Implications of Customary Land Rights Inequalities for Food Security: A Study of Smallholder Farmers in Northwest Ghana

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Received: 2 April 2020; Accepted: 26 May 2020; Published: 1 June 2020

Abstract: Inequalities in land rights exist globally, both in formal and customary settings. This is because land rights are either strong or weak, and held by various categories of people. The weaker variants of the inequalities tend to stifle tenure security, reduce land use, and threaten the food security of those dependent on the land for survival. This paper investigated the implications of customary land rights inequalities and varying tenure insecurity for food security among smallholder farmers in northwest Ghana. It identified the nature of rights inequalities, the number of rights and in whose possession. The research also assessed the kinds and nature of land rights as well as how such rights affect people’s farm sizes and subsequently farming output for ultimate food security. The data collection techniques were focus group discussions and interviews of key informants and key players in key organisations. Results revealed the existence of food insecurity among smallholder farmers (settlers/migrants) who have both fewer and weaker land rights as compared to landowners who possess numerous and stronger rights in the study area. Results also showed that weak and unequally skewed land rights lead to uncertain tenure durations and reduced farm sizes, which affects farmed area, farm output, food availability, accessibility and food security. Furthermore, farmers expressed the need to apply coping strategies to overcome the impact of unequal land rights. This research recommends further studies to design intervention strategies to better understand land rights inequalities and their implications. The outcome is expected to contribute to informing interventions to narrow these inequalities and reduce the implications that can later enhance food security.

Keywords: customary tenure security; land rights inequalities; smallholder farming; settlers; food security

1. Introduction

1.1. Land Rights and Tenure Security

Land tenure is governed by social relations and institutions (formal/statutory/legal and local/customary) determining access to, use and transfer of land contained in a bundle of rights available to various categories of people [1]. Land rights are the entitlements (within a tenure arrangement) to land based on land law, custom, or both. Such land rights are indispensable for people who depend on them for their survival. For example, the right to access, hold and use land makes it available to people and enables them to engage in productive activities including farming [2]. These land rights may derive from statute law, custom or both, marriage, power and inheritance.
However, such rights can be significantly varied leading to inequality [1]. According to Wegerif and Guerena [3], land inequality represents the differences in the quantity and value of land people have access to, the relative strengths of their land tenure rights, and the appropriation of value derived from the land and its use. These researchers added that land-related inequalities in developing countries affect everyone and directly determine the quality of life of smallholder or subsistence farmers who depend on land and its related resources for their livelihoods and even survival [3–6]. Meanwhile, land inequalities also inevitably result in weak land rights for some. Therefore, one cannot adequately strengthen the land rights of weaker groups without overcoming land inequalities in general. This is especially true with increasing pressure on land evidenced by farm size reductions and displacement of vulnerable smallholder farmers and groups. Zant’s work [7] identifies that smallholders in developing countries produce most of the food crops for home consumption and some cash crops for the market. Such farmers require strong land rights with secure tenure to continue. The United Nations (UN) also acknowledges that substantial land rights inequalities exist and have implications for farming, food security and poverty reduction [8]. It is argued that while ongoing challenges over property rights, inequality, and the political economy of land distribution persist, they can be overcome [6,9]. This probably informs the UN’s resolve to promote improved land rights, greater agricultural production and improved food security in its Sustainable Development Goals (SDGs), particularly goals 1.4 and 2.3. Land rights inequalities are typically widened and deepened by factors such as gender, ethnicity, class and political affiliation [9]. Land rights inequalities and the resulting tenure insecurity contribute to food insecurity. This is because both rights and tenure security, can enable efficient, profitable, and sustainable agricultural production and access to food, where the landholder has sufficient power over the land [1]. In related research [3,10–12], the authors posit that land rights are skewed against the majority of farmers, indigenous people and other communities. The marginalised may be indigenous landowners or settler farmers, males or females, young or old and disabled or able-bodied. Indigenous landowners are naturally the first occupants of any land. Secondary land rights holders (like migrants) refer to those who have arrived more recently whether from other parts of Ghana or beyond (e.g., Burkina Faso). Such migrants, referred to as settlers in Ghana, now permanently reside on that land and have done so for generations. Where land rights holders have little or no control over ‘their’ skewed land rights inequalities, the implications can be serious and are therefore worth investigating. This research contributes to the customary land rights and tenure literature by describing the context specific dynamics of the implications for vulnerable groups and how these dynamics are shaped in local settings.

1.2. Customary Land Rights Inequalities and Food Production

Land rights inequalities among different groups feed into the sense that, customary land rights and tenure are secure based on landholders’ perceptions [11–14]. On the other hand, there is a contrary view suggesting that customary land rights (with their inherent inequalities) are insecure due to changes in African economies, including demographic growth, urbanisation, monetisation, livelihood diversification, integration in the global economy, and cultural change [15–20]. The inequalities inherent in the social structure of communities may reflect themselves in skewed land rights inequalities, varying tenure security and sometimes landlessness. Additionally, undocumented customary land rights and tenure are known to contribute to weak tenure security [16].

Land rights inequalities (when skewed) among various categories of vulnerable and marginalised people dependent on them, tend to negatively influence their tenure security and livelihood needs especially in terms of farming and food security [17]. Land inequalities also invariably seem to result in weak land rights because, if such inequalities are regarded as the norm, privileged people may tend to abuse (relying on weak laws and enforcement) the vulnerable, thereby further aggravating the plight of the marginalised in society. In line with the above assertion, Carte [17] argues that smallholder farming family migration in Nicaragua and Guatemala represents displacement resulting from land right inequalities and hopelessness. This is of concern because a large proportion of farmers
in Africa depend on customary lands and adequate farm sizes for meeting their food needs [18–20]. It is important to recognise that land rights inequalities in the context of this work mean that some groups may have too little land to meet their farming and food needs while others have bigger farms than they need for their survival. As mentioned above, the nature of land rights inequalities, which also reflect varying tenure security, have implications for productive land use such as smallholder farming. This situation may threaten the livelihoods of those who depend directly on the land for their food supply [21]. The inequalities inherent in customary land rights and tenure arrangements can affect peri urban agriculture by reducing the land available for farming and therefore, food production and food availability [22]. Meanwhile, most land users in sub-Saharan Africa access land (and of course rights over land) through this customary system that remains contentious regarding the security of inherent rights with negative implications for the poor over time [23,24]. The insufficiency of information about customary land rights therefore leads to calls for evidence in order to help eradicate tenure challenges [24–26]. This research attempts to provide some evidence about context specific customary land rights.

