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Sustainable Development Goals and land tenure security in Uganda

Teddy T Nakanwagi

Department of Environmental Management, School of Forestry, Environmental and Geographical Sciences, Makerere University, P. O. Box 7062, Kampala, Uganda

Contact: kateleonia@gmail.com

Abstract: Land tenure security is important for achieving a number Sustainable Development Goals (SDGs). The purpose of this paper was to investigate variation in land tenure security across three districts located in different geographical regions of Uganda. Using a quantitative cross-sectional survey data collected in early 2019. The findings show that Kanungu district found in South-Western Uganda had significantly higher levels of land tenure security as compared to Nakasongola (Central) and Nwoya (Northern). Research findings have implications on further study and benchmarking land governance systems in Kanungu. Furthermore, they have implications on implementation of government and donor land titling or registration programs in terms of priority areas. They further sheds light on the importance of accounting for geographical context in land tenure studies.

Keywords: Sustainable Development Goals, SDGs, land conflicts, land tenure security, Uganda

1. Introduction

The paper studies variation in land tenure security variation in Uganda using 2019 quantitative cross-section data set collected from 3 districts located in different geographical regions which include Kanungu (South-Western), Nwoya (Northern) and Nakasongola (Central). This was done in an effort to contribute empirical evidence regarding Sustainable Development Goal indicator 1.4.2. In agrarian economies which heavily depend on land and agriculture, personal or household wealth depends on control and access to land [1,2]. Land access provides economic security for populations with limited access to off-fam incomes [1]. And influences socio-economic and political dominance of individuals, households, groups and communities

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along the dimensions of age, gender, ethnicity and religion [1]. Hence, control of land is highly contested between the powerful and vulnerable [1].

Secure land access plays a vital role in poverty eradication or spurring economic growth in the face of rapidly growing land tenure insecurity and conflicts especially in SSA [1], where land tenure systems formal documentation is dismal [3]. As the types of activities that can be undertaken with a given bundle of rights depends on level of their security [4]. That is, perceived tenure security is important in land owner's economic decisions [5-8].

Because land tenure security is highly considered important for achieving Sustainable Development Goals (SDGs) for ending poverty, ending hunger, achieving food security, gender equality, sustainable cities and human settlements, and for the protection of and sustainable use of terrestrial ecosystems [9]. "The UN System developed indicator 1.4.2 to monitor the progress of the security of land and property rights by countries until 2030 [10]. Sustainable Development Goal indicator 1.4.2. measures the proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights land as secure, by sex and by type of tenure [10].

Therefore, improving land tenure security remains a crucial goal for developing country governments and development agencies. In Uganda, the government has made recommendable efforts to streamline land policies to better serve land rights holders. In the last decade, it has authored different land policy documents that are aimed at streamlining land services and land rights [11]. And development partners have actively worked with government to draft the different land policy documents [12,11]. Currently, the government of Uganda "aspires to adjudicate and document land rights, and issue legal documents as a means to improve land tenure security" [11].

However, according the governments' Land Sector Strategic Plan (LSSPII) of 2013-2023 [13]. The government targets improving tenure security through systematic clarification, demarcation and certification of customary or communal land rights of Northern and Eastern Uganda [13]. Indeed, so far

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Northern Uganda has been the major recipient of land tenure security improvement programs in the past decade [14]. But other regions such Western/South Western and Central Uganda have also benefited from the piloted land titling or registration projects [11, 14].

Nonetheless, considering that majority of the rural areas have been plagued with increased commercialization of their land since the onset of the global food and energy crisis of 2007/2008 [15]. There is a need for frequent studies of land tenure security levels of the country for easy implementation of different land tenure security improvement programs and to track SDG 1.4.2. Frequent examination of land tenure security across the country can go a long way in timely updating of appropriate land policies. Land tenure (in)security and conflicts are mediated by geographical context and institutional frameworks [16]. Thus, land tenure security and conflict analysis at regional level can help in revealing where local land institutions are more efficient. Furthermore, it helps to determine which region has better developed social, political and economic systems [1]. And how such systems can be adapted to areas which are the process of transition and reestablishment [8].

The authors are aware of a few studies that have examined land tenure security in different parts of the country with aim of capturing difference in land tenure systems. Doss et al. (2014a) focused on land ownership among men and women in three regions, that is Kapchorwa (Eastern), Kibale (Western) and Luwero (Central). Ravnborg et al. (2013) examined the relationship between land tenure types and tenure security as it is perceived by the land rights holder using data from also three regions which include, Masaka (Central), Pallisa (Eastern), and Amuru (Northern).

2. Land tenure systems in Uganda

Land tenure can be classified in terms of: (i) the legal regime governing the tenure whether statutory (formal) or customary (Informal), (ii) the way such land is used whether private, public or government, (iii) the continuum of rights held, whether owned in perpetuity or leasehold [17]. Uganda's land laws recognize four land tenure systems: Customary, freehold, mailo and leasehold (See Table 1). As indicated in Table 1,

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most of the individuals, households, and communities in Uganda hold their land rights under customary land tenure system. Though the most recent land laws – the 1995 constitution, and the Land Act (1998) recognize customary land tenure as a formal tenure with provisions of Customary Certificates of Ownership (CCOs) that land rights holders can use to prove land rights ownership and interests in a piece of land. Customary land rights in Uganda remain largely undocumented.

Table 1: Land tenure forms in Uganda based on 2008/2009 Uganda Census of Agriculture

	Land tenure type						
Region	Customary	Freehold	Mailo	Leasehold	Squatter	Unknown	Parcels
Northern	90.6	5.2	0.1	1.8	1.2	1.0	13520
Central	25.9	22.8	29.2	6.6	14.9	0.6	8248
Eastern	81.4	13.6	0.6	2.3	1.4	0.6	16291
Western	62.7	29.1	1.6	2.0	3.5	1.2	14597
All regions	69.9	17.2	5.3	2.7	4.0	0.9	52656

Adopted from Ravnborg et al. (2013)

Undocumented customary systems face problems of land grabbing because it is not easy to determine who owns land, if the claimant has any interest in land, whose and which interests in land take precedence and lacks clearly defined boundaries [18]. In the face of increasing land revalorizations, safeguarding land tenure and ownership in communal customary tenure systems can be challenging. As powerful individuals move to accumulate, title and individualize as much communal land to sell at exorbitant prices to interested buyers. Be own State and fellow citizens or foreign State and multinational or individual investors. Customary leaders who are supposed to be the custodians of communal customary lands also move individualize it at the expense of other community members.

