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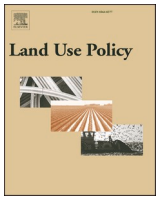

Large-scale acquisitions of communal land in the Global South: Assessing the risks and formulating policy recommendations

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ABSTRACT

This article conceptualises and empirically assesses the socioeconomic and environmental risks of large-scale land acquisitions (LSLAs) for communal lands in the Global South. These risks include the displacement of local communities due to the insufficient formal recognition of communal land and exclusive and corrupt negotiations with investors who frequently exploit the legal pluralism inherent in these tenure systems. Furthermore, LSLAs often imply the loss of important ecological and socioeconomic functions that communal land holds for local communities across the world. These risks are in particular severe for already marginalised groups such as women, pastoralists and forest-dependent communities. Our empirical analysis focusses on spatial data of LSLAs and communal lands in three countries with varying degrees of communal land recognition. In the case of Colombia, where communal lands are relatively well documented and protected, we identify overlaps and conflicts arising from deficient consultation processes, primarily linked to extractive industries. Similarly, Cambodia formalises communal lands, but the actual extent of collective titles remains limited, and prevalent social forestry schemes in the region provide only restricted land rights. This leaves local communities with far less and also less well protected land facing LSLAs. The Democratic Republic of the Congo with almost no effective safeguards to protect communal lands is surely the most problematic case, as our analysis suggests potential overlaps of LSLAs with close to one million hectares of communal land. Increasing the compliance of land policies with global frameworks but also exploiting upcoming due diligence regulations will be key mitigating the risks of LSLAs for communal land.

1. Introduction

Large-scale land acquisitions (LSLAs) in the Global South and their potential adverse impacts on local populations in targeted regions have been under scrutiny for about a decade now. While fewer new deals are added today compared to the late 2000 s, large land deals are still being negotiated, concluded, and implemented on the ground with far-reaching consequences for the local population (Lay et al., 2021a). In addition to the ever-increasing demand for agricultural production, estimates suggest that the current national climate pledges and commitments already claim an unrealistic 1.2 billion hectares (ha) of land for biological carbon removal in the coming decades (Dooley et al., 2022). Even if only a fraction of all pledges and commitments are put into practise, this could exceed by far the cumulative amount of about 30 to 50 million ha recorded for LSLAs in the agricultural sector.

While the implementation and conclusion of new LSLAs continue, reports taking stock of the current evidence on the local effects of LSLAs show that rather adverse impacts prevail (Lay et al., 2021a). In many cases, LSLAs with mainly negative impacts affect or directly target communal land of local communities where land is allocated and secured by the authority of the community under customary tenure. Communal land is often perceived as idle by investors, as the land use is often of low intensity, such as, for example, grazing livestock or gathering forest products (McCarthy and Cramb, 2009; White et al., 2012). The lack of private ownership and intensive production systems probably led to the notion that countries in the Global South still harbour vast land resources suitable for commercial production. In addition to case study evidence, visual interpretation of global maps of communal land from LandMark (2022) and maps of LSLAs from the Land Matrix (2022) also suggests that LSLAs could overlap with large tracts of communal land in the Global South. This article explores the risks that large-scale acquisitions pose for these communal lands, the extent and nature of overlaps and potential policy responses.

These risks to communal land have historical roots. Colonial 'land

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grabs' were not reversed after decolonisation, and new constitutions in several countries in sub-Saharan Africa and Asia placed all land or substantial fractions of national territory under the control of the state without recognising the claims of local communities (Haller et al., 2019). As we will show in this study, LSLA often (partially) target communal land, which causes specific risks. First, land under communal tenure is often less well protected than privately held land. Even if formal rules protecting communal land rights are now in place in many countries, they may not be used effectively by communities or enforced by state authorities. Second, the land rights of individuals are often very poorly protected under communal tenure, increasing the risk of displacement without adequate consultation and compensation. Third, communal land is typically administered by local elites who may or may not do so in the best interest of their community. Elites may exploit communal land for private gains (German et al., 2013). Fourth, land loss, inadequate consultation (or compensation), as well as corrupt and unaccountable local elites, are all factors that increase the risk of social conflict, be it between the community and the investor, but also within the community (Juan et al., 2022). Fifth, communal lands have specific economic and environmental functions for the local population, for example, common grazing grounds or forests used for firewood collection. Finally, well-established global policy frameworks, such as 'The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security' (VGGT), may work less effectively for communal lands where legal ambiguity and overlapping claims are common (Dieterle, 2022).