1.3. Food Security and Its Dimensions

The World Food Summit (1996) adopted a definition of food security as a situation in which “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. The Economic Commission for Africa regards food security as the capacity to provide sufficient food through production, acquisition and distribution on a sustainable basis [27,28]. The above definitions imply that eradicating hunger requires increases in the availability of and accessibility to sufficiently nutritious food in a sustainable manner. The extent to which individuals and families are able to increase their food security depends in large part on the opportunities they have to increase their access to assets such as land [6,19,29]. Smallholder farmers throughout the world continue to experience displacement from their lands, struggle to remain viable and often experience hunger [17]. According to the Food and Agricultural Organisation (FAO), factors that enable progress towards improved food security and nutrition goals are agricultural productivity growth, functioning markets, and effective social protection [30]. This makes land, its rights, associated inequalities, and varying tenure security important in this research. Furthermore, the food needed to boost global food security will come from both large-scale commercial and small-scale agricultural activities [20,31]. The supply of food to smallholder households is mainly through own efforts in addition to some purchases from the market of what they do not produce and paid for, by selling some of their own farm produce.

In Andersen’s work, the four pillars of food security are characterised [32]. Food availability implies that food must be physically available in sufficient quantities and on a consistent basis through production and stock [30]. Secondly, it recognises food accessibility as the ability to regularly acquire (or receive) adequate quantities of food through purchase, barter, gifting, borrowing or food aid. Thirdly, effective food utilization implies that food must have a positive nutritional impact on people. Finally, food stability is the maintenance of the desired properties or nature of a food over time such that it remains safe and pleasant to consume. It is argued that food security can be greatly facilitated when access to land, land rights, and tenure security are guaranteed, leading to increased investment in farming [19,33], especially in sub-Saharan Africa. This is especially so for smallholder farmers who depend directly on the land for the majority of their food production and supply. The availability and accessibility dimensions of food security are especially relevant in this research, although without losing sight of the stability and utilisation components. The German Federal Ministry of Food and Agriculture recognises broad implications for food insecurity that land rights inequalities and tenure insecurity can contribute to [31]. The evidence in the literature suggests that strong land rights and tenure security are essential for food security [18,19,34,35]. Of course, this does not necessarily imply that favourable results from strong land rights and tenure security will automatically result in food security. Instead, some other factors or inputs must be combined with strong land rights and secure
tenure, which may then lead to improved food security outcomes and can have positive impacts on the lives of those who depend solely on land for survival.

This paper contributes to the ongoing debate about how customary land rights and tenure security of smallholder farmers may influence household food security. And how it can possibly also affect national and international land rights and food security efforts. What is happening in the study area is relevant for Ghana in the sense that whereas the country may be doing well in terms of food security, its (five) northern regions remain the most food insecure place in the country [30]. This food security twist is undermining the country’s long-term food security goals.

The organisation of this work is as follows. The introduction has discussed the literature. The key topics are land rights and the consequent variability in tenure security, customary land rights inequalities and food security and its dimensions. Section 2 discusses the research methods. Section 3 presents the results while Section 4 contains the discussion followed by conclusions and recommendations.

2. Methodology

This is largely a qualitative study that used focus group discussions (FGDs), interviews with key informants and with individuals in key organisations to collect data. The choice of a qualitative study in this research stems from the desire to focus on the lived experiences and views of the participants. The methodological focus is not on the number of people affected but on the various outcomes currently experienced by the affected communities. However, the discussions have produced some statistical data, which have been included in the results. Heads of landowner and settler groups provided information as key informants that others in the study communities may not be privy to. Finally, institutions such as the state’s land sector agency (Lands Commission) and a collaborative traditional-formal customary land management body, such as the Wa Central Customary Lands Secretariat (WCCLS) were interviewed. A representative of Meridia Ghana that focuses on helping local people document their land rights was also interviewed online.

2.1. Study Area

The map below shows the location of the study area. The research selected the Upper West Region (referred to in this research as the northwest) of Ghana. The study area comprised the six communities all located in the map in Figure 1. This part covers a total land area of about 3600 km². These communities were purposively selected because they have the highest (80%) occurrence of farmers holding secondary land rights under the customary system.

Customary land rights inequalities, variability in tenure security and customary service arrangements are all usually based on the customs of particular communities in Ghana. These are briefly stated below [36]:

(1) Allodial title: the highest interest in land, communally owned by members of the landowning group.
(2) Customary freehold or usufructuary interest: family land use rights held perpetually by members holding the allodial title.
(3) Common law freehold right: acquired through express grant from the allodial owner or customary freeholder, either through sale, gift or other arrangements, and usually held by non-members.
(4) Leasehold, sub-leases and customary tenancy rights.

Another reason for the choice of these communities is the uniqueness of their land tenure system as compared to those prevailing in the rest of Ghana. The land tenure system in the study area is patrilineal (male controlled), and uses cropping arrangement for non-members, but not sharecropping as commonly found in southern Ghana. In the sharecropping system, land users may give the landowner a half or a third of the crop or its value. However, under the cropping arrangement, land users may offer a ‘token gift’ of negligible (non-commercial) value to landowners to acknowledge the landowner and settler statuses on the land.
The areas visited include the Sing and Kunfabiala communities in the Wa Municipality of the Upper West Region of Ghana. This area is approximately 235 km$^2$ and the most urbanised part of the study area. The other two rural places, located further north over 200 km away, are: Piina number (1) and Piina number (2) in Lambusie-Karni (1360 km$^2$) and, Fielmua and Nimoro in the Sissala West (2100 km$^2$) districts. These rural districts border each other with travel distances of about 40 km from one end of one district to the center of the other. The choice of a rural and urban mix in this research was to determine the extent to which urbanity or rurality influences land rights inequalities and any resulting implications.

