purposes, indicating potential pressure on the family and surrounding agricultural land, and highlighting the importance of securing land and transferring healthy and productive soils to the growing family members.

## 3 Findings

### 3.1 Household land assets

#### 3.1.1 Land allocation to crop production

Based on the research framework described in Figure 2, this section looks at the main crops produced by farmers in Gounin and the land area (in ha.) allocated to each crop. This information was important because land allocation is a challenging process that is determined by multiple inter-connected factors including household size, access to extension services and fertiliser, type of labour use, membership of farmers' associations, and the total land area that the household manages (Adjimoti, 2018).



The research revealed that farmers in Gounin mainly rely on three main crops for household needs and revenues: soya, maize, and cotton.

Unlike cotton, which is produced only for cash income, crops such as maize, soya, yam, rice, etc. have traditionally been grown for household consumption. Nowadays, they are increasingly grown as a cash crop, even if a portion is retained for household consumption. Farmers' preference for soya can be attributed to its favourable market conditions, coupled with other perceived benefits including soil fertilisation and potential for small-scale processing (soya cheese). Farmers find soya production less restrictive and less negatively impactful on humans and soil than cotton production, which requires the use of inorganic fertiliser inputs. They also find the revenues from soya cultivation fairer because they retain bargaining power over their products, unlike cotton where prices are set by the government. From a cost-benefit point of view, farmers consider soya production to be a highly profitable activity. Maize, on the other hand, is significant as a staple food, ensuring steady demand and easy market access for producers.

Understanding the distribution of farmed crops sheds light on household food consumption needs and revenue priorities and provides some indication of possible demand and use of SLM practices or fertiliser inputs. For instance, a household that produces a lot of cotton is likely to be highly dependent on inorganic fertilisers, as cotton producers usually receive assistance from extension agents and have access to subsidised inorganic fertilisers. Farmers who do not produce cotton have limited access to inorganic fertilisers, and hence are more reliant on SLM practices or low-quality fertilisers.

To understand the weighting of the above crops in household decisions, we further analyse land area allocated to each crop. In Benin, as in many countries across Africa, land use allocation decisions are influenced by complex demographic and socio-economic factors (Kokoye et al., 2013), including the characteristics of heads of household, market orientation, access to credit or extension services, farm size, and land access mechanisms. In northern Benin, where the communes are larger and population size comparatively small, farms are larger than the national average.

Farmers involved in crop production	Maize	Cotton	Soya	Yam	Other crops
Women (n=22)	17	14	22	0	12
Men (n=35)	35	23	35	9	20
<b>Total</b>	<b>52</b>	<b>37</b>	<b>57</b>	<b>9</b>	<b>32</b>

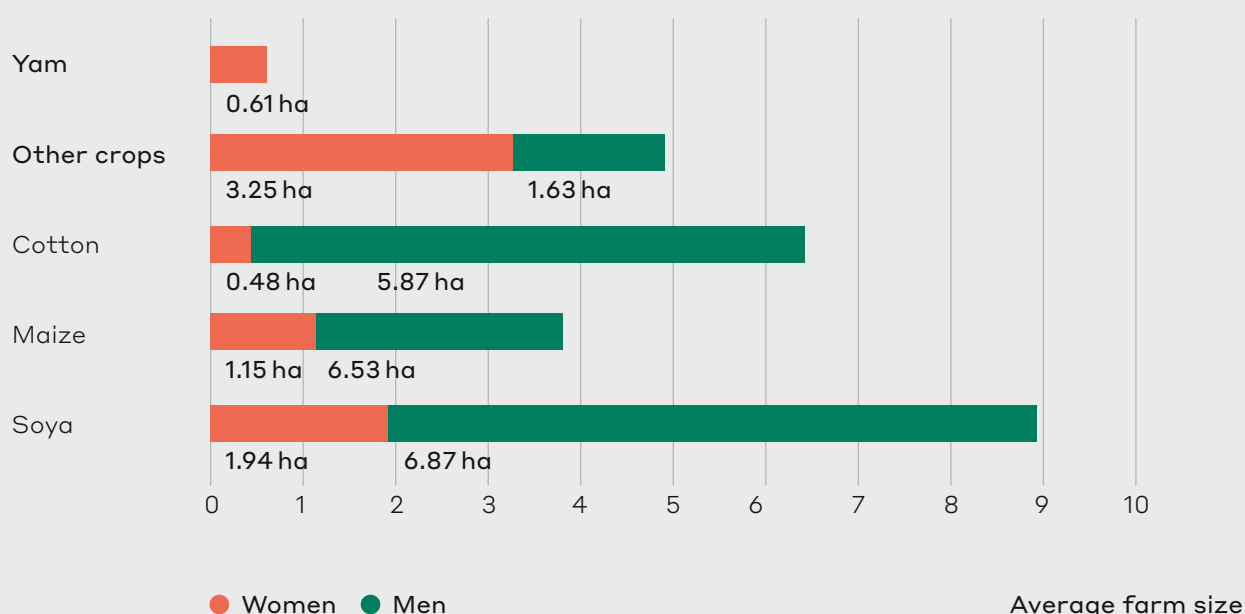
**Table 1** Main crops farmed by respondents (count)

In Gounin, the average farm size is about 22 hectares for households headed by men and 7 hectares for households headed by women. This is far higher than the national average of 5.4 hectares (RNA<sup>5</sup>, 2019) and higher, too, than the average of 6.8 hectares for Borgou Department (RNA, 2018). In neighbouring Collines Department, farms headed by males average 13 hectares in size while those run by women average 11 hectares in size (Adjimoti, 2018).<sup>6</sup>

All households are involved in soya production, allocating on average 5 hectares of land. For farms managed by women, the average soya plot size is about 2 hectares, whereas the average for farms managed by men is about 6.5 hectares. Maize is produced

by about 86 percent of respondents on plots averaging 6.53 hectares in size. Fewer women (77 %) than men (100 %) are involved in maize production, and with smaller plot sizes. Women's average maize plots (1.15 ha) are more than three times smaller than men's. Although there is not much difference in proportion between women (63.6 %) and men (65.7 %) involved in cotton production, women's average cotton plot size (0.48 ha) is almost 12 times smaller than men's (5.87 ha on average). Yam is cultivated only by men (60 % of respondents) on plots averaging 0.60 hectares in size (see Figure 3). Women do not cultivate yam due to its physical demands and social-cultural considerations.

### Land size for crop production in Gounin



**Figure 3** Land size (ha) allocated for crop production in Gounin (field data, July 2023)

<sup>5</sup> Recensement National Agricole

<sup>6</sup> <https://instad.bj/images/docs/insae-statistiques/enquetes-recensements/RNA/Resultats-Module-base/Indicateurs%20synth%C3%A9tiques%20sur%20l'E2%80%99agriculture%20b%C3%A9ninoise2.pdf>

Other crops cultivated by respondents include peanut, beans (niébé), sorghum, rice, and cassava. Although a lot of men are involved in the production of other crops, the area they allocate to those crops is very small, as compared to women who allocated on average 3.25 hectares to the combined cultivation of beans, peanuts, and rice.