To identify the specific risks that large-scale acquisitions of communal land pose to local communities and the environment, we review and systematise current evidence. In the empirical part, our study uses data from the Land Matrix (2022) and LandMark (2022) combined with other datasets to assess overlaps between communal land and LSLAs. LandMark is a global platform offering spatial data on indigenous peoples' and local communities' communal lands. We integrate LSLA data from the Land Matrix with communal land maps, focusing on deals with precise location information (polygon or point). We calculate LSLA areas directly overlapping with communal land and those within 1 km, 10 km, and 20 km of communal land boundaries and then disaggregate the area by type of investor, intention of investment, implementation status, and produce type.

Our study makes two contributions to the literature. First, it summarizes and conceptualizes the socioeconomic and environmental risks of LSLAs for communal land in the Global South and systematically accommodates the ample evidence. Second, we have taken a first step at a spatial analysis of the risks of LSLAs for communal land. Although data are still scarce, data initiatives are increasingly collecting and publishing spatial data on both communal land and LSLAs, which allows for more fine-grained risk analyses beyond aggregated data at sector or country level. The paper is structured as follows. First, in Section 2, we define communal land tenure systems and summarise the literature on tenure security and access to land within these systems. In Section 3, we conceptualise the socioeconomic and environmental impacts of large-scale acquisitions of communal lands. Section 4 reports country-level evidence on LSLAs and communal lands for three countries, including Colombia, Cambodia, and the Democratic Republic of the Congo (DRC). Policy recommendations are formulated in Section 5.

2. A review of communal land tenure systems

2.1. Defining communal land

Land tenure systems distribute rights to use, control, and transfer land during a determined time frame and under specific conditions. These can be formal or informal, often called customary, with the former having state recognition and protection by established legal means. A recognized categorisation of land tenure by the FAO (2002) classifies land tenure into four types: private land for exclusive use, communal land for independent use by community members, open access with impossible exclusion, and state land. However, those discrete categories are not without criticism. Customary land tenure systems include a diversity of specific land rights that often involve several actors (FAO, 2002). Within the same community on the same communally held lands, a specific plot could be communal forests, while other plots could be temporarily used for transitory agriculture by community members or grazing by migrant pastoralists. In some cases of communal tenure, there is *de facto* individual land ownership. Individual use rights may even be transacted, governed of course by community-level institutional arrangements (Haller et al., 2019; Sward, 2017).

Although categorisations of land tenure are often contested, in the present study we use the term communal land to differentiate these tenure systems from individual private property systems. The distinguishing feature of communal land is that land rights are allocated and secured by the authority of the community under customary tenure and not by state authorities or by unrelated individual claims. This definition includes indigenous land that are mostly under customary tenure and collectively managed.[1]

2.2. The recognition of communal land and legal pluralism

Customary tenure systems have existed for centuries and have been adapting to internal needs or climatic changes (Fenrich et al., 2011; Haller et al., 2019; Olofsson, 2021). Foreign occupations have also made considerable modifications by appointing new local authorities (Fenrich et al., 2011; Mushinge and Mulenga, 2016) and displacing entire communities due to slave trade (Binswanger et al., 1995). Following their independence, some African countries and their new constitutions shifted control over land from communal to state authorities (FAO, 2020; Haller et al., 2019; Mushinge and Mulenga, 2016), resulting in a lack of recognition of communal land rights. Increased internal migration and commercialization of agriculture and forestry and the associated land claims from migrants and investors/companies created further pressure. In addition, formal land titling programs, in accordance with prevailing legislation and often advocated by multilateral organisations as conducive to rural development (Musembi, 2007; Borras, 2003), also affected customary tenure systems (Dell'Angelo et al., 2017; Fenrich et al., 2011; Greiner, 2017).

Only in the past 25 years, it became more common to recognise also in the policy sphere that customary tenure systems *de facto* prevailed in many places, in particular in sub-Saharan Africa (Fenrich et al., 2011). In this context, the United Nations began to encourage the protection of customary land tenure systems (OHCHR, 2008; United Nations, 2018). Although communal land was hence for long not recognized by statutory law, its recognition and protection are increasing across all world regions. Of the 100 countries studied by Alden Wily (2018), 73 countries now officially recognise collective property; yet with heterogeneous degrees of protection. Notwithstanding these 'formal improvements', a considerable share of communal land in the world is organised under informal but functional customary tenure systems (LandMark, 2022).

All these processes have led to the coexistence of different precolonial, colonial and post-colonial legal systems simultaneously applied over the same geographical areas, which is also known as 'legal pluralism' (Davies, 2010). This legal pluralism caused by the simultaneous existence of customary and statutory laws has reduced transparency for all land-related actors and augmented the risk of conflict (Fenrich et al., 2011). Likewise, it has led to competition between traditional authorities and state officials around decisions on land in Africa (van Leeuwen, 2014). Furthermore, legal ambiguity sometimes allowed local elites to interpret or use the legal system to their own

[1] We use here the term local communities to include both indigenous peoples, afro-descendant peoples, and other groups without shared identity and ethnicity but also with strong ties to their land.

advantage (Haller et al., 2019).