The population of the selected study communities is over 14,400. The research selected three landowner and three settler communities who participated in FGDs. They were grouped into males (i.e., elderly male, disabled male and middle-aged male) and females (i.e., elderly female, disabled female and middle-aged female) in Tables 1 and 2. The elderly is defined as those who are 60+ years while middle-aged and active working population are defined as those between 18 and 59 years [37].

### Table 1. Landowner FGD participants in Sing, Piina number 1 and Nimoro.

| Landowner | Male Focus Groups | Number of Participants | Female Focus Groups | Number of Participants | Group Total | Participants Total |
|-----------|-------------------|------------------------|---------------------|------------------------|-------------|--------------------|
| Elderly   | 3                  | 31                     | 3                   | 34                     | 6           | 65                 |
| Disabled  | 3                  | 29                     | 3                   | 26                     | 6           | 55                 |
| “youth”   | 3                  | 36                     | 3                   | 35                     | 6           | 71                 |
| Total     | 9                  | 96                     | 9                   | 95                     | 18          | 191                |

### Table 2. Settler FGD participants in Kunfabiala, Piina number 2 and Fielmua.

| Settler  | Male Focus Groups | Number of Participants | Female Focus Groups | Number of Participants | Group Total | Participants Total |
|----------|-------------------|------------------------|---------------------|------------------------|-------------|--------------------|
| Elderly  | 3                  | 34                     | 3                   | 35                     | 6           | 69                 |
| Disabled | 3                  | 27                     | 3                   | 29                     | 6           | 56                 |
| Middle age | 3                  | 36                     | 3                   | 36                     | 6           | 72                 |
| Total    | 9                  | 97                     | 9                   | 100                    | 18          | 197                |
2.2. Selection of Participants for Focus Group Discussions

In each community, the head of landowners (tendana among Waala in Sing, tengansob among Dagara in Piina number (2) and Fielmua, and tortina in Nimoro and Piina number (1)), was interviewed as the key informant. Other key informants were the heads of settler groups in each of the three settler communities who were also interviewed to provide specific information. Also, key people in two key organisations were interviewed as indicated earlier.

The number of participants in each FGD averaged 10. This is in line with the recommended size of a focus group of between eight and 12 participants [38,39]. A total of 36 FGDs were conducted. In each of the three districts, three landowner groups from Sing, Piina number (1) and Nimoro were interviewed. In addition, three settler groups from Kunfabiala, Piina number (2) and Fielmua were also interviewed with varying numbers of participants as shown in Tables 1 and 2. There were 18 landowner FGDs with 191 participants and 18 settler FGDs with 197 participants, giving a total of 388 participants for the fieldwork and data collection.

The focus group discussions and key informant interviews responded to questions about land rights inequalities that may affect tenure security, crop farming, food availability and the consequent food security trends over the years.

The focus group discussions provided information about various land rights inequalities affecting categories of people in each community. These were: (1) number of rights, (2) kind and nature of rights, and (3) how these rights affect people’s farm sizes and farming output. The FGD participants also gave information about how land rights inequalities affect crop farming and food availability for each category of people.

2.3. Data Analyses

Audio recordings were transcribed into written text, following which content analysis was performed to draw meaningful inferences about the relationships and impacts revealed by the study and based on the framework shown in Table 3. The analysis was carried out on the documentation resulting from the data collection exercise by systematically evaluating or interpreting texts, oral communication and illustrations. The research results are presented in tables, and some of the qualitative data collected were converted into quantitative form. Next, identified emerging patterns, trends, and themes were matched according to how various groups’ bundle of land rights and consequent varying tenure security impacted on their farm sizes, farming activities, food production, food security, and particularly on food availability and accessibility. For instance, the trend showed that the fewer the rights of one category of people in the bundle of rights, the weaker these rights are and the more vulnerable such land rights holders are. The implications of land rights inequalities influencing tenure security and disrupting their food production, availability and food security were then analysed to better understand the magnitude of the problem. Other implications of land rights inequalities related to migration and youth involvement in crime such as theft, truancy and sexual immorality identified during the data collection process were also briefly touched on, in relation to food security and overall wellbeing of people.

### Table 3. Analytical framework.

| Concepts Guiding This Research | Analytical Dimensions, Categories and Understanding |
|--------------------------------|----------------------------------------------------|
| Customary land rights          | Rights derived from local practices through successive generations. The practices in which some have more rights that are stronger while others have fewer and weaker rights. |
| Land rights inequalities       | Food security focuses on availability and accessibility constraints that are likely to influence nutrition and stability. Smallholder farming refers to subsistence farming but with the opportunity to sell excess produce. |
| Food security                  | Smallholder farming |
| Smallholder farming            | Land rights Exclusive entitlements derived from accessing and holding land in either customary or more formal settings |
Table 3. Cont.

| Concepts Guiding This Research | Analytical Dimensions, Categories and Understanding |
|--------------------------------|---------------------------------------------------|
| The relation between formal and informal rights (institutions) | It is a top-down relationship, in which the formal statutory institutions led by the Lands Commission (LC) supervises the customary institutions through documentation, concurrence issuance, verification of claims etc. Informal customary norms and practices may be regarded by the state as primarily important in land matters. They are however, still subject to legal processes administered through the courts. |
| The dynamic interplay among various institutions. Customary, statutory/legal/formal & mixed feature institutions | CLSs were formed as an improvement of the customary system as a lands office operated by landowners with minimal external support. The LC is the state agency that oversees all land matters in Ghana. Private land organisations—Meridia and others carry out land documentation on a small-scale for households, families or communities in Ghana. Such documents are subject to the LC’s approval. |

3. Results

The results highlight land rights inequalities and implicit tenure (in)security, derived and analysed from the research objectives. This was then analysed based on the perceptions of their tenure and food security to establish the implications and what other interpretations one can make to draw conclusions for improved public policy.