### 3.1.2 Land degradation prevention and SLM practices

All farmers, regardless of gender, perceived their farmlands to be degraded, although a few of them have some plots they consider somewhat fertile. Sixty-three percent of respondents had not a single plot they considered fertile while the remaining 37 percent have plots they consider somewhat fertile. Only one out of 22 female respondents considered her farmland to be somewhat fertile (see Figure 3). Of the respondents who perceived their farmlands to be degraded (n=36), more than 58 percent are women.

#### Soil quality perception

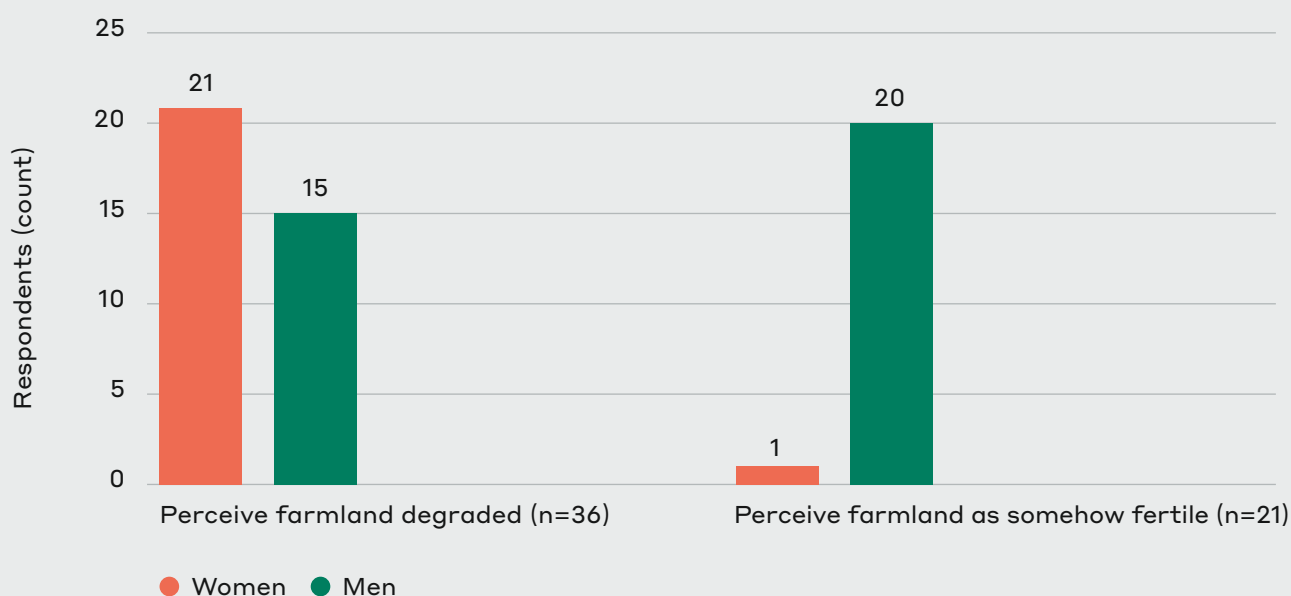


Figure 4 Perception of farm soil quality per gender (field data, July 2023)

On soils perceived to be fertile, we explored whether farmers implement some action or SLM practices to prevent land degradation (LDN response hierarchy 1: Avoidance). A majority (71.4 %) of those who stated that they implement SLM practices specified crop rotation. This is consistent with the findings of TMG Research in northern Benin (Assogba et al., 2017; Baba et al., 2016). Other SLM practices employed by farmers include cassava cultivation, the use of cattle dung as manure, avoidance of slash and burn practices, tree planting (agroforestry), and soya cultivation.

On soils perceived to be degraded, the most common SLM practices to reduce land degradation or restore soil fertility (LDN response hierarchy 2 and 3) are crop rotation (43.9 %), soya cultivation (16.75 %), crop residue management (7.9 %), pigeon pea planting (7 %), and cattle dung fertilisation (5.3 %).

Frequency of SLM practices employed on farmland

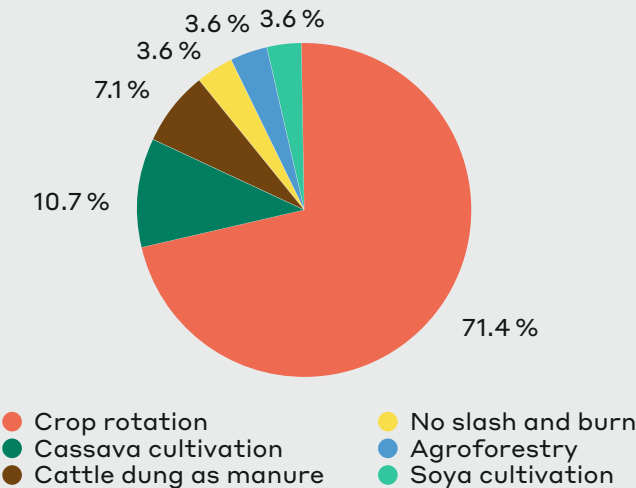


Figure 5 Frequency of SLM practices employed on farmland perceived to be fertile (field data, July 2023)

Figure 6 disaggregates the use of SLM practices by gender and shows that women rely heavily on the above-mentioned six SLM practices. Men, who usually possess livestock, use cattle dung to regenerate their degraded lands in addition to other practices including agroforestry and planting nitrogen-fixing legumes such as *mucuna* and *niébé*.