In all regions, there is a co-existence of different land tenure systems with exception of Mailo and its associated kibanja (tenant) found mostly in Central Uganda. [8] noted that the co-existence of different land tenure forms in a community is a source of land tenure insecurity and uncertainty in land rights since some tenures are given preferential treatment. The current market-driven land reforms aim at making freehold tenure which specify individual or group property rights, the dominant form of land ownership [19]. Furthermore, the coexistence of formal law and customary which makes it difficult to determine land rights

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as both laws have to be consulted during a land dispute. This has bred forum shopping in land dispute resolution as conflicting parties seek the institution that will rule in their favor [20].

The confusion in the formal law causes even the learned judges in formal courts to error while making rulings regarding land disputes. For example, in 2018, about 350 people were evicted from their homesteads on 9-acre land parcel due to a court order [21]. The court order that led to evictions were ruled by the high court judge later to have been illegal on the premise that the magistrate judge gave it without visiting the area [21].

Freehold tenure is promoted by the national land policy [17] because it confers full powers of disposition of land by the land title holder. This ability to dispose of land is very key in stimulating a dynamic land market. Freehold land tenure which accords the rights to individuals and leasehold which facilitates land acquisition by foreigners are promoted as the land tenure systems of the future [22]. And according to [23], current government's efforts are to homogenize land tenure systems across the country and boost the land market. Customary and mailo are the most land conflict prone land tenure in Uganda [2]. Mailo tenure which is only unique to Uganda also faces rampant evictions of bona fide occupants (bibanja tenants). Since its creation, all most a century ago, Mailo tenure has been problematic since its inception and it continues to affect negatively land rights and tenure security for many [2].

Mailo land tenure came about when the British Protectorate in 1900 parceled and titled land in miles (now referred to as Mailo tenure) which were awarded to the loyal chiefs in Buganda and other regions [24,2]. Introduction of Mailo land tenure created land lords (Kabaka and Chiefs) and the poor subjects on those land became tenants also known as bibanja holders whose usufruct rights can be inherited and traded as the title holders [22,23]. The act of awarding freehold land titles to the chiefs of the time resulted in land becoming a saleable commodity in Buganda, since individuals had complete power of land disposal with no legal obligation to either the Kabaka or the tenants who were on 'their land' [19].

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3. Measuring land tenure security

Existing literature on tenure security in general consists of different definitions and measurements, some authors using the same measures as the definition used in tenure security [26]. For long land tenure security was equated to land titles especially in economic literature [5]. However, there is an increasing focus on perceived land tenure security in recent years and land titles are seen as one of its contributors among others which include names on the document, access mechanism, length of ownership, and wealth [5]. As [26] note that, "one of the most fundamental ways of understanding the strength of property rights is through citizen's perceptions of them." And "the constrain on the expected returns to productivity-enhancing investment in agriculture is the belief on the part of the investor that she/he will not investment due to expropriation or conflict" [7:308]. As we have already noted, Agenda 2030 focuses on tracking (i) the proportion of adult population with documented tenure rights that are legally recognized by governments, (ii) the proportion of adult population who perceive their tenure rights as legally secure, regardless of whether these rights are documented [27].

Land rights which must be perceived as secure for economic development are usually classified along dimensions of (i) access, the right to be the land such as the right to walk across a field; (ii) withdrawal, the right to take something from the land, such as to collect water, firewood and other produce; (iii) management, the right to change the land in some way, such as to plant crops or trees, clear bush, or make improvements on land; (iv) exclusion, the right to prevent others from using land and (v) alienation, the right to transfer land to others through rental, bequeath or sale [28: 80]. [29] categorized (i) the right to choose which crop to grow, (ii) the right to put one's land into fallow and to cultivate it once the fallow is over, (iii) the right to bring improvements to the land, (iv) the right to freely dispose of crop output, and (v) the right to prevent the grazing of others' livestock as minimum tenure security. And (vi) the right to lend the land along traditional lines, (vii) the right to give it, (viii) to bequeath it, and (ix) to rent it against cash and (x) the right to sell or mortgage as r maximum tenure security.

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Soliciting land rights of an individual or a group holds constitutes the breadth of tenure security; but to have a complete understanding of tenure security; we also have to ask about how long the land rights are expected to be held. This can be temporal or permanent. And secondly, the assurance that land rights are free from any threat from other people during the specified period, the land rights holder expects to hold the rights. Hence the key components of tenure security include breadth, length and assurance [28, 30, 31]. The assurance component of tenure security has received much more attention in literature due to its effect on land economic decisions [29, 5, 32, 33, 6, 7, 8, 34]. If land rights are insecure, that is there is a looming fear of losing rights unexpectedly, it will discourage land investments. And even those who have rights to alienate will find it difficult to find a buyer since the buyer also wants secure land rights.

Due to the different land tenure security measurements that exist. This study focuses on more than one measurement or definition to examine the status of land tenure security in Uganda. The different elements that constitute or influence perceived land tenure security examined in this study include land tenure type, mode of land acquisition, maximum indicative tenure security or transfer land rights, land documentation levels regardless of legality and the types land documents, past land conflict experiences, and perceived likelihood of disagreements in the future.