3.1. Nature of Land Rights Inequalities

Indigenous landowners (males) in Table 3, were found to possess the highest number of land rights (i.e., 14 out of 15). Male settlers were next, possessing seven out of 15 land rights. However, females, irrespective of whether they are attached to landowner or settler groups as wives, sisters or daughters generally possess the lowest number of land rights (three out of 15) in the geographical study area. That notwithstanding, landowner women seem slightly better (as they derive their rights from landowner men having stronger rights) than settler women who derive their rights from settler men with far weaker land rights. More insight into this can be found in the discussion section. Again, Table 3 shows the specific land rights as well as the number in use per category in the study area. From the table, rights with asterisk (*) against them is an indication that the right exists, being used by and benefiting the group concerned. Rights with dash (-) against them is an indication that the concerned group does not benefit from that right even though it exists for other groups. However, where there is an asterisk and a dash (*-) together, it implies a limitation is placed on the existing right for the group concerned. Such a limitation is controlled almost exclusively by landowners. For instance, in Table 3, columns 3, 4, and 5, both women and settler males lack any ownership while landowners exclusively have such ownership as shown in Table 3, column 6. On the other hand, females’ rights to purchase land as expressed in row 13 is limited since they cannot exercise such rights without male consent and involvement. Settler males can purchase that land and all the rights that come with it outright. However, landowners self-evidently lack it completely since they cannot buy what already belongs to them, they explained.

In the bundle (number/group) of land rights identified in the geographical study area, there were 15 in total directly benefiting one group or the other in varying numbers, as shown in Table 4. Male landowners possess 14 in the bundle containing 15 rights, and only lacking the right to buy their own land as mentioned earlier. Male settlers have nine (i.e., seven clear and two limited) rights out of the 15 contained in the bundle of land rights and have the right to buy land they are currently
occupying, which landowners customarily do not have. All females (columns 3 and 4 in Table 4) possess six (three clear and three limited) rights of the 15 contained in the bundle of land rights in the area, which are: use, cultivation and pecuniary (monetary) benefits. Within the customary system, women’s right to buy land is generally limited and dependent on male support from husbands or other male relatives. It is important to highlight responses from the focus groups that unmarried daughters and wives have automatic access and use of their fathers’ and husbands’ lands for farming to sustain themselves. However, this access and use right of daughters ends at marriage and at divorce for wives. At the death of the husband, the interviewees said custom recognises the widows’ continuous and almost exclusive right to access and use such land during her remaining lifetime. However, that right ceases if or when she remarries outside the family. Also, daughters’ automatic rights to their fathers’ land continues forever except if they enter into a marriage in which they derive their land rights from husbands. Sons, however, can inherit all their late fathers’ land rights, including ownership, gifting, and sale, depending on whether they are landowners or settlers.

Table 4. Type of group land rights & tenure arrangements.

| S/n | Land Right/Tenure Arrangement | Settler Females | Landowner Females | Settler Males | Landowner Males |
|-----|-------------------------------|----------------|------------------|--------------|----------------|
| 1   | Ownership                     | -              | -                | -            | *              |
| 2   | Occupy/use/enjoy              | *              | *                | *            | *              |
| 3   | Inheritance by heirs          | -              | -                | *            | *              |
| 4   | Transfer to others            | -              | -                | *            | *              |
| 5   | Sale                          | -              | -                | -            | *              |
| 6   | Develop/improve               | -              | -                | *            | *              |
| 7   | Cultivate/produce             | *              | *                | *            | *              |
| 8   | Access credit                 | -              | -                | -            | *              |
| 9   | Enforcement                   | *              | *                | *            | *              |
| 10  | Pecuniary/monetary            | *              | *                | *            | *              |
| 11  | Sharecropping                 | -              | -                | -            | *              |
| 12  | Rental                        | -              | -                | -            | *              |
| 13  | Purchase                      | *              | *                | *            | -              |
| 14  | Give as gift                  | -              | -                | -            | *              |
| 15  | Common property               | *              | *                | *            | *              |

Modified from [41,42]. Star or dash shows available (*), limited availability (*/) or absent (-) land right.

Generally, land rights in the study area include the right to access, hold and use as well as to control a certain unspecified size of the land held for farming or other purposes. The FGDs revealed that farmlands held by married female settlers in the rural areas are typically as small as 0.2 ha (because they are complementary to husbands’ farmlands), while the male settlers’ farmlands averaged two hectares. By implication, widows almost exclusively hold and ‘control’ larger farmlands of their deceased husbands’ than do married women. Meanwhile, rural male landowners still hold up to four hectares of farmland while rural women also from the landowning group hold an average of 0.2 ha under similar conditions to settler women (see Figure 2). In the case of settlers (male and female) in urban areas, there is virtually no legitimate farmland remaining except tiny pieces surrounding houses. All urban settler FGDs said they have to either re-negotiate with developers to squat temporarily or encroach on other people’s land to farm for their food supply. The people in all FGDs explained several implications of this situation for their livelihoods that affect food security, peaceful co-existence, emigration, and fear of increasing crime (mentioned earlier) among the youth.
Urban settler males
Urban settler females

By implication, this information. Rather, various categories of groupings of individuals were selected by communities themselves to represent each community. The research aggregated the statistical data collected from individuals and groups through consensus building and calculated the mean for each category and year. In the main, the presentations therefore accurately represent the numerical expressions from

Figure 2. Changing farm sizes in peri urban portions of the study area – Sing & Kunfabiala near Wa.