SLM practices used on farmlands

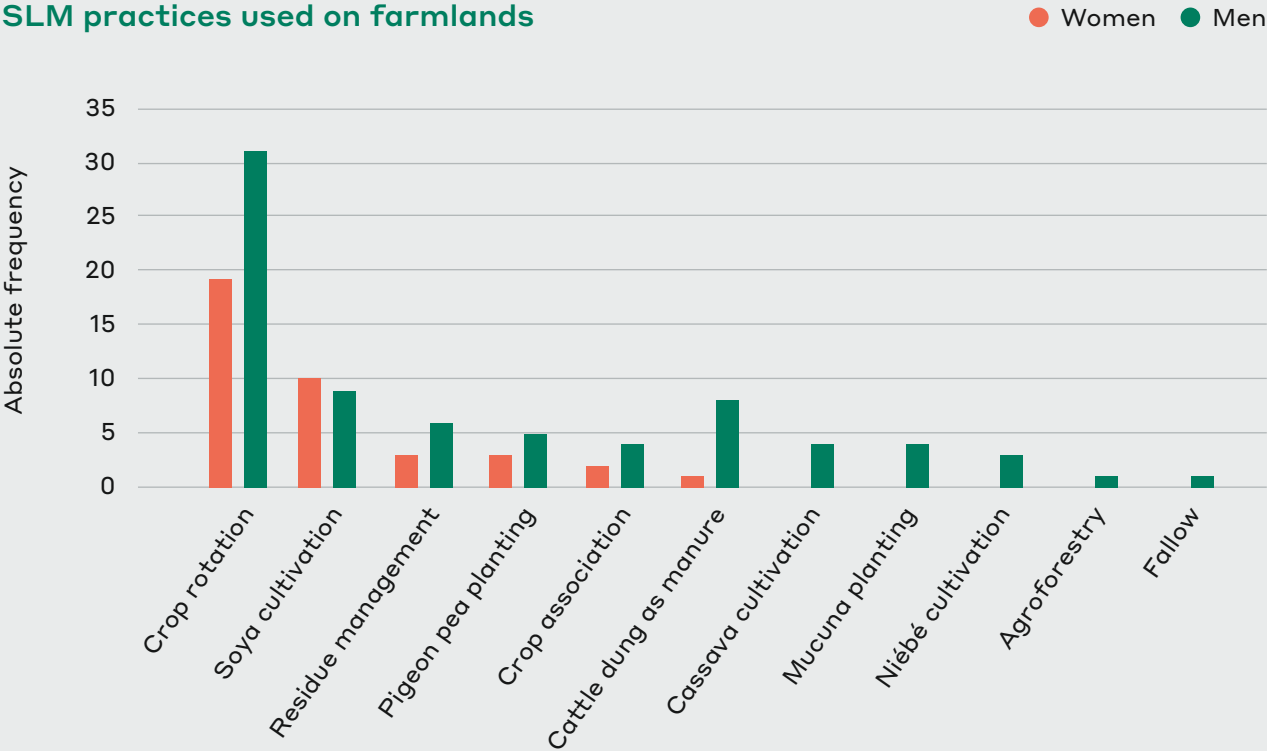


Figure 6 Gender-disaggregated data on SLM practices frequently implemented by farmers



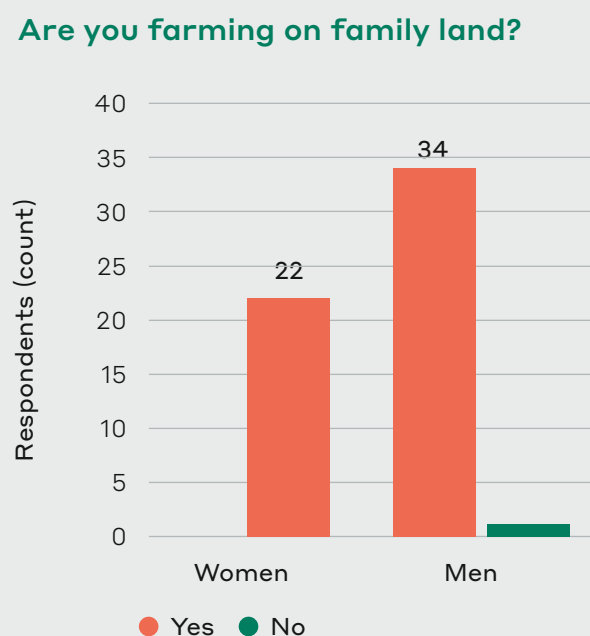
## 3.2 Perceived land tenure security

Several researchers have stressed the positive influence of perceived land tenure security on SLM adoption (Chikaya-Banda and Chilonga, 2021; Ekpodessi and Nakamura, 2022; Jha et al., 2021). Most agree that farmers' willingness to improve and invest in land is influenced by their perceptions of various risks, including the freedom to use or dispose of land (Kasimbazi, 2017). It is therefore critical to assess how farmers perceive their tenure security and to identify contextual elements that provide them with a sense of tenure security. This information is critical for understanding farmers' choices and investment decisions in relation to SLM practices.

Following the analysis of SLM practices that farmers use to avoid or reduce degradation or to restore their land assets, the research examines ownership and perceived tenure (in) security on those productive assets. Over 97 percent of the farmers we interviewed cultivate on farmlands they consider their own or family property. Although the Benin legal code stipulates that rural lands without a customary land certificate may be contested, land used by individuals or families is usually perceived as secure and free of conflict as long as they are recognised by the customary system (even without a certificate).

Note that all women reported that the land they cultivate is owned by the family, indicating that they received their farmland through their husbands.

Notwithstanding the ownership status of the farmlands they cultivate, farmers have a mixed sense of tenure security (see Figure 7) which contrasts with the privileges of land ownership. About 60 percent of farmers perceive their land tenure to be moderately (58 %) or fully (2 %) secure, and up to 40 percent perceived their land tenure to be somewhat insecure (19.3 %) or highly insecure (21 %).

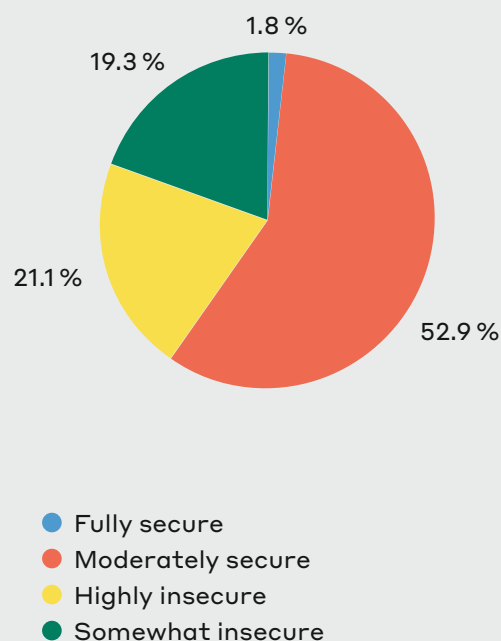


**Figure 7** Reported ownership of farmland by survey respondents in Gounin (field data, July 2023)

Further analysis showed that farmers who described their lands as fully to moderately secure possess a survey document (*levé topographique*) of their farmlands. This is one of the input documents required to obtain the customary land certificate. It is a printed document, usually provided by a state-recognised land surveyor, which contains a map and GPS coordinates of the land, as well as other relevant information such as the name of the village, the presumed owner of the land, the area of the land, etc.