4. Study Methodology

4.1. Study areas

This study is based on 2019 cross-section quantitative data collected under Agricultural Investors as Development Actors research project aimed at observing the different dimensions of development in Uganda. The data was collected from three districts found in different regions of Uganda with different land tenure systems and civil war experiences. The districts include: Kanungu (South-Western), Nakasongola (Central) and Nwoya (Northern). Land tenure systems in Northern Uganda are predominantly customary [35, 36, 8] with quite high proportions of communal land ownership as compared to the customary land tenure systems in South Western region [14] [38] show that in Northern Uganda, about

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20% of land is under communal ownership as compared to 4 and 6% in Western and Central Uganda. [38] note that land administration in Northern Uganda is overwhelmingly customary kin-based, communally organized at clans and sub-clans or extended families, though individuals can households own their lands [35]. Northern Uganda is priority area for government's systematic land adjudication and documentation ([13]. And Nwoya has been a recipient of sporadic land adjudication and documentation pilot programs [39, 40, 41, 14). And it was found to have a comparatively higher percentage of respondents who were aware of land documentation promoters, who were mainly NGOs [42].

Nwoya district as a member of the Acholi sub-region was at the epicenter of a 20-year long political war between Kony's Lord Resistance Army (LRA) and Uganda's government forces which ended in 2006 after signing the cessations of hostilities agreement in Juba [43]. Such prolonged civil wars cause people displacement and have grave consequences on oral land ownership and boundaries due to the death of elders [43]. After cessation of hostilities, the return of IDPs to their homes and lands is mostly marred by intra-land grabbing and boundary disputes between clans, neighbors and families [44]. Early IDP returnees can seize upon the disruption and loss of oral land registries due to the death of many elders during the war; and disappearance of boundary markers [45, 43]. Thus, grabbing land by forcefully taking it all or 'pushing out' traditional boundaries to increase their acreage [45, 44, 46].

Kanungu's land tenure system is mostly customary [47, 36], though mostly privately owned [47]. [36] found about 50% of land parcels in Kanungu were acquired through the land sales market, which could partly explain private customary land ownership. [37] show that generally land ownership is 74% individual owned with 37% owned with a certificate or lease in Western Uganda where Kanungu district is found. The main distinguishing feature of land tenure in Kanungu is its hilly terrain [48] high population density of 198 as compared to 29 and 55 persons Km2 for Nwoya and Nakasongola respectively [49], high land fragmentation and small parcel sizes owned or accessed [36].

Kanungu borders the Democratic Republic of Congo (DRC) [50]. And can suffer from the civil war in DRC through inflow of refugees into its territory. However as compared to Nwoya and Nakasongola, it has the

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least migrant populations [36]. This may mean that refugees from DRC most affect land tenure systems of Kanungu's neighbors that host Rwenzori Mountain [50].

Nakasongola is different from the other two districts in terms of land tenure. It is dominated by Mailo tenure, which suffers from competing land rights claims from occupants and title owners who are both recognized by the law as highlighted earlier. According to EPCR (2008) cited in [22], 90 percent of the land in Nakasongola is owned by absentee landlords, posing tenure uncertainties for the current occupants. [36] found a high prevalence of mailo (25%) and kibanja (54%).

Of the three districts, it lies in the cattle corridor zone and "has one of the highest cattle densities in Uganda with over 150 cattle per km2 with 30– 50 cattle per household" [51]. Majority of cattle farmers graze communally with exception of a small segment of the wealthy. Farmers move their cattle towards L. Kyoga in search pasture and water in the dry season [51]. However, due to changing land ownership that arise from fencing, competition from other land uses such as crop production and increasing population is on the rise. Animal mobility is being delineated as coping strategy for drought among livestock farmers not only in Nakasongola but as well as in other parts of the cattle corridor [52]. The competing changes between pasture and crop farming in Nakasongola is demonstrated in [52] who show a dramatic decrease and increase in grasslands and small-scale farming between 2002 and 2013. The movement of pastoralists with their animals can spark conflicts with cultivators [52] and land fencing in traditional communal system by the wealthy encloses resources which can cause conflicts [53].

Central region where Nakasongola is located experienced civil wars from about two years after Uganda gained independence from colonialists in 1962, and it was the center of the civil war that brought the current President –Yoweri Kaguta Museveni [54]. The greater Luwero district from which Nakasongola was curved, was the epicenter where Museveni and his rebel group the National Resistance Army (NRA) fought intensively to oust the elected president between 1981-1986 [54]. Though the civil war ended over 3

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decades ago and there is relative peace, populations in greater Luwero could still be suffering physical and physiological effects [55] citing Musisi, Kinyanda, Liebling, Kiziri-Mayengo & Matovu, 1999 cited in)[1].

4.2. Sampling

The research project aimed at observing certain development outcomes that deal with SDGs such as land tenure security. The data used in this study which will be referred to as CP19 henceforward. The districts and Sub county (ies) from which data that informs this study was collected. Were purposively selected by project research team. Only sub-county was selected that is Kayonza and Kakoge Kanungu and Nakasongola respectively. However, in Nwoya (Northern region) two sub-counties − Alero and Purong as per 2014 census were selected. The choice for two sub-counties in Nwoya was because the greater Alero which was the preferred choice as at the time, it was a beneficiary to formal land registration program that was being implemented by Dutch Development Agency (ZOA). Thus Purong sub county was also considered to increase the proportion of land parcels that had not been affected by the program.

CP19 survey questionnaire was administered using Cspro 7.1 computer-assisted interview program between March-April 2019. Households to be interviewed per village were determined using a proportionate sampling method. The number of households to be interviewed were guided by ±7 precision levels at 95% confidence level and P=0.5 [56]. Field teams were given the targeted number of households in the selected villages. In Kanungu Nakasongola, the team leader would contact the local council (LC) / village chairperson and write a list of names of household heads in the village. Then randomly sampled the household heads whose homesteads were to be visited and assigned them to the enumerators.

But villages in Nwoya as per 2014 National Population and Housing Census demarcations were quite big. Hence, the ‘random walk’ method used by [57] was employed. That is the team would arrive in the village and contact the chairperson. After self-introductions, the chairperson and the team would take enumerators

[1] For more information on the study areas including poverty profiles see Nakanwagi et al. (2021). “Regional difference in land tenure security in Uganda.” https://ssrn.com/abstract=3968647

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in opposite directions or at distant locations that are relatively far apart. After being introduced to the first household, the enumerators were instructed to skip four homesteads and go to the next. And if an interview could not be carried out at the fifth household, the enumerator would continue to the next. The targeted person to be interviewed was the head of the household, but in some cases where it was not possible, then a spouse or an adult was interviewed. Furthermore, enumerators in Nakasongola were not able to collect data in some sampled households or communities due to high sensitivity of land issues in Central region.