Regarding temporal inequalities of farm sizes among farmers, there is a downward trend in farm sizes while population growth follows an upward trend [37]. From Figures 2 and 3, there is a trend in the reduction of farm sizes across all groups over nearly four decades. For instance, in 1983, both landowners and settlers held an average of over 10 ha of farmland, whereas women (i.e., adult/unmarried daughters and wives) only held an average of about two hectares of farmland. One can see from Figures 2 and 3 that male landowners’ landholdings reduced by an average of about 60% to four hectares and that of male settlers reduced by 80% i.e., to about two hectares on average. For all women, their remaining farm size reduced by 90% to 0.2 ha compared to two hectares in 1983. This means that land losses by landowner males, settler males and all females are 60%, 80%, and 90% respectively. It is noteworthy that some of the females who lost more lands held smaller farm sizes in the past and are even smaller now. Careful scrutiny of the percentages in relation to absolute farm sizes show that women’s (particularly daughters’ and sisters’) farms remain with an insignificant 0.2 ha on average. Widows’ farm sizes (i.e., late husband’s farmlands) are much the same as other males in terms of size and rights exercised. By implication, mature and independent daughters, sisters, as well as women not in some form of relationship with males have difficulties accessing and/or using customary land in the area as compared to wives and widows. As a result, such women may not be able to independently engage in farming that is sufficient for their food supply and possibly for sale. This is particularly because, as shown in Figure 3, farm sizes for all categories generally reduce as time passes but more so for settlers and this is even more common for women.

Another key finding of this paper is that while both landowners and settlers complain of farm size reduction, vast areas of uncultivated lands were seen dotted across the area. Interviewees indicated that ownership of such land is being contested (so they fear to till such land). On the other hand, the lands may have been repossessed from settlers, sold to developers, or awaiting construction.

The numerical or statistical information collected during this research was from respondents through the various data collection techniques used. It was not the whole community that provided this information. Rather, various categories of groupings of individuals were selected by communities themselves to represent each community. The research aggregated the statistical data collected from individuals and groups through consensus building and calculated the mean for each category and year.
the participants during data collection. It is a fair and accurate representation because the research reported back all the information received from respondents to each community in PowerPoint format and the slides were verbally explained at separate community forums. Thus, the communities (who are not exactly the same individuals at each meeting of the same group) had the opportunity to clarify and confirm the data as accurate and representative of their lived experiences as they themselves had freely expressed them. Furthermore, the FGDs discussed matters pertaining to communities rather than to the individuals present at the meetings. Therefore, although individuals were engaged in the discussions, they spoke about their communities’ situations and very rarely referred to individual situations to support their assertions. Therefore, the final responses were collective, by following consensus building during every stage of the data collection process.

![Rural farm size changes 1983 – 2018](image)

**Figure 3.** Changing farm sizes in the rural part of study area – Piina number 1 and 2, Fielmua and Nimoro.

### 3.2. Implications for Farming, Food Availability and Food Security

Other implications of land rights inequalities among smallholder farmers are difficulties in: (1) accessing and securing sufficient farmland to farm, and (2) making food available and ensuring food security. Farmers were asked about what changes (if any) have occurred regarding the crops they cultivated in the past in order to secure food. They responded that some landowners and all settlers have discarded tree (cashew) plantations and long (4–6 months) maturing crops, e.g., local beans, millets, and yams. They have now resorted to fast maturing short season (2–3 months) exotic crops (e.g., soya beans, groundnuts and guinea-corn called “dorado”), especially in the urban areas. By doing this, they aim to reduce the risk of losing crops to developers who sometimes intensify their construction activities a month or two before the rainy season ends to harvest and store water. The FGDs complained that such fast maturing exotic crop varieties require many inputs such as fertilizers, insecticides and weedicides to achieve sufficient yields. The money needed for such chemicals, which farmers claimed they lack, results in insufficient yields, thereby affecting food availability and food security. On the number of months of food availability from their farming activities, their responses are shown in the graph in Figure 4. This graph shows that there is a steady decline in the quantity of food available that they have harvested from their farms over the years. This is because of the challenges of land rights to access, hold, and use, which affects farm sizes, especially for the settlers and women. Again, FGDs have indicated that their current average farm size of two hectares may sustain them in the short to medium term, but only if they incorporate some technology into their farming activities. Finally,
on food security, FGD participants and other interviewees indicated that some coping mechanisms have been adopted by people. Otherwise, their farm produce will likely last for 2–3 months instead of the current 6–8 months of food availability over the year, as shown in Figure 4. The coping strategies were said to include engaging in paid labour, menial jobs and seasonal migration. They are worried that these income sources are uncertain and cannot guarantee their food security into the future.

Respondents were asked to give reasons for these trends in food production and availability. It was mentioned that landowners’ food insecurity is largely influenced by their reduced farm sizes, but also by weak finances for investing in modern farm inputs to increase their farming outputs. Landowners attributed their farm sizes reductions to sub-divisions among expanding family units. Furthermore, the seemingly large lands of landowners are either under conversion into gravel/sand extraction or stone quarrying. Therefore, those lands have apparently been sold to developers and awaiting the start of construction. Additionally, some lands in the urban areas have been compulsorily acquired but landowners still claim ownership because compensation has not yet been received. As a result, even though landowners across the study communities seem to have large farm sizes and are quite unrestrained in terms of making farming decisions, their average food sufficiency from their farming activities is still surprisingly only eight months. Settlers, on the other hand, attributed their food insecurity mainly to customary land rights inequalities, reducing their farm sizes with a consequent lack of security of tenure and a lack of agricultural inputs. On the other hand, settlers with less land, land rights and farming decision-making options report six months of regular food availability from their farming activities in both rural and urban areas as shown in Figure 4. It is worth noting that the interviewees expressed difficulty in clearly distinguishing between consumption from their own farming activities and coping strategies because they employ the two approaches simultaneously. The respondents have demonstrated through this research that weak land rights leads to uncertain tenure durations and reducing farm sizes, which affects farmed area, farm output, food availability, accessibility, and food security.

There were several observations of various groups’ food availability as shown in Figure 4. The first is the gradual decline in the months of food availability (from landowners’ farms) from 12 months in 1983 to eight months in 2018. For settler farmers, the trend shows a reduction from almost 12 months to six in the same period. While months of food availability from women’s farms reduced from about nine to six months over the same period. Both male settlers and all women were asked how they are able to survive beyond six months once food produced from their small farms is exhausted. They claimed

![Figure 4. Annual household food availability in study area.](image-url)
that they have adopted some coping strategies. For instance, they purchase food using the proceeds from their rearing of animals (usually free-range), and menial jobs, paid labour, trading and use remittances to supplement their farm produce. Settler farmers in the urban areas also engage in paid labour and use the income to supplement their backyard/kitchen gardening activities. One settler female farmer said the food from her farm might last between one and two months if she did not adopt any coping strategies. Another finding was that settlers in urban areas said they do not have farmlands left. However, it became clear that the lands surrounding their houses are currently being farmed, which still supplies some food. All this notwithstanding, they stressed, if this downward trend continues, other implications than reducing food security may emerge. This can have other impacts on local, national, and global food security efforts and development in general.