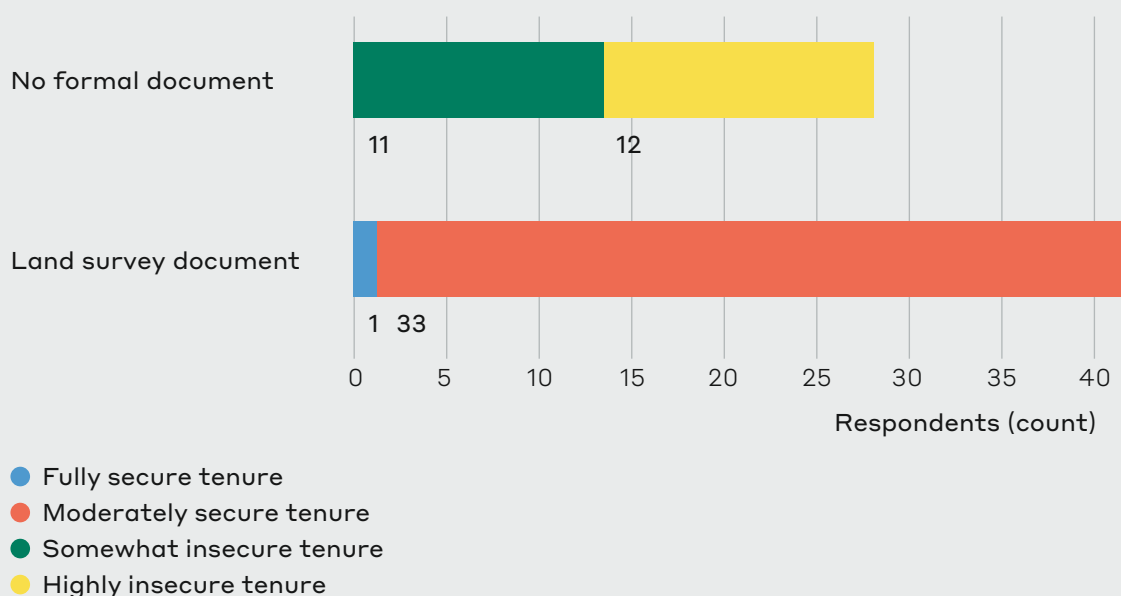
Those who reported their land tenure to be somewhat or highly insecure were farming on borrowed land and hence could not engage in any formalisation process to obtain a land certificate or any written formal document (see Figure 8).

### How secure is the tenure of the land you farm?



**Figure 8** Farmland tenure perception by farmers in Gounin (Field data, July 2023)

### Does possessing written land documents influence farmers' perception of the security of their tenure?



**Figure 9** The influence of written land documents on farmers' perception of the security of their tenure (field data, July 2023)

Data analysis also highlighted that the perception of tenure insecurity varied depending on the respondents' gender (see Figure 9). Eighty-nine percent of male respondents perceive their farm tenure to be moderately secure and only 8.6 % consider it insecure. About 91 percent of the women farmers surveyed regard their land as somewhat or highly insecure and only two (out of 22) claim to have moderately secure land tenure. A test of association performed to analyse the relationship between

gender and tenure perception confirmed a significant association [ $\chi^2 (2, N = 56) = 36,065, p = 1,47E-08$ ]<sup>7</sup>. Additionally, an effect size was calculated using Cramer's V, which was found to be 0.81 (value close to 1 indicates a strong association between the variables). This effect size suggested that tenure security perception is indeed strongly associated with gender, confirming that most women farmers in Gounin have somewhat or highly insecure land tenure.

### Are perceptions of land tenure security influenced by gender ?

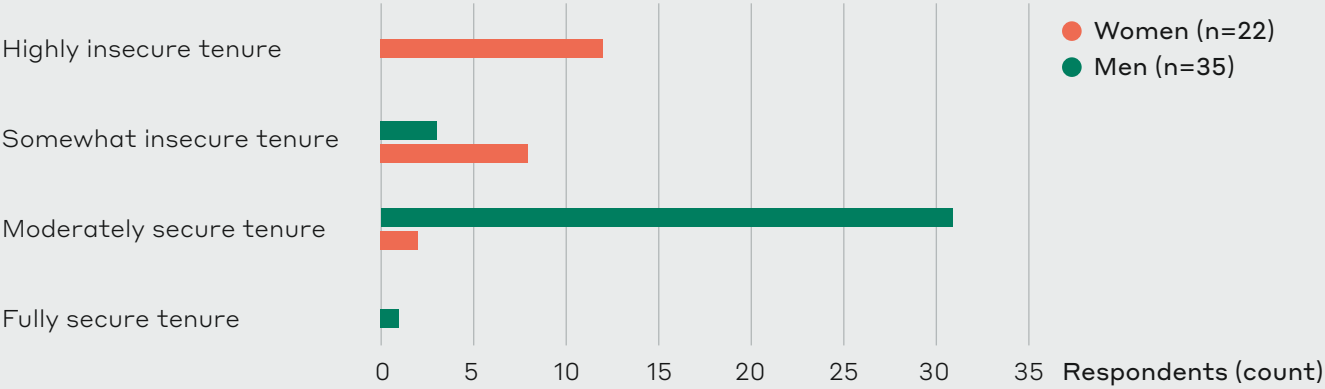


Figure 10 Gender-based possession of written land documents in Gounin (source: Field data, July 2023)

The strong sense of tenure insecurity felt by women is justified by the fact that they generally farm on “borrowed land,” meaning land they received from their husbands and on which they cannot obtain any formal document to prove use rights or claim ownership.

Eight-seven percent of respondents without any written document indicating ownership are women (see Figure 10). Those with a survey document for their farmland are mostly men (94 %).

### Who has a written document that can confirm land ownership?

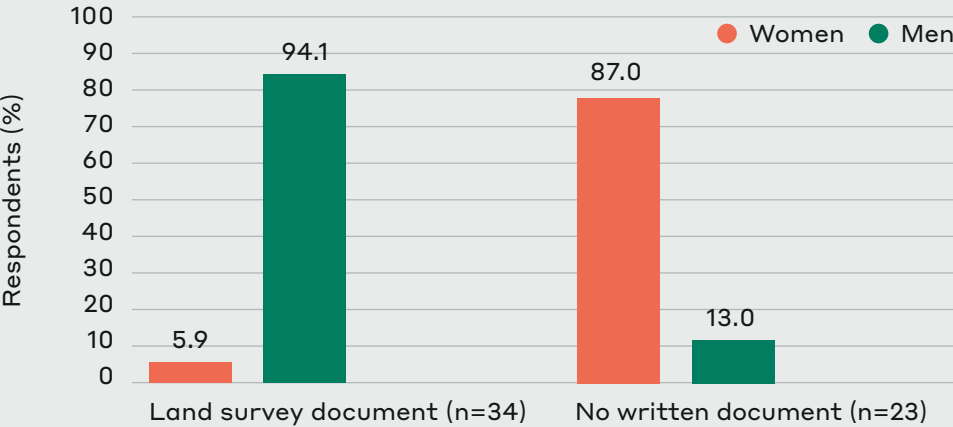


Figure 11 Possession of written land documents in Gounin disaggregated by gender (field data, July 2023)

<sup>7</sup> Note that the one farmer who claimed to have fully secure land tenure has been isolated from this analysis to ensure the conditions for Chi-square analysis are met.

### 3.3 Land formalisation and farm investment decisions

Understanding the context, challenges and opportunities of land formalisation is key to adequately securing rural communities' land rights. In this section, we discuss farmers' perception of the importance of land formalisation for SLM implementation and decisions in relation to crops.