In total the survey collected data from 181, 172 and 266 households or respondents in Kanungu, Nakasongola and Nwoya respectively. Parcel level data was collected from 160 (288 parcels), 113 (148 parcels) and 240 (422 parcels) households in Kanungu, Nakasongola and Nwoya respectively. Because a household can access land parcels through short term tenancy, borrowing and walking-in and thus may not know the parcel history, documentation status and ownership and cannot claim control rights on it. This study analyses land tenure security for only parcels that were owned or perceived to be owned by the household. Parcels that were indicated to be owned by the household as per the respondent were 253 (87.85%), 94 (63.51%) and 361 (85.55%) Kanungu, Nakasongola and Nwoya respectively. This result already shows the land ownership constraints in Central region district of Nakasongola as households have a larger reliance on non-owned land.

4.3. Ethical considerations

The research was conducted under Agricultural Investors as Development Actors research project in Uganda. All research activities undertaken by the project team in Uganda were approved by the Research Ethics Committee of the School of Social Sciences, College of Humanities and Social Sciences, Makerere University, Kampala. During the survey period, the presence and objective of project team was reported to the relevant district offices such as the Police, Chief Administration officer, sub county chairpersons and village chairpersons. Furthermore, each chairperson of the targeted village was contacted in advance about the date when the interviews were to be conducted and guidance on how to approach respondents. The study involved participation of humans, as respondents during the administration of the survey

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questionnaire. The study was voluntary and verbal permission was sought from the head of the household or any other adult available for the interview. And respondents were informed of the confidentiality of their data.

5. Results and discussion

5.1. Regional variation in population characteristics

The population profiles presented in Table 2 are based on all the individuals and not just the household head in the study households in a district. Some questions were age specific which reduces the population sample in some cases such as leadership and employment. There was variation in formal education completed across the three districts. A chi-square test of independence was performed to examine the relationship between region and the formal education completed among the study populations. The relationship was significant, χ^2 (10, N=2,778) = 51.5426, $p < 0.001$.

The results in Table 2 show that Nwoya district which is just emerging from a civil war (see Table 3), performed well in terms of upper primary and post primary formal education completed, though Nakasongola had higher percentages in those categories. There was no variation in the population gender across the study areas as the correlation was insignificant. The association between the district and individual relation to the household was significant, χ^2 (6, N=2,778) = 32.1090, $p < 0.001$.

Households in Kanungu district were less likely to have extended family members as compared to Nakasongola and Nwoya. There was no statistical significant difference in the defined age categories of the populations across the study districts. The difference in population marital status across the study districts was statistically significant, $\chi 2$ (10, N=2,778) = 24.6210, $p < 0.01$. Nakasongola district was less likely to have polygamous marriages while Kanungu was less likely to have separated couples.

Individuals in Kanungu were more likely to have been born in the study village as compared those of Nakasongola and Nwoya. The association between district and being born in the village (Non-migrant) was significant, $\chi 2$ (2, N=2,777) = 177.7454, $p < 0.001$. The results of this study on migration mirror those of

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Nakanwagi et al. (2021) who found comparatively lower migrant individuals in Kanungu as compared to Nakasongola and Nwoya.

This result is also collaborated those presented in Table 3 in this paper which show that Nakasongola and Nwoya had a high percentage of households that had been established in the sampled village as a result of migrations. And the relationship between reason for establishment of the household in the study village and district was significant, χ^2 (8, N=616) = 382.6526, $p < 0.001$.

Individuals in Nwoya were more likely to stay outside their villages probably to work on commercial agricultural farms or rent land. The correlation between study district and staying in the village was significant $\chi 2$ (2, N=2,778) = 13.8615, $p < 0.01$. There was a statistical variation in individuals who were regarded as opinion leaders by the respondents across the districts of study, $\chi 2$ (2, N=1,352) = 81.3827, $p < 0.001$.

Table 2. Demographic profile of the populations in the study districts (include p-values)

	Kanungu	**Nakasongola**	**Nwoya**	**All districts**
All individuals (HMs)	819	657	1,302	2,778
Formal education completed				
Never attended (includes pre-school going children)	18.19	15.37	16.51	465
Pre-primary	10.62	10.81	9.29	279
Don't Know	0.61	1.37	0.08	15
lower-primary (P1-P4)	37.24	25.88	31.34	883
Upper-Primary (P5-P7)	21.49	29.53	28.96	747
Post-Primary	11.84	17.05	13.82	389
Sex of HM				
Male	46.64	48.4	47.54	1,319
Female	53.36	51.6	52.46	1459
Relationship to HH				
Household head	21.25	25.11	19.59	594
Spouse	17.22	16.13	14.29	433
Child	56.65	49.16	55.84	1514
Others	4.88	9.59	10.29	237
Age category				
Below 6 years	15.14	18.87	15.67	452
Between 6-15 years	32.97	28.16	31.8	869

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Between 16-24 years	15.38	14.92	16.21	435
Between 25-39 years	18.07	21.92	19.05	540
Between 40-65 years	14.65	14	14.29	398
Above 65 years	3.79	2.13	3	84
Marital status				
Monogamy marriage	33.09	32.12	29.95	872
Polygamy marriage	3.79	1.83	3.61	3.24
Never Married	58.36	58.75	60.37	59.4
Divorced	0.85	0.91	1.08	0.97
Separated	0.61	3.5	1.77	1.84
Widowed	3.3	2.89	3.23	3.17
HM born in this village				
No	13.92	39.48	40.02	894
Yes	86.08	60.52	59.98	1883
HM stays in the village				
No	0.61	0.76	2.38	41
Yes	99.39	99.24	97.62	98.52
All individuals above 17 years	398	325	629	1352
HM is Opinion leader				
No	77.64	71.38	51.67	866
Yes	22.36	28.62	48.33	486
HM is member in group in/outside village				
No	42.96	66.77	45.95	677
Yes	57.04	33.23	54.05	49.93
All individuals above 11 years	542	412	826	1,780
Primary occupation in past week				
Own farm	50	45.87	61.62	969
Own business	5.72	4.85	1.69	65
Private/public employment	4.8	9.71	1.82	81
Student	31	20.39	29.9	499
Others	8.49	19.17	4.96	166