2.3. Tenure security and access to land under communal tenure

In contrast to communal land under customary tenure, private property systems with formal titles are often believed to increase tenure security and foster economic development through enabling credit and land markets (Atwood, 1990; Binswanger et al., 1995; Borras, 2003; Pereira, 2021). However, the evidence on the efficiency and equity effects of both land titling programs[2] and the associated emergence of land markets[3] and credit markets[4] is ambiguous. Furthermore, customary tenure systems do not necessarily hinder either tenure security nor land-based investments (Goldstein and Udry, 2008). In general, the long-standing focus on private ownership and land markets tended to neglect the importance of communal land tenure arrangements and the fact that individual private access to land could be relatively secure under customary communal tenure.

In many parts of rural areas in the Global South, customary institutions regulate individual and communal access to land, and thus its distribution within communities. Land allocation is usually the responsibility of local authorities, which are often older male members who belong to the most powerful groups or ethnicities in the community (Antonio and Griffith-Charles, 2019; Fenrich et al., 2011).[5] The allotment of plots, their area, and location are highly specific to each community. In some cases, land allocation may only be seasonal for transitory crops or grazing (Chimhowu, 2019). In other cases, there are no clear boundaries and land allocation simply depends on the capacity of recipients to exploit the land and the current necessities of the community (Haller et al., 2019; Sward, 2017).

Individual access to land, however, often depends on the relationship with traditional authorities (Goldstein and Udry, 2008; Olofsson, 2021), gender (FAO, 2002; Lanz et al., 2020), and ethnicity (Gmür, 2020). Therefore, access to land is often more limited for women, younger members of the community, and domestic migrants, despite their status as national citizens and their constitutional rights to land (Fenrich et al., 2011; Haller et al., 2019). For women, for example, the care work within households often prevents their capacity to grow cash crops to claim land (Hajjar et al., 2020). Furthermore, land succession laws usually are to their disadvantage. In patrilineal inheritance systems, the land previously assigned to a deceased man is transferred to the male relatives (descendants or siblings) and not to the widow (Matchaya, 2009; Takane, 2008).

The formalisation of communal land also does not solve the equity issues of these tenure arrangements. While the legal recognition of customary land tenure systems in sub-Saharan Africa was an important milestone in the protection of communal lands, it nonetheless reinforced the political power of local chiefs who can influence decisions over land not always and only in the best interest of the community. It also legitimised the exclusion or discrimination of specific groups based on ethnicity, as observed in Kenya (Greiner, 2017), or their ties to local authorities, as reported in South Africa (Olofsson, 2021). In the worst case, formalisation through collective land title can exclude communities from their land. Collective land titles under statutory law typically guarantee access to land to ethnic communities and indigenous groups, but also imply the delimitation of territories for communal land tenure. In Paraguay, for example, the creation of collective land titles worked as a geographical restriction for indigenous communities, prevented them from accessing land they traditionally accessed, and encouraged the establishment of commercial agriculture on land that was no longer 'theirs' (Tusing, 2023).

In summary, despite the cultural relevance of customary land tenure systems and the need to empower local communities, and their relatively low costs in administration, the customary institutions of communal land can also sustain local inequalities and prevent vulnerable groups from access to land. However, it should also be acknowledged that these systems can change over time and have the capacity to integrate demands from outside and within their communities.

3. Conceptualizing the socioeconomic and environmental risks of large-scale acquisitions of communal land

LSLAs frequently target communal land, a phenomenon that has been framed as "common grabs" (Dell'Angelo et al., 2017). Such land is the basis for the livelihoods of small-scale farmers, pastoralists, and forest dependent communities around the globe (FAO, 2002; White et al., 2012). As explained above, communal lands tend to be characterised by legal pluralism and competing land claims. Although investors do not exclusively target communal lands, they do not avoid them (FAO, 2020) despite clear guidelines against commercial agriculture investments in areas without clear land rights (FAO, 2022a; FAO, 2014).

3.1. Negotiation risks and conflicting interests

LSLAs already start to have effects on local communities during the negotiation processes that take place between investors, government officials, and local authorities. The stakes are high for local communities, with most negotiations involving rental agreements for several decades, sometimes almost a century, that have long-term social repercussions (FAO, 2020; Hambloch, 2022). Furthermore, in cases of highly informal and unclear land rights, governments often grant vast tracts of land at extremely low rental rates without the consent of local communities (Abate, 2020; Wayessa, 2020). Although international standards require Free and Prior Informed Consent (FPIC) from local communities for the establishment of a large-scale agricultural investment (FAO, 2022a; FAO, 2014), the coexistence of statutory and customary laws on land can lead to legal loopholes and local conflicts due to overlapping land claims and the omission of certain groups of land users during negotiations (Antonio and Griffith-Charles, 2019; FAO, 2002).