#### 3.3.1. Perceived importance of land formalisation and customary land certificates

Tenure security is commonly defined as the certainty that the rights of an individual or group to land and land-related resources will be recognised by others and protected in the event of challenges (Swallow, 2021). Although land has long been held under a regime of customary rights in Benin, the introduction of the customary land certificate by the Benin Land and Estate Code represented a clear move by Beninese authorities towards land formalisation.

Land formalisation is the recording or legal documentation of land ownership, including legally enforceable documentation of land rights (UN-Habitat, 2018).

Although farmers engage with land formalisation for a variety of reasons, the most common motivating factor is a belief that land formalisation will provide a safeguard against infringement, address land conflicts, stimulate investment in land restoration, improve their economic and living conditions, etc. (Notess et al., 2021, 2017; Swallow, 2021).

In Gounin, we analysed the perceived benefits of customary land formalisation and assessed the extent to which land registration documents (land survey map or customary land certificate) influence farmers' investment decisions.

Regardless of gender, farmers associate the possession of a land certificate with many other advantages (see Figure 10). These include social protection (conflict prevention, peaceful life), access to credit (bank loans), revenue opportunities (renting or sale of land for investment revenues), safe transfer to children or family members, and reinforcing social networks and ties (lending a plot of land to someone in need without fearing land conflicts). However, land formalisation does not seem to play a big role in crop selection and implementation of SLM practices by farmers.

#### Perceived benefits of holding a customary land certificate

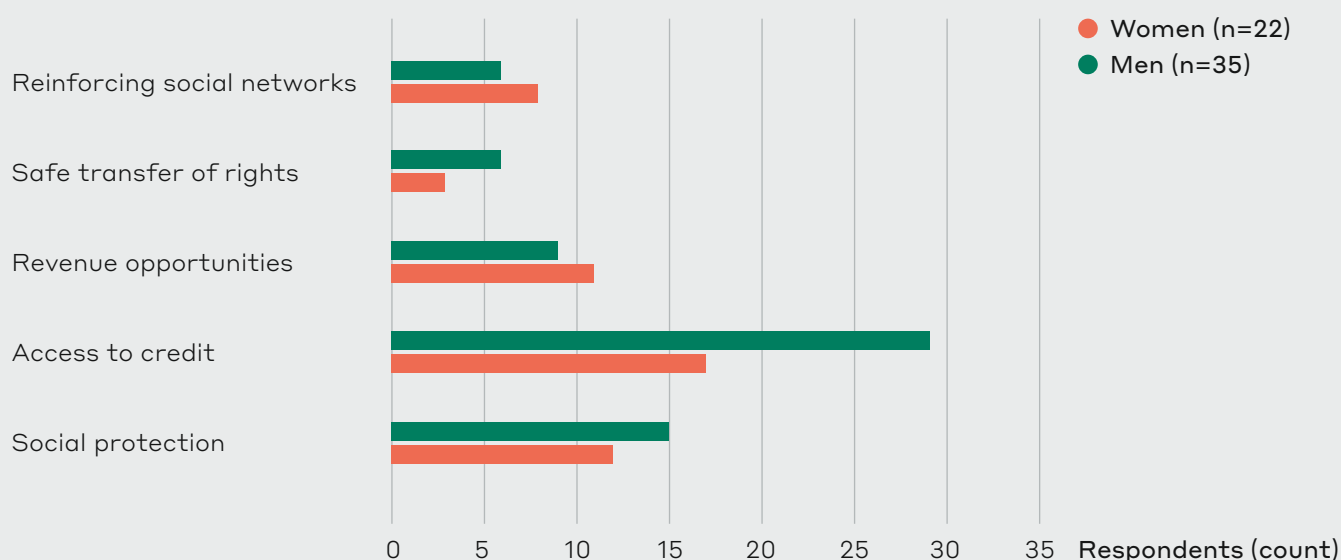


Figure 12 Perceived benefits of holding a customary land certificate (multiple responses were possible)

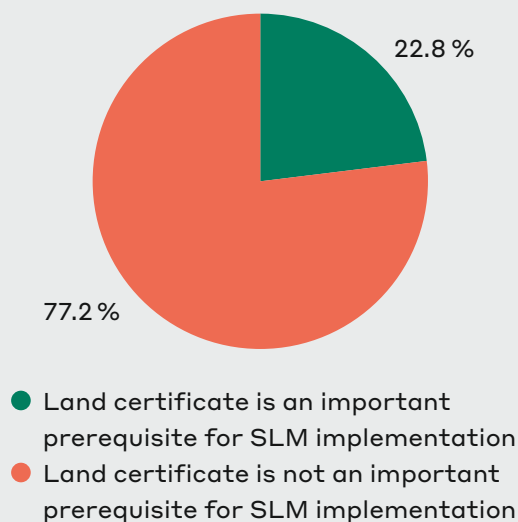


### 3.3.2 Impact of land formalisation on SLM

Land tenure formalisation has long been proposed as a policy prescription to stimulate investment in land restoration, foster growth and reduce poverty in developing countries. However, researchers and practitioners are divided on the extent to which land formalisation positively affects farmers' decisions to invest in land restoration (Burnod and Bouquet, 2022; Kasimbazi, 2017; Msangi et al., 2023). This research contributed to the above discussion by exploring the impact of customary land certificates, which are issued to record and formalise land tenure in northern Benin, on SLM implementation and farm decisions.

Of the fifty-seven (57) farmers who were asked to reflect on the importance of a land formalisation document for SLM, over 77 percent stated that possession of a land certificate is not an important prerequisite for implementing SLM practices on their farms. Only 13 farmers stated that a land formalisation document is an important prerequisite for SLM implementation.

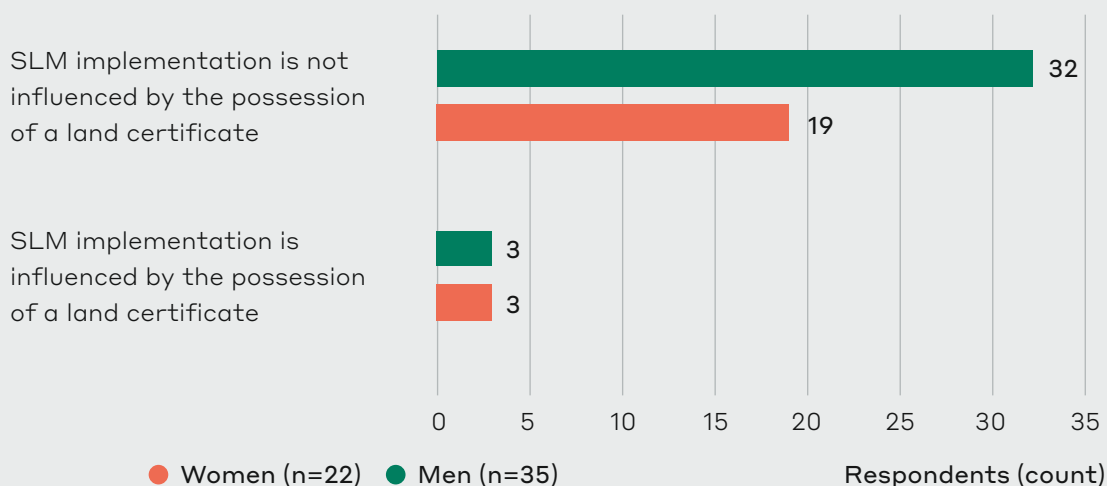
#### Which of these statements best describes your perception of the importance of a land certificate for SLM implementation?