Source: CP19 survey, HM-Household members, Opinion leader- called upon to mediate a conflict or give opinion on important matters in the village

Respondents in Nwoya were significantly more likely to regard their household members as individuals who are called upon to mediate a conflict or give an on opinion on an important matter in their communities. The association between district and group membership among adults was statistically significant, χ^2 (2, N=1,352) = 48.5686, $p < 0.001$. Individuals in Nakasongola district were less likely to belong to any

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organized group either in their village or another village. The difference in primary occupation of individuals above 11 years was statistically significant, χ^2 (8, N=1,780) = 141.1515, $p < 0.001$. Nwoya comparatively had lower percentages of individuals with off-farm incomes.

Table 3. Reasons for establishment of household in the study village

District	Marriage	Return after war	Migrated here	Returned home [a]	Shifted within village	Total
Kanungu	87.85	0	9.94	0.55	1.66	181
Nakasongola	40.83	0	48.52	4.73	5.92	169
Nwoya	13.53	51.88	28.57	4.89	1.13	266
All	42.86	22.4	28.57	3.57	2.6	616

Source: 2019 CP survey, [a] returned home for other reasons like divorce, end of employment

5.2 Which region (district) enjoys higher land tenure security levels?

To answer this question, the study used data from 708 owned parcels or perceived to be owned by the respondent from 445 households distributed across the three districts. This section largely presents descriptive statistics of the different studied land tenure security indicators across the three districts. The indicators include land tenure types, modes of land acquisition, land documentation, land rights, land conflict experience and perceived land tenure security.

5.2.1. Mean acreage of owned parcels

Results in Table 4 show that on average Nwoya district had significantly higher levels of land accessed or owned as compared to Nakasongola and Kanungu. The Kruskal-Wallis test results showed that with or without ties, there was a statistically significant difference in mean acreage of the studied land parcels across the three districts at $p < 0.001$. The higher levels of acreage owned or perceived to be owned by households as compared to the other districts is related to low population density and recent civil war experiences.

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Table 4: Mean acreage of owned parcels

Study district	Mean (acres)	Std.Dev (Acres)	Min (Acres)	Max (Acres)	All Parcels	Rank sum
Kanungu	2.399	7.222	0.1	80	253	62374.50
Nakasongola	4.538	13.419	0.05	125	94	28877.00
Nwoya	20.606	76.822	0.01	900	361	159734.50
All districts	11.966	55.907	0.01	900	708	

Source: CP19 survey

However, this can be a source of land tenure insecurity posed by large scale land acquisitions by governments and other powerful individuals while claiming it is idle land. [58] found that communities with large areas and low population densities are more targeted by large-scale agricultural land investments (LALIs) in Nigeria. Yet such acquisitions and investments have been largely associated with land conflicts [59, 60, 53].

5.2.2. Land tenure type

Land tenure types as institutions which consist of rules, norms and enforcement mechanisms of rules [19] legally or customarily defined [61]. Determine land relations among people, as individuals or groups [61]. They determine land access and ownership [2], and land tenure insecurity as well as land conflicts [19] of individuals and households in the communities. For example, freehold tenure affords owners complete rights to use, sell, lease/rent, subdivide, mortgage and bequeath as they see fit as long as they are within the low [28]. But freehold is still a minority tenure despite decades of its introduction due to the expensive nature of traditional and Westernized land titling programs. Thus a district or region with higher proportions of freehold land tenure type is likely to have more control and secure land rights.

The variation in land tenure forms across the study districts was statistically significant, χ^2 (12, N=706) = 734.9607, $p < 0.001$. The obtained results in Table 5 show that the observed variation probably arise from complete absence of customary land tenure in Nakasongola and mailo or kibanja tenure in Kanungu and Nwoya.

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Table 5. Land tenure type

	Land tenure type (%)							
Study District	Unregistered customary	Registered customary	Freehold	Public	Leasehold hold	Mailo	Kibanja	Total
Kanungu	57.77	19.52	21.91	0.40	0	0	0.40	251
Nakasongola	0	0	3.19	1.06	0	12.77	82.98	94
Nwoya	65.10	18.01	4.16	11.36	1.11	0	0.28	361
All districts	53.82	16.15	10.34	6.09	0.57	1.70	11.33	706

Source: CP19 survey

Kanungu in comparison had more control and secure land rights due to higher prevalence of freehold land tenure which is about 7 and 5 times that of Nakasongola and Nwoya respectively. The result obtained in this study reflect those obtained by [8] using Uganda Census of Agriculture which show that Western region comparatively has higher proportions of freehold land tenure form (See Table 1).

The high proportions of Kibanja tenancy and mailo tenure in Central region is indicative of land tenure insecurity [62, 8, 2]. Doss et al. (2014) noted that, despite the Land (Amendment) Act of 2010 which sought to increase land tenure security of bibanja holders by making it difficult for mailo holders to evict them. The mailo owners just sell the land to more powerful actors such as those in the army or multinational investors who can easily evict them [28].

On the other hand, a high prevalence of public land tenure in Nwoya presents a forum for contestation as locals claim government designate their customary lands as public lands to give it to foreign investors and the army officials [28] citing Rugadya (2009). The highly contested perceived land grab of 40000 ha to Amuru Sugar Works ltd of Madhvani Group that was being facilitated by government [63] was on land that government claims to be public while locals claim it is their customary land. That contestation which started in 2011 resulted in death, imprisonment, evictions, displacement and house (huts) demolition at a large scale [64].