3.3. Other Implications

With reference to some of their lands being compulsorily acquired without compensation or resettlement and, no renegotiations or information on any restitution, one settler farmer in Kunfabiala questioned:

“How can you purport to be establishing a university for people and you are indirectly sacking us and not making any arrangements to resettle or even compensate us? Worst of it, you will not even allow us to squat until actual construction commences. Just because we have no one to speak for us, that is why our age-old land rights are being trampled on and making life for us miserable with nearly no hope for the future of our children. What manner of development is this? Therefore, you see why peaceful co-existence is eluding all of us (landowners and settlers). This also negatively affects our freedom to work on the little farmlands since we fear attacks from even developers thereby affecting both farming activities and food security.”

Concerning direct land sales by landowners, another settler farmer lamented that:

“We currently survive by negotiating with land developers who purchased our farms from our landlords to ‘squat’ and farm on their plots until the lands are needed for development. However, when this fails, we encroach on people’s plots knowing that eviction is imminent. How can we possibly be assured of food security under these conditions?”

Under such circumstances, they resort to engaging in piecemeal farming which clearly further reduces smallholders’ food production and food security. For instance, interviewees have mentioned tension and threats to peaceful co-existence and further loss of soil fertility through continuous cropping. Clearly, these interfere with their ability to farm more land and work more hours.

Further implications of land rights disparities found included continuous cropping on the little land left for settler farmers and all women. Both landowners and settlers have become more assertive and protective of their land rights with little regard for tenure norms and formal laws, which have the potential for further tenure disagreements. Worsening interpersonal relationships were said to exist between especially the Dagara and Sissala tribes in Fielmua and Nimoro respectively who have been litigating land rights in the law courts at the regional capital of Wa for the past five years. This disagreement has led to reduction of people’s current farming area, work hours and farm output/harvests. Therefore, the people urged that government should collaborate with the customary authorities to take stricter measures to rectify these land rights inequalities and the resulting tenure insecurity. The FGDs emphasised the need to ensure people’s land rights and tenure security, because many of the people in the area do not possess any skills other than farming. One settler remarked during the FGD in Kunfabiala number (1) that:

“The land is just not available for us now, so on what can we produce our own food if not on it? Given the current landlessness among us—settlers, our youth and middle-aged people
have been pushed out of the community and out of frustration may do “anything” [referring to unlawful means] to provide for their wives and children. Now you talk about buying food from the market, even though there is some food in the market, but our main source of income is the same farming that we can no longer do effectively. So, it is difficult to meet our food needs if our land rights and tenure issues remain unresolved.”

Due to these negative experiences, some interviewees indicated that the situation has compelled them to find other income-generating activities. These new income sources such as paid labour, menial jobs, and learning various trades, including trading (which FGDs complained to be uncertain), are used to pay for food to supplement their traditional food source of farming. This is much more common among urban dwellers than rural people whose alternative is the rearing of animals on a free-range basis.

Another important finding is that even though youth and disabled groups participated in the FGDs, their status seems not to be influenced by land rights and consequent food security in the study area. Rather, land rights and food security implications of youth and disabled in the area are determined by whether they are settlers, landowners, males, or females, but not their youth or disabled status.

4. Discussions

Land rights inequalities exist in customary areas in sub-Saharan Africa. They adversely affect the tenure security of those who hold weaker rights and negatively influence their food security. This is because such people’s food needs and indeed livelihoods are largely dependent on land. This paper has investigated the implications of customary land rights inequalities. It also examined land tenure insecurity among smallholder farmers in northwest Ghana in terms of their nature, number and type. It has also examined how these rights affect people’s farm sizes and subsequently farming output to achieve ultimate food security.

It is worth reiterating that there are various categories of rights contained in a bundle of land rights [43,44]. Some people have fewer and weaker rights whose holders experience insecure tenure. Others have more rights in the bundle, which are stronger, leading to more security of tenure. Meanwhile, both weak and strong rights influence farming and food security in the area. However, it was unexpected that even landowner women in the study area have considerably weaker land rights than settler men. It is also important to point out that women from the landowner group and settler women appear to have the same weak rights. However, a careful examination of the data shows that their circumstances do differ slightly and are better for landowner women. This is because landowner women rely on landowner men with strong land rights, while settler women rely on settler men with weak land rights. There are both food security and other implications emanating from the above revelations that require urgent attention as discussed further below.

4.1. Nature of Land Rights Inequalities

Generally, the distribution of land rights varies per category of people and correlates with the level of each group’s food security in terms of number of months in the year of food available to them from their own farms.

Land rights and tenure inequality with various dimensions of economic development are already known [6]. The implications of land-related inequality constitute a central component of wider inequality and represent a burning issue for our society today [3,45,46]. Landowners in the geographical study area admitted to the existence of land rights inequalities. These inequalities are skewed against particular categories of people, whether they come from the landowner or settler groups. However they attribute the reduction of landowners’ farm sizes to, for instance, sub-divisions among growing numbers of family members but that effect does not necessarily weaken their other land rights [27]. This supports the inverse relationship between population growth and resource
availability analysis propounded by Robert Malthus [47]. For instance, looking at the population growth trend in Ghana over recent decades, the population increased by nearly three times from 12.3 million in 1984 to an estimated 30 million in 2019 [37]. Other reports [48,49] reveal that Ghana’s urbanisation rate is slower in the rural areas, with the study region (Upper West) being the least urbanised. From this, it is evident that the reduction of landowners’ landholding (by over half from about 10 to about four hectares) is roughly inversely correlated with the trend of population increase. However, the trend of settlers’ land reductions by five times less (from about 10 to about two hectares) is much steeper than the population growth over the period. This implies that, in addition to influences of population growth and urbanisation [50,51], other factors must be contributing to these inequalities among the people. Thus reflecting reduced farm sizes of settlers and women, weak land rights and consequent tenure insecurity in the area. Responding to this, the settler interviewees attributed the widening land rights inequalities and their weakened tenure security to landowners’ “growing greed”. This greed, settlers contended, is in landowners’ anticipation of rising land values due to increasing land commercialisation. In addition, it is the weak enforcement of existing land laws and the absence of specific land rights laws to protect the vulnerable. Meanwhile, landowners attribute the changing land rights of settlers to “inevitable” changing trends, referring to urbanisation, population growth, and development in general. For these reasons, landowners claim they have to vary land rights (contrary to custom), in response to these changing circumstances whether they are economic, social or political. This confirms similar findings in Tamale in the northern region of Ghana [15] which reported similar reasons for changing land rights.