**Figure 13** Influence of land certificate on farmers' decision to implement SLM practices (n=57)

Digging deeper into the above statements, we analysed the data and statements from a gender perspective. More than 89 percent (n=51) of farmers, regardless of gender, stated that their decision to implement any SLM practice is not related to the possession of a land certificate, against 11 percent (n=6) who expressed reluctance to implement SLM practices without a certain guarantee that they would be able to work on the restored land in the long term (see Figure 12).

#### Farmers' perception of their land tenure security



**Figure 14** Influence of land certificate on farmers' decision to implement SLM practices on their farms

Further analysis revealed that those farmers who expressed most concern about implementing some SLM practices without holding a land certificate were the same as those (mainly women) who previously stated they were farming on borrowed or rented land. This quest for a land certificate illustrates their concerns about land security and emphasises the importance of finding innovative mechanisms to secure legitimate tenure rights, and not just through tenure formalisation. This was highlighted by the following statement made by one of the women interviewed in Gounin.

We also explored whether farmers' statements on the importance of a land certificate for SLM implementation were influenced by their perceived tenure security. For consistency and the sake of analysis, we grouped farmers who perceived their land tenure to be somewhat or highly insecure together in a category called poorly secured to unsecured land. We did the same for those who stated that their farmlands were fully and moderately secure in a new category called moderately to fully secure land tenure (see Figure 15).

»My plot is not secure as I am forced to move each year. Restoring a degraded land with cattle dung is effective but exhausting. I cannot make such a sacrifice if I am not sure to use the plot for several years«

Ms Dafia Baké Yerima, interviewed on July 21st, 2024, in Gounin.

### Does farmers' perception of land tenure security influence their assessment of land certificates as prerequisites for implementing SLM?

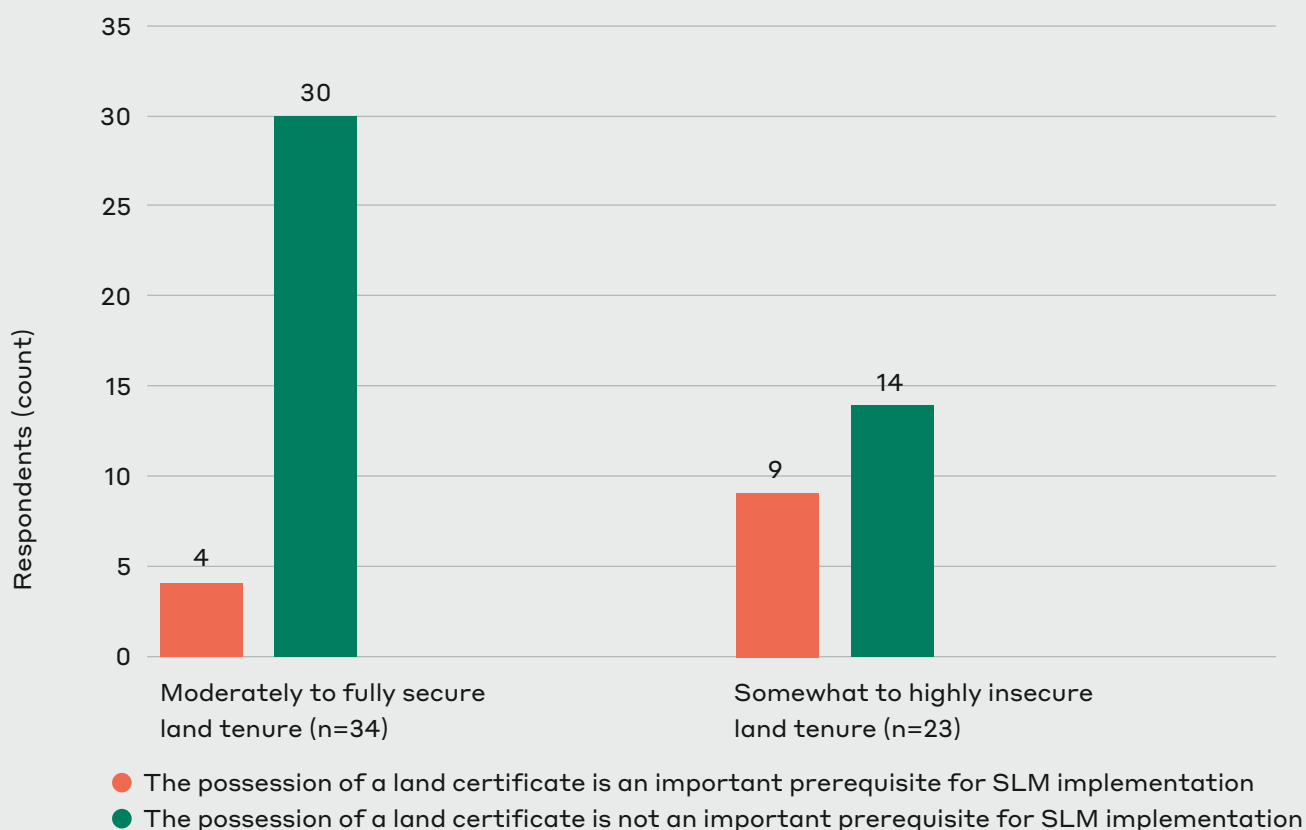


Figure 15 Importance of land certificates for implementing sustainable land management based on farmers' perceptions of tenure security

It appears that most farmers, regardless of perceived tenure (in)security, do not regard land formalisation as a prerequisite for implementing SLM practices. Among farmers who perceive their land tenure to be moderately to fully secure, over 88 percent stated that the possession of a land certificate is not an important prerequisite for implementing SLM practices. The same trend was observed among farmers who perceive their farmlands to be somewhat or highly insecure with fourteen (14) respondents out of twenty-three (23) aligning with the latter statement. It is important to note that up to twenty out of the twenty-three (23) respondents who perceive their farmlands to be somewhat or highly insecure are women, reinforcing the need for tailored approaches to secure women's land rights.

### 3.3.3. Impact of land formalisation on farming decisions

In Benin, as in many African countries, farmers' choice of crops and land use decisions have an influence not only on food security but also on the state of land degradation (Eder et al., 2021; Ekpodessi and Nakamura, 2022). There is also emerging evidence that land tenure arrangements and the way

farmers relate to them play a role in farmers' investment decisions and engagement in sustainable land use (Honfoga, 2018; Totin et al., 2021). The research findings in Gounin contribute to this debate by exploring whether land certificates issued through the process of formalising customary land tenure in northern Benin influence farmers' crop choices and decisions in relation to sustainable land use.