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5.2.3. Modes of land acquisition

The way a parcel was acquired influence the type of land rights and perceived land tenure security. For example, inherited land parcels are usually more tenure secure as compared to allocated parcels in Ghana [6]. [5] found high perceived land tenure security among purchased and inherited parcels in Nicaragua. Land purchases especially are indicative of more individualized land tenure systems and presence of some form land documentation and thus more land tenure security.

Table 6: Modes of land acquisition

	Mode of land acquisition (%)							
Study District	Given by family	Inherited	Purchased	Rented	Borrowed	Allocated	Others	Total
Kanungu	18.97	27.67	49.80	2.77	0.00	0	0.79	253
Nakasongola	19.15	4.26	64.89	1.06	4.26	0	6.38	94
Nwoya	29.36	48.20	11.63	0.83	0.55	5.54	3.88	361
All districts	24.29	35.03	32.34	1.55	0.85	2.82	3.11	708

Source: CP19 survey

The test of independence showed that modes of land acquisition significantly differed across the study regions, χ^2 (12, N=708) = 204.1743, $p < 0.001$. The obtained results in Table 6 show a relatively higher reliance on inheritances and donations in Nwoya which would imply higher land tenure security. The same would be said of Kanungu and Nakasongola which have a higher reliance on land purchases to acquire. However, land purchases in Nakasongola take place on Mailo and Kibanja tenure which are generally regarded as insecure [62, 28, 13, 17].

Furthermore, a high reliance on the land market for land acquisition especially in Nakasongola has implications on land access for the youth and women. Indeed, considering all parcels owned and non-owned, over 30% of parcels were accessed through renting and borrowing in Nakasongola as compared to only 13% and 12% in Kanungu and Nwoya. [65] noted that land markets are gendered and thus disadvantage low income earners. And a land market can also be said to be a political institution [19] where access to persons who sell or lease depend on political and social connections [66].

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This is especially concerning in a context of increasing land demand from various commercial agricultural farms. Studies of [67-69] all found increasing land prices and changing land relations in areas close to commercialized agricultural farms irrespective of the model. [68] also noted that poor women who were involved in sharecropping arrangements to access land have been affected due to increasing adoption of cash rental arrangements as land owners seek to profit from increasing land prices in areas close to commercial agricultural models studied.

5.2.4. Land documentation

Though legally documented land tenure and rights are considered to be more land tenure secure [27]. But even other forms of 'informal' land documentation can provide land tenure security [5]. Results in Table 7.3 show that most of the informal land documents in all study districts were stamped at village local councils, a procedure which is sought to increase security of the parcel [70] However, the stamping of land agreements or informal documents was mostly done at the first level of local council governance (LC1) and few go up to the sub county level (LC3) (see Table 7.4).

Table 7.1. Per cent of parcels with land documentation per district

Study District	The parcel has any type of document to prove ownership (%)	All parcels
Kanungu	67.98	253
Nakasongola	70.21	94
Nwoya	26.04	361
All districts	46.89	708

Source: CP19 survey

Considering all forms of land documentation in Table 7.1, the difference across the districts was significant, χ^2 (2, N=708) = 128.7616, $p < 0.001$. Nwoya significantly had lower levels of documented parcels in the sample compared to Kanungu and Nakasongola. It would seem that Nakasongola which had 70.21% of parcels with some form of documentation had more secure land rights and Nwoya would have the least. But considering that a great proportion of land documentation constitutes purchase agreements on mailo an Kibanja tenancy tenure in Nakasongola which are inherently land tenure insecure. It is difficult to say that

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owned parcels in Nakasongola are more land tenure secure or land owners have more control rights. However, a high prevalence of land documentation in Kanungu with more individualized customary land tenure system could be indicative of more secure land rights.

Table 7.2. Per cent of type of land document

	Study district			
Type of land document	Kanungu	Nakasongola	Nwoya	All districts
Customary Certificate	19.77	0	55.32	25.90
Freehold title	6.40	6.06	8.51	6.93
Leasehold title	0	0	13.83	3.92
Mailo title	0.58	4.55	0	1.20
Certificate of occupancy	0	3.03	1.06	0.90
Purchase agreement	59.88	81.82	18.09	52.41
Rental agreement	0.58	0	0	0.30
Will	6.40	1.52	3.19	4.52
Inheritance agreement	5.81	0	0	3.01
Kibanja agreement	0	3.03	0	0.60
With family members	0.58	0	0	0.30
All parcels (N)	172	66	94	332

Sources: CP19 survey

The high proportional of land documents in Nwoya which are legally recognized, that is Certificate of Customary Ownership, freehold and leasehold (see Table 7.2) reflect government and development partners' effort to improve land tenure security in the district and Northern region at large. Results in Table 7.2. further show that despite provisions for acquisition of Certificate of Occupancy to strengthen land tenure security Kibanja tenure holders, they are not widespread in Nakasongola.

Table 7.3: Informal document stamped by local council

	Was the informal document stamped by local council?				
Study districts	No		Yes		All Parcels
	Freq.	%	Freq.	%	
Kanungu	37	29.37	89	70.63	126
Nakasongola	10	17.54	47	82.46	57
Nwoya	2	10.00	18	90.00	20
All districts	49	24.14	154	75.86	203

Source: CP19 survey

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This discrepancy could be due to low sensitization of land holders in Central Uganda about the possibility of acquisition Certificate of Occupancy. Indeed, [42] found lower levels of awareness of land documentation promoters in Nakasongola of about 58% compared to 63 and 89% in Kanungu and Nwoya respectively.

Table 7.4: Highest level of local council stamping of the document

	What was the highest level of local council stamping						
Study district	LCI		LC2		LC3		All Parcels
	Freq.	%	Freq.	%	Freq.	%	
Kanungu	87	100	0	0	0	0	87
Nakasongola	39	82.98	3	6.38	5	10.64	47
Nwoya	17	94.44	0	0	1	5.56	18
All district	143	94.08	3	1.97	6	3.95	152

Source: CP19 survey

Furthermore, Table 7.5 show that Kanungu and Nakasongola with high proportions of informal or semi-formalized land documentation are in the names of the household who is in most cases a male in Ugandan context. This has implications on land tenure security of vulnerable groups such as women and youth even in a district like Kanungu whose land tenure systems appear to be more secure and the situation could be worse in Nakasongola whose land tenure systems seem to be more insecure.