Farm sizes are reported to be decreasing in both Africa and Asia. This decreasing trend will continue in the face of evidence that smallholder farms generally depend on less than two hectares of land for survival [52]. The size of land holding is falling in the developing world with the fastest decline in Africa [3,20]. A third of the world’s population depends on smallholdings for their livelihoods and food supply even though the average farm size in Asia and Africa is estimated to be just 1.5 ha [5,20]. There is cause for concern as population increase continues to lead to divided landholdings such that smallholder farms are becoming both more numerous and smaller. However, these smallholder farms remain of great importance to food production and availability, and rural development more generally in developing countries [7,20]. There is however, an expectation that, as agriculture develops, it can lead to greater yields. And as production of smallholder and cash crops is sustained, smallholders can gradually become more prosperous [20]. This implies there is still hope to improve smallholder farming and food availability. This will assure food security through design of suitable strategies (including technological strategies) and models to mitigate the widening land rights inequalities and the reducing smallholder farm sizes in the future.

4.2. Implications for Food Production, Food Availability and Food Security

The implications of land rights inequalities among various categories vary based on the distribution of the rights themselves in the first place. It is argued [5,53] that land rights inequalities must be viewed contextually (i.e., specific to particular regions). That is why it is sometimes asserted [53,54] that customary institutions should maintain their traditional power to allocate land and resolve land rights conflicts, including rights inequalities. The implications of these inequalities affect several connected aspects of human life at various levels such as social justice, equality and the rule of law. For example, the interviewees reported that unfair land rights inequalities and consequent tenure insecurity is contributing to food insecurity among their families. This can have other unexpected implications as some of the youth and middle-aged people currently engage in seasonal migration to urban areas to earn money to supplement the inadequate food from their farms. However, the research participants expressed the worry that some of their young and middle-aged peers who migrate sometimes do not return to the communities. They end up abandoning their families (usually elderly people, women and children) in the rural areas with insufficient food supplies.
This research found that some aspects of customary land rights (including tenure) have changed to reflect the dynamic humankind-to-land relationship [54]. These are: a change (1) of social value of land to economic value, (2) from communal rights in land to individual rights, and (3) of land use patterns in general. Note that customary tenure arrangements cover more than 80% of land and associated rights in Ghana, as stated earlier. Therefore, Ghana’s land rights issues will require a thorough analysis of possible imminent unintended negative implications for food security, among other factors. Furthermore, population growth and the changing economic importance of land may have partly influenced changes in land rights and crop farming, and as a result have food security implications. This is because, the FGD participants admit that the challenge of land rights inequalities and consequent tenure insecurity have directly affected farm sizes, farming investments, yields, and food security. This is seen in terms of less food availability from their farms as captured in literature [18,19,33,55]. Therefore, the nature of land rights inequalities and implicit tenure insecurity in the study area have negative consequences for both farming and food availability [56,57].

Land rights are least secure for women (who are not household heads), whether they are part of settlers or landowners. It implies that the associated implications for food availability also weigh heavily on women [56]. For instance, women’s land rights depend on access through their male relations and so they cannot independently enforce their rights or make major farming decisions to (for example), increase their farm yield. Therefore, even as formal land laws in Ghana are non-discriminatory, they are still inadequate or poorly implemented such that some customary practices in the study area still obstruct women’s land rights [57]. However, widows who remain unmarried and live in their late husbands’ houses do have some perpetual rights to use their late husbands’ lands. These rights are stronger if there are children involved, especially males. Having sons was again said to secure widows’ land use rights, tenure security and, consequently, food security but not land ownership in any manner. Nevertheless, such rights of the widow cease if she remarries outside of the late husband’s family. Interestingly, women were asked which of their children (male or female), they would prefer to inherit the mother’s land. The women were unanimous in declaring the preference that their sons rather than their daughters should inherit mothers’ land. Their reasons are much the same as those that men usually give for few and weak female land rights in the area. Both women and men contended that women in patrilineal societies do not “have permanent homes to” inherit such rights.

Interviewees also mentioned external factors such as immigration and urbanisation as directly contributing to land rights and tenure changes especially in the urban areas [14,51]. Additionally, interviewees mentioned general economic transformations that influence and accelerate the already existing internal customary mechanisms for changing land rights. This again confirms similar findings from Tamale in the northern region of Ghana (referred to earlier) [15].

The implications of land rights inequalities and customary tenure insecurity found in this research has also been corroborated [12,58–60]. These authors suggested that weak land rights and insecure tenure lead to reduced crop yields in small farms with consequences for food security. This finding strengthens the call for stronger land rights and tenure protection through public policy and social safety nets to enable smallholder farmers meet their daily food needs through farming [61,62]. To further support Gollin’s assertion, farmers (especially landowners) have downplayed customary land rights issues and instead complained of non-tenurial (soil infertility and their financial inability to use modern farming strategies) that affect their ability to improve yields. As a result, landowners resort to taking back their lands from others, thereby reducing the farm sizes of settlers and women in particular in the process. This is also supported by Bugri’s finding that, in the Upper east region of Ghana, food insecurity emanating from low crop yields among landowners was largely attributable to non-tenurial factors such as soil fertility, water availability, farming inputs and financing [13]. Therefore, the injection of significant farming inputs to increase crop production seems positive for vulnerable categories of smallholder farmers in addition to mitigating land rights and tenure issues. However, it must be borne in mind that settlers and women instead, emphasised that land rights,
access, and consequent tenure security are more important to increasing their food production as corroborated in the literature [19,60].