When asked if owning a land certificate affects the choice of crops they grow, about 32 percent (n=18) of farmers said that the possession of a land formalisation document has an impact on their decisions. On the other hand, 68 percent (n=39) stated that their decisions are not influenced by owning any written document to prove land ownership (see Figure 11). A chi-square test of independence was conducted to investigate the relationship between possessing a land certificate and decisions on crop production. The analysis showed that there was no significant relationship between these variables,  $\chi^2(1, N = 57) = 0.18, p = 0.668$ . This indicates that the choices and cultivation of crops by farmers are not influenced by the possession of a land certificate.

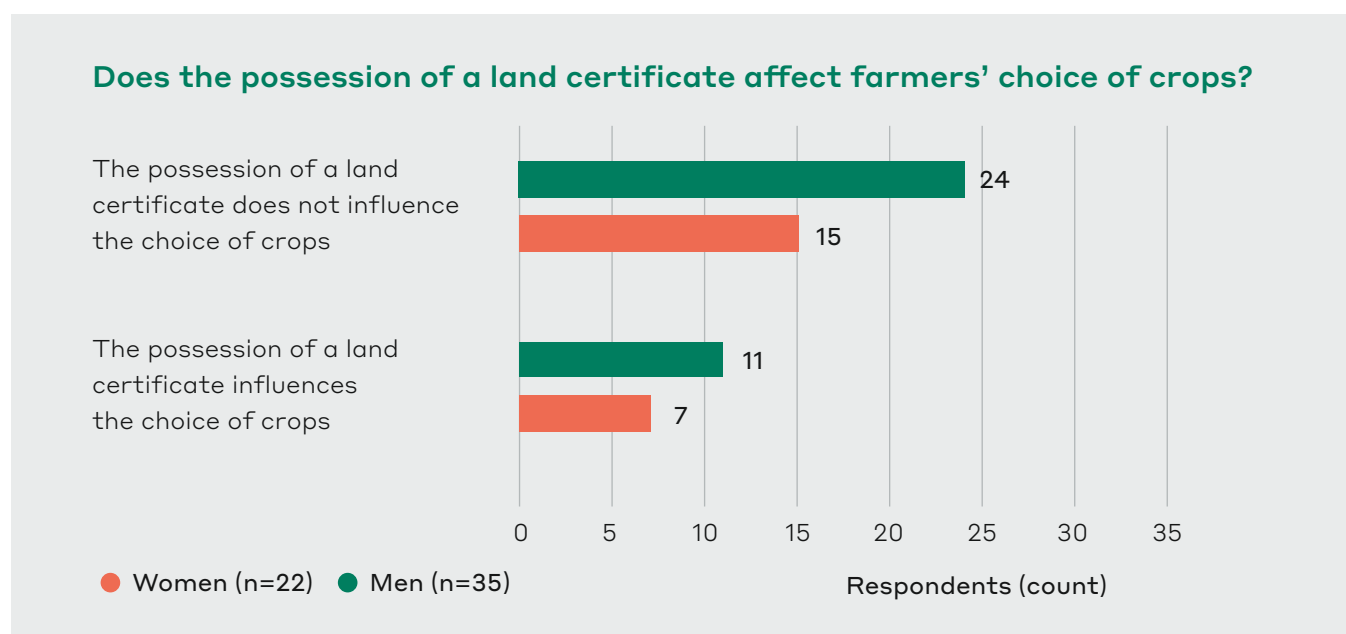


Figure 16 Influence of land certificates on farmers' choice of crops

To understand the motivation of the significant proportion (32 %) of farmers who reported that the possession of a land formalisation document influences their choice of crops, we further analysed the specific crops they were referring to and found that the concern was mainly about tree planting (cashew, mango, teak, gmelina, and others). In Benin, as in many other African countries, tree planting on a plot of land is an indication that the land is not vacant and has an owner (customary regime system). So, unless someone is recognised by the customary regime system as having legitimate rights to claim ownership of a given plot of land, they are not allowed to plant a tree on it, even if they may have other secondary rights (farming, grazing, etc.). This complex tenure arrangement makes it difficult to simplify the concept of tenure security to land formalization certificates, which secure only one part of all for the benefit of one actor against others. It also points to the importance of protecting and integrating legitimate tenure rights, as defined in the [Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security \(VGGT\)](#).

Our analysis of the impact of land formalisation on farmers' investment in sustainable land management revealed little evidence of a positive impact. Farmers, in most cases, do not consider the possession of a land certificate as a prerequisite for SLM, nor as a factor influencing their crop decisions, even though they associate the land certificate with other opportunities such as access to credit or double locking their ownership on their lands (secured through customary regime).

Although some farmers have associated land formalisation with tree planting, further analysis highlighted that they were drawing a parallel between land tenure security and land formalisation. In areas where land formalisation processes have been introduced, it is not uncommon for farmers to associate tenure security with land formalisation, even where they have not taken steps to get their land formalised. For instance, most of the farmers we met in Gounin have a land survey map which they received through the project (costs paid by the project). It was assumed that once farmers received the survey map of their lands, they would continue the process of formalisation by themselves by paying the remaining processing fees<sup>8</sup> for the obtention of the customary land certificate. For example, to obtain the certificate for a land area of between 2 and 20 hectares, the applicant is required to pay a fee of FCFA 50,000 (equivalent to EUR 76). If the land area is less than 2 hectares, the applicant is required to pay FCFA 25000 (eq. EUR 38). This is consistent with the findings of Burnod and Bouquet (2022) that the demand for land certificates responds to a logic of opportunity, aroused during informational and promotional campaigns conducted by land projects and programmes at the village level. A study of the perception and effects of land certification (PECF) conducted by Madagascar's national land observatory highlighted for instance that the logic of opportunity triggered 72 percent of land certificates (*Comité technique Foncier & Développement, 2017*).

<sup>8</sup> <https://leleaderinfobenin.bj/attestation-de-detention-coutumiere-queles-demarches-pour-obtenir-le-document-dans-les-mairies/>



### 3.4 Discussion: Safeguarding legitimate tenure rights to balance the limitations of land formalisation with equality and inclusivity.

The increasing demand for food from Benin's growing population requires effective land reforms to secure food production and promote sustainable land management. Land formalisation has been presented as a policy prescription to stimulate investment in land restoration, alleviate poverty, and address land-based challenges and conflicts (Notess et al., 2021; Swallow, 2021). In Benin, land reforms increasingly involve land recording and formalisation processes.

Among researchers and practitioners, opinions diverge on the positive effects of land formalisation. While some have found a positive correlation between land formalisation and farmer investment in land restoration, tenure security, access to credit, or land productivity (Aikaeli and Markussen, 2022; Aytenfisu Abab et al., 2022; Wren-Lewis et al., 2020), others insist there is a lack of empirical evidence of the positive effects of land tenure formalisation on farmers' investment decisions on land, or in terms of poverty alleviation (*Comité technique Foncier & Développement*, 2017; Kasimbazi, 2017; Larson et al., 2023; Msangi et al., 2023; Valkonen, 2021).