Table 7.5: Per cent of Name (s) on the land document?

	Which name (s) on the land document?					
Study district	HH	Spouse	Head & spouse	HSO	OFM	All parcels
Kanungu	72.67	2.33	19.77	1.16	4.07	172
Nakasongola	80.30	0	6.06	3.03	10.61	66
Nwoya	35.11	1.06	5.32	35.11	23.40	94
All district	63.55	1.51	12.95	11.14	10.84	332

Source: CP19 survey, HH-Household Head HSO- Head, spouse, and other family members, OFM- Other family members only

The high prevalence of other names on land documents in Nwoya is due to the joint land titling programs advocated by development partners aimed at increasing women's land tenure security who usually lose out in such programs [28, 65].

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5.2.5. Land rights

Land rights can be broadly categorized into control and access [71]. Access rights allows one to use land but has control over the production process [71] and thus they are mainly use rights [28]. On the other hand, control rights confer powers to make long-term investments such as tree planting, exclusion of others from using the land and transfer of land to others through sale, rent, bequeath [28] and pledge, mortgage or gift [72].

This paper deals with only control rights such as right to plant trees which does not necessarily confer transfer rights and three transfer rights which include right to rent, right to bequeath and right to sell. The respondent was asked if there was any household member who had a right to plant trees, rent, bequeath or sell the parcel. The relationship between district and right to sell was significant, χ^2 (2, N=708) = 152.8522, $p < 0.001$, and right to bequeath was significant, χ^2 (2, N=708) = 28.2741, $p < 0.001$, right to rent parcel was significant, χ^2 (2, N=708) = 68.2121, $p < 0.001$ and that with right to plant trees on the parcel was significant, χ^2 (2, N=708) = 28.4637, $p < 0.001$. The observed statistical variation in transfer rights such as right to sell, bequeath and rent a parcel across the district is due to the higher percentages in Kanungu district (See Table 8).

Table 8: Per cent of rights possessed by any household member on a parcel?

	Does any of household member have a right to… this parcel?				
Study district	Plant trees	Rent	Bequeath	Sell	All parcels
Kanungu	84.98	83.40	78.26	80.24	253
Nakasongola	75.53	55.32	57.45	58.51	94
Nwoya	93.91	51.52	58.73	29.92	361
All district	88.28	63.42	65.54	51.69	708

Source: CP19 survey

The results in Table 8 demonstrate that land tenure systems in Kanungu are more individualized and are more secure. Using the right to sell as a case, results not displayed in Tables show that the correlation between right to sell the parcel and tenure type of the parcel was statistically insignificant, and right to sell was 76.55% on unregistered customary tenure, 85.71% on registered customary tenure and 87.27% on

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freehold tenure in Kanungu. This implies that even unregistered customary land tenure systems in Kanungu has limited impediments on transfer rights which can facilitate a health land market.

On the other hand, the relationship between the right to sell and tenure of the parcel was statistically significant, $p < 0.001$ and right to sell was 22.55% on unregistered customary tenure, 21.54% on registered customary tenure, 93.33% on freehold tenure and 58.54% on public tenure in Nwoya. The relationship between land tenure type and right to sell was also statistically insignificant in Nakasongola. The right to sell was higher on mailo at 83.33% as compared to 53.85% on kibanja tenure.

Tree planting can increase individual land ownership in customary land tenure systems [73] and such long-term investments are associated with increased land tenure security [74]. [75] found increased investments in tree planting as a result of land certification.

Thus, the high prevalence of rights to plant trees in Nwoya could imply high land tenure security in that context. However, in Northern Uganda tree planting to demarcate boundaries using communally recognized species such as 'Omaramar' is common even in the process of issuance of CCOs [74]. [36] found that use of trees as physical parcel demarcations was more widespread in Nwoya as compared to Nakasongola and at Kanungu. Therefore, it is not easy to ascertain if widespread rights to plant trees mean more land rights especially in Nwoya.

5.2.6. Incidences of land conflict

Table 9.1 Per cent of land conflict incidences in the past

Study District	Experienced a land conflict in past	All Parcels
Kanungu	5.14	253
Nakasongola	19.15	94
Nwoya	24.93	361
All districts	17.09	708

Source: CP19 survey

Land conflict or dispute is a social phenomenon that involves at least two parties with different perceptions regarding rights of access, use, management and transfer on a given parcel [76]. Thus, high land conflicts

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experiences are indicative of contestations over land use types, limited access and use rights, unclear land ownership and boundaries [76]. Land conflicts usually thrive in communities with population increase, in-migrations, increasing land values, large scale land acquisitions and expropriations, weak land governances and unclear land information [77]. Perceived land tenure insecurity, land scarcity, unaddressed historical land grievances and normative dissonance in land governance are also precursors of land conflicts or disputes [78].

Though the survey question was focused on land conflict or dispute experiences within the last 5 years. Data shows that enumerators also captured land conflict experiences that occurred beyond five years as shown in Table 9.2. The difference in land conflicts experiences across the study district was statistically significant, $\chi 2\ (2, N=708) = 41.4486$, $p < 0.001$. The relatively lower incidences of land conflicts or disputes in Kanungu could be due to widespread control and transfer rights as observed in results in Table 8.1. The low prevalence of land conflicts in Kanungu could be further explained by lower migrant populations as compared to the other two study area observed in Table 2 and 3 which contribute to lower ethnic diversity.

Table 9.2: Frequency of past land conflict experiences across study areas

	Study district			
How long ago a conflict was experienced on this parcel ?	Kanungu	Nakasongola	Nwoya	All districts
Between 0-5 years	8	17	82	107
Between 6-10 years	1	0	6	7
Above 10 years	4	1	2	7
All conflict distribution	13	18	90	121

Source: CP19 survey

5.2.7. Perceived land tenure security

Perceptions of land tenure security were captured using likelihood of conflict or disagreements on the parcel in question within the next 5. Of all land tenure security indicators, perceived land tenure security allows for better comparison of land tenure security across diverse land tenure and governance systems [79].