Generally, agricultural productivity in the study area is already regarded as poor, as reported in the Ghana Living Standards Survey Round 6 (GLSS 6) [49]. This is claimed to be due to poor soil fertility, poor rainfall patterns, continuous cropping on the same parcels. The continuous cropping and poor agricultural productivity in the study area implies land scarcity coupled with little mechanisation. Therefore, adding land rights inequalities and tenure insecurity to the above, suggests that the challenges faced by the people are more numerous and bigger than anticipated. Settler and women interviewees attributed their continuous cropping practice to reducing farms that tend to deplete soil nutrients quickly. This explains why settlers and women achieve lower yields and food availability as compared to landowners who have large farmlands.

4.3. Indirect Implications

Beyond food insecurity, reports suggest weak adherence to, and poor enforcement of land laws in Ghana’s courts, which is evident in the high number of unresolved cases [61,62]. The slow rate of resolving land cases in Ghana’s courts contributes to growing disregard for people’s land rights especially under customary arrangements. Gyamera’s work on justice delivery in the courts in Ghana reported that “land cases pending in Ghana’s courts constitute about 59% of all court cases.” [63]. The delays in the courts have contributed to festering tenure disagreements and widespread tenure insecurity found in the study area. The people mentioned their dislike for the imminent threat to peaceful co-existence and a sense of suspicion among the otherwise peaceful inhabitants. There is bound to be some undesirable implications (they stressed) for food security and general social wellbeing when different farmer groups believe their competing interests are incompatible as wide inequalities of land rights and other entitlements persist [64].

4.4. Conclusion and Recommendations

This research does not purport to conclude that the implications of land rights inequalities center only on food security. It aimed to identify the nature of land rights inequalities among smallholder farmers and the accompanying implications, both direct and indirect. The second was to examine the implications of land rights over time. Thirdly, it aimed to analyse the implications of land rights inequalities for food production, availability and subsequent possible food security. This is also key because smallholder farming remains a main source of income and food supply to many households, especially in sub-Saharan Africa [4].

The results have shown there is weakening reliance by the people on legal processes because there is little strict enforcement. Paradoxically, the same people expressed their trust in the potential effectiveness of the legal system to finalise sensitive cases that customary systems cannot resolve. Notwithstanding the long delays [63] in addressing land cases in the courts in Ghana (mentioned earlier), if land cases in the courts would be more speedily resolved, the legal system could facilitate processes to strengthen land rights and secure tenure. The results also showed that various categories of people (e.g., secondary land rights holders, namely women and settlers) experience varying levels of vulnerability to land rights inequalities. It is evident from the results that funding is important to promoting farming and securing food in general. Equally evident from the results is that strong land rights and secure tenure remain fundamental to improve food security of marginalised secondary land rights holders (i.e., women and settler farmers) [13]. In spite of the general vulnerability and marginalisation of women regarding customary land rights and tenure security, this research has revealed that wives and especially widows in the study area (patrilineal setting) have stronger rights and more secure tenure than other women (daughters and sisters). There are indirect but critical effects caused by emigration, suspicions and tensions affecting peaceful co-existence that further impact on food security in the area. Further research is therefore necessary for a collaborative effort to better
understand land rights inequalities and their implications, and to contribute to informing interventions to narrow these inequalities in order to contribute to improving food security.

What has become evident from this research is that those with the weakest land rights lost the most land. These land losses are visible in Figures 3 and 4. The land losses have significant implications for their survival in the future and demonstrates the need to increase the land rights of those with weak rights to create a more equitable land rights environment for everyone. It is anticipated that this would have positive impacts on their ability to hold onto land and maintain food security, in the medium to long term. It is pertinent to state that not addressing this situation will have dire consequences for those with weak land rights over the coming years. At least, it is clear by now that those with weaker land rights are more impacted by the allocation of land to developers and other investors in the study area. It is with these new pressures on land that the weaker land rights are exposed as being a serious problem that results in greater food insecurity at the household level. This food insecurity can affect national and international food security if care is not taken to prevent it from becoming more widespread. However, smallholder farming has been acknowledged in the literature discussed earlier to contribute at least 60% of the food needed to feed the world. Therefore, the undesirable land rights inequalities and the inevitable increasing pressures on land call for greater efforts to strengthen land rights for those with weaker rights, and to create more equitable and stronger land rights for all.

Author Contributions: Conceptualization, B.B.N.; Methodology, B.B.N., M.L., J.Z.; Data Analysis, B.B.N., M.L.; Data Collection, B.B.N.; Writing-Original Draft Preparation, B.B.N.; Writing-Review & Editing, B.B.N., M.L., J.Z.; Funding Acquisition, B.B.N., J.Z. All authors have read and agreed to the published version of the manuscript.

Funding: The Nuffic (now OKP) and the Dutch government funded this research.

Acknowledgments: I wish to acknowledge that the Dutch government through NUFFIC provided funding but this has not influenced the results of this research in any way. The permission and participation of interviewees in this research is very much appreciated. In addition, the participation of institutions like the Lands Commission (LC) and the Wa Central Customary Land Secretariat (WCCLS) in the Upper West Region is recognized and appreciated. Finally and equally important is MERIDIA Ghana for responding to our questions via email. I cannot end without recognising Benedict Akpem for transcribing audio recordings of FGDs, data collection support and critical technical inputs from Williams Miller Appau, Tahiru Alhassan, Osman Mohammed Banyellibu and Urbanus Wedaba of University for Development Studies, Ghana and Maxwell Owusu of University of Twente, Netherlands. All of these have contributed in diverse ways to enrich the output of this research.

Conflicts of Interest: The authors declare no conflict of interest.

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