Our findings in Gounin did not reveal positive effects of land formalisation on farmer investment in land restoration.<sup>9</sup> Seventy-seven percent of respondents did not consider the possession of land formalisation documents an important prerequisite for SLM implementation. The possession of a land certificate also did not play a key role in farming decisions. The results are consistent with the findings of Barton et al. (2023), who found no strong evidence of improvements in perceived tenure security due to the formalisation of customary tenure rights in the 27 villages they surveyed in Benin. However, they contradict the findings of Ekpodessi and Nakamura (2022), who found that land tenure security is key to sustainable agriculture and positively influences agricultural profitability. The latter authors consider land tenure security to be conditional upon good land administration and ownership to be a precondition for the government to effectively protect farmers from forcible evictions.

Our research findings also showed that 97 percent of the farmers interviewed (n=57) cultivate on their own or family lands, and about 40 percent consider their land tenure to be somewhat or highly insecure. This finding is surprising because farmers who cultivate lands recognised as their own by the customary tenure regime generally feel secure in rural areas of Benin. In a study implemented in northern Benin, Barton et al. 2023 found that the perception of tenure security is high among respondents whose land was already demarcated in the name of the clan or family through the customary tenure system. Given that none of the respondents took advantage of receiving the survey map of their farmlands through the ProPFR project to gain a customary land certificate under Benin's Land and Estate Code, we conclude that farmers in Gounin do not believe that their land

<sup>9</sup> [https://link.springer.com/chapter/10.1007/978-3-030-96347-7\\_8](https://link.springer.com/chapter/10.1007/978-3-030-96347-7_8)

tenure security is under threat. Most of the farmers who reported that their land tenure was somewhat or highly insecure were, intentionally or inadvertently, associating tenure security with the possession of a land certificate. The association of land tenure security with land formalisation is not uncommon in areas where communities and policymakers have been exposed to land formalisation narratives. However, farmers' engagement in the formalisation process is mostly driven by a logic of opportunity and by a desire to "double lock" land rights that are already guaranteed through a customary tenure regime.

Many scholars also caution against using land formalisation documents as a proxy for land tenure security, especially in countries where overlapping rights (to access, withdrawal, compensation, etc.) to the same land may be held by multiple actors (Holland et al., 2022; Larson et al., 2023; Valkonen, 2021). Stressing the importance of carefully assessing and considering what rights should be granted to which resources and to whom in land formalisation processes (Larson et al., 2023; Larson and Springer, 2016), many researchers and implementing agencies and NGOs emphasise the need to consider policy contexts, cultural heritage, and social norms, avoiding a one-size-fits-all approach.

Our research findings raise concerns about women's land rights, highlighting their exposure and vulnerability to tenure insecurity. Male farmers are generally confident about the tenure security of their land and, hence, less concerned about implementing SLM practices. However, among female farmers who cultivate land borrowed from their husbands, and who are frequently exposed to forced rotation, the sense of tenure insecurity was higher. The same pattern was observed by other researchers in northern Benin, especially among migrants, highlighting the need for innovative approaches to secure the rights of marginalised communities (Barton et al., 2023; Kasimbazi, 2017), the need to consider secondary land rights, and to address gender inequalities in land tenure.

In the context of growing competition for land between a growing variety of actors, from large-scale domestic and international investors to smallholder farmers and herders (Msangi et al., 2023), it is important to ensure that land formalisation is inclusive and reinforces social justice (Meyfroidt et al., 2022; UNCCD and Landesa, 2022; UN-Habitat, 2018). The recent introduction of carbon market projects backed by various national governments, and the looming threats to community lands by rich countries keen to offset carbon emissions, makes this even more urgent. Unfortunately, in Benin, as in many countries across Africa, the land formalisation process has been carried out without consulting rural communities or fully understanding the different rights that are safeguarded through customary systems.

The recognition and protection of legitimate tenure rights promoted by [Voluntary Guidelines](#) on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT) and amplified by the UNCCD decisions on land tenure can reconcile land formalisation goals with the imperative of inclusivity.

Encompassing customary tenure systems and other informal systems socially accepted and recognised by the communities and that may not be documented in statutory law<sup>10</sup>, legitimate tenure rights extend beyond mainstream notions of private ownership to include multiple tenure forms deriving from a variety of tenure systems (Cotula and Knight, 2021). To successfully translate this concept into meaningful policy

measures, it is crucial that policy-makers understand that awareness and community participation in making, planning, implementing, and monitoring decisions related to the tenure security of the lands they depend on are key to the recognition of their rights (Larson et al., 2023). It is equally critical to acknowledge that commonly agreed-upon land tenure arrangements are critical to scaling agricultural innovations and improving sustainable food production (Eder et al., 2021; Ekpodessi and Nakamura, 2022). Top-down land reforms and limited local consultation risk disrupting the social fabric and creating resistance to cooperation with government agencies.

<sup>10</sup> [https://www.iucn.org/sites/default/files/2022-07/tenure\\_rights\\_final.pdf](https://www.iucn.org/sites/default/files/2022-07/tenure_rights_final.pdf)

# Conclusion

Secure land tenure assures farmers that their rights to land are both recognised and protected, particularly in the event of a dispute. How best to secure land rights in rural areas remains a critical challenge. While land formalisation has become a popular among national policymakers and international development agencies, field data consistently emphasise the need for alternative means to recognise and protect the legitimate tenure rights of farmers. In Benin, as in many other countries across Africa, land formalisation processes are seen by most farmers as cumbersome and costly. Despite evident risks of conflicts and dispossession of land by the state or other powerful stakeholders, the vast majority of farmers continue to rely on customary institutions to protect their land tenure. This trust and confidence in customary rules and values shapes the behaviour of many farmers across

Benin, including their perception of land tenure security. Our research findings show that farmers in Gounin, despite being exposed to narratives on land formalisation, do not consider formal land tenure security to be a prerequisite for implementing SLM practices. Despite associating the possession of a land certificate with multiple benefits such as access to credit, conflict prevention, revenues opportunities, etc., none of the farmers we interviewed actually possess a land certificate. Most of those who claimed to possess a formal document proving ownership held only a land survey map they obtained through a GIZ project. For land formalisation projects to have a genuine impact, it is important to first understand farmers' perspectives on the formalisation process before developing approaches that meet their needs and expectations.



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This publication was made possible with the financial support by the German Federal Ministry for Economic Cooperation and Development (BMZ)

## TMG Research

TMG – Think Tank for Sustainability  
TMG Research gGmbH  
EUREF-Campus 6–9  
10829 Berlin, Germany  
Phone: +49 30 92 10 74 07 00  
Email: [info@tmg-thinktank.com](mailto:info@tmg-thinktank.com)  
Website: [www.tmg-thinktank.com](http://www.tmg-thinktank.com)