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Results of perceived land tenure security displayed in Table 10 show that still Kanungu district had higher levels of perceived land tenure security as compared to Nakasongola and Nwoya. And the difference in variation in perceived land tenure security across the study districts was statistically significant, χ^2 (2, N=708) = 72.0994, $p < 0.001$. Further evidence that land tenure systems and governance are in Kanungu are more efficient in ensuring land tenure security and those of Nakasongola and Nwoya significantly weaker.

Table 10. Per cent Likelihood of disagreement on this parcel in the next 5 years

	Is there a likelihood of disagreement on this parcel in the next 5 years?			
Study district	Not likely	Likely	Highly likely	All parcels
Kanungu	92.09	6.72	1.19	253
Nakasongola	51.06	37.23	11.70	94
Nwoya	72.30	21.33	6.37	361
All districts	76.55	18.22	5.23	708

Source: CP19 Survey

However, perceived land tenure security of parcels in Nwoya is higher than that of Nakasongola yet it is just emerging from a prolonged civil war which effectively disrupted land tenure and rights. The relatively high perceived land tenure security in Nwoya and Northern Uganda at large could be due to the concerted efforts by government and its development partners in improving land tenure security as part of post war rehabilitation package through increasing awareness of land rights [44, 42], land certification [11, 14] and strengthening conflict resolution mechanisms [8].

Conclusions and policy implications

This paper examines variation in land tenure security across three districts with different land tenure systems and located in different regions of Uganda. The findings showed that, of the three districts, Kanungu located in South-Western region had higher levels of land tenure security. This was demonstrated by: higher percentages of freehold land tenure and transfer rights such as rent, bequeath and sell, lower incidences of past land conflicts and fears of likelihood of land disagreements in the next 5 years.

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The obtained findings of higher land tenure security in Kanungu district in this study as well as that of [36] seem to suggest that high population density in presence of homogeneous communities has less effect on security of land tenure or land conflicts. As noted in study description, Kanungu's population density of 198 persons/Km^2 is 3.6 and 6.8 times that of Nakasongola and Nwoya respectively [49]. But, findings in Tables 3 and 4 in this study and [36] show that of the three districts, Kanungu has the least migrant populations. [80] found that communities with many tribes and higher proportions of migrants were likely to have high incidences of land conflicts and it was true for districts with increasing population growth in Uganda. [80] explained that the high occurrence of land conflicts in migrant host communities was due to ethnic diversity which leads to weakening of conflict-resolution mechanisms. On population growth, the 2014 Uganda Census show that Kanungu's population growth was 1.7 between 2002-2014 as compared to 3 and 9.9 of Nakasongola and Nwoya respectively [49].

The study results further suggest that land tenure systems in areas with low population densities such as Nakasongola and Nwoya face more insecurity and conflicts as compared to those with high population densities. This is because such areas usually have abundant land which may seem to policy makers as redundant and thus more likely to be sources of land give away to investors. [58] noted that land based investments are attracted to areas of low population density, low educated leaders and land availability. A study by [36] find that Nakasongola and Nwoya had more land access and comparatively lower percentages of educated adults. Results obtained from the data in this study showed also that Kanungu had the least mean acreage owned or accessed. Additionally, Nakasongola had higher proportions of households that kept cattle. Cattle grazing can be a source of conflicts between pastoralists/herders crop cultivators [76, 52, 7]. Recent experiences of civil wars and violent conflicts in Northern and Central Uganda as noted in study area description also makes them vulnerable to land grabs [53].

Also this results seem to suggest that concerted post-war efforts to minimize land conflicts and improve land tenure security in Northern Uganda are paying off as evidenced by in increased land documentation. A study carried out in Amuru district−Nwoya neighbor by [8] show that overall land documentation back

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then was about 5% and formal documentation was about 2%. Yet this study results show that overall documentation is about 25% and at least 17% of registered customary land tenure. And results seem to show that despite relatively higher levels of past land conflicts, Nwoya has more perceived land tenure security as compared to Nakasongola. [8] study in Northern Uganda district of Amuru with higher perceived tenure security but with higher prevalence of land conflicts/disputes. [8] explained that the higher prevalence of land disputes in the Northern Uganda study district were due to war effects on land ownership and boundaries. But the higher perceived tenure security was "due to the existence and functioning of a fine-meshed set of institutions capable of dealing with these types of local land disputes, occurring primarily between relatives and neighbors" [8: 50]. The higher perceived land tenure security in Nwoya despite higher levels of land disputes could also be due to high levels of land rights awareness [42].

The study findings have implications for policies and programs that target to improve land tenure security in the different parts of the country. First the study suggests that land tenure security improvement programs such as those that deal with systematic adjudicate and document land rights, and issue legal documents by the government of Uganda and her development partners should pay more attention to districts with characteristics similar to those of Nwoya and Nakasongola. Some of those characteristics include low population densities but with higher population growth, relative high land abundance and migrant populations, recent experiences of violent ethnic and civil conflicts. The study results further suggest to improve land tenure security in some regions, that there is a need to pay more attention to building conflict-resolution mechanisms that can be trusted by an ethnically diverse community.

Also, this study suggests that in some areas with higher land purchases and inheritance agreements such as Kanungu with relatively higher levels of land tenure security, investment in low-cost local regularization such informal agreements [70, 81] beyond village local council LC1. As [70:199] noted that in "some cases, it is better to recognize and build on existing institutional solutions, that are not legally validated to bring forth hybrid solutions that may provide a satisfactory level of local tenure security, be accessible to users, and not represent too much of a burden on technical, financial, and administrative resources that are either

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scarce or nonexistent." In addition, local land administrators should be sensitized on the importance of inclusion of spouse and children names on land purchase and inheritance agreements.

Furthermore, there is a need to find ways of increasing freehold land ownership in Uganda. This is because freehold confers all land rights yet this study's results show that it is still thin in areas that are suitable for large scale land acquisitions and targeted by migrants from other regions.

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