The discrepancies between established principles and actual conduct on the ground have various reasons. First, the informal and sometimes flexible rules of customary tenure systems require a very thorough understanding of the local land right context, which may be very difficult to obtain for an investor who may also need to negotiate with more than one community. In addition, legal pluralism raises uncertainties about the legitimacy of the negotiation counterparts which often lead to exclusion of certain groups, for instance, women or ethnicities without political representation. These ambiguities surrounding ownership and tenancy right and disagreements over boundaries often turn negotiations into contentious endeavours (Bottazzi et al., 2016; Juan et al.,

[2] See Brasselle et al. (2002) and Lawry et al. (2017). The evidence on the effects of land formalization processes on agricultural productivity tends to show moderate positive effects, but these vary considerably across different contexts (Bardhan and Mookherjee, 2007; Holden et al., 2009; Mendola and Simtowe, 2015). Further, increases in productivity may not exhibit a linear trajectory. In the case of Colombia, for example, beneficiary households of land titling programs initially experience a substantial drop in productivity before gains increase over time (Rincón Barajas, 2023).

[3] Empirical studies from Kenya (Acampora et al., 2022) and China (Chari et al., 2021) suggest that functioning land markets could increase productivity significantly; yet, land markets may also happen to transfer property rights to unproductive producers, as occurs in Colombia (World Bank, 2004) and Malawi (Sitko et al., 2014). Furthermore, private property rights may lead to an increase in distress sales in times of production or market shocks (Binswanger and Deininger, 1997; Binswanger-Mkhize et al., 2009; Collier and Venables, 2012).

[4] Private property rights are no guarantee for the attainment of formal loans (Atwood, 1990).

[5] In some cases, for instance in Peru, traditional authorities are democratically elected (Carter, 2021). There is much heterogeneity in these appointment or election processes across communities, groups, and countries.

2022), even if there were initially well-designed processes with comprehensive consultation by the companies (Dieterle, 2022).

Second, formal processes to acquire large areas of land may by default also cause the exclusion of certain groups due to the use of private land titles as an intermediate step to transfer or lease land to investors. For example, in Indonesia, the arrival of companies in the context of the country's oil palm boom sometimes directly incentivised the transformation of communal village land into individual plots. Formal landowners are typically the state, in the case of forest land, or village authorities, in the case of communal land. On these communal lands, village heads often recognized individual claims on the land, resulting in the transformation of communal village land into individual-owned plots that would then be leased to companies (Cramb and McCarthy, 2016). Similar procedures were documented in the context of Uganda, where ancestral customary land rights were formalised with the support of companies, resulting in the establishment of freehold titles. This enabled the communities to subsequently confer a leasehold title to the companies (Dieterle, 2022). In such cases, land titling and privatisation could be seen as a process that allows the payment of adequate compensation or lease fees. However, such conversions are not without problems, as the transformation of communal land into private and transferable property rights could exclude certain groups, for example pastoralists or forest-dependent communities, or communities with competing land claims (Dieterle, 2022; Meinzen-Dick and Mwangi, 2009).

Third, local authorities may not represent the interests of all community members beyond land rights (Greiner, 2017). Local authorities' power may well reflect historical power imbalances associated with ethnic affiliation, gender, and age (Fenrich et al., 2011). Additionally, individuals or groups with temporary presence on a territory are often neglected in LSLA-related negotiations although losing access to land has substantial impacts on their livelihoods (Bottazzi et al., 2016; Sulieman, 2018). These groups include pastoralists, small-scale seasonal farmers, hunters, or indigenous people with ancestral connections to the land. Thus, negotiations about land acquisitions are an entry point for local authorities or elites to pursue their own benefit (Bottazzi et al., 2016; Hughes et al., 2019). Land-related corruption and nepotism has long been documented (see Goldstein and Udry, 2008). In the worst cases, land officials have legalised land transfers for agribusiness development after small-scale farmers suffered life threats (Grajales, 2013; Thomson, 2011). Nepotistic practises have been shown in regard to the benefits of land investments, including compensation fees and jobs given to relatives of those involved (Hak et al., 2018; Sward, 2017). This lack of consultation and inclusion is well documented (see, for example, Nolte and Voget-Kleschin, 2014) and it can be the origin of a vicious circle of social conflict between investors and communities, as well as between community members, as observed by Bottazzi et al. (2016) in Sierra Leone but also beyond (Dell'Angelo et al., 2021; Juan et al., 2022).

3.2. Economic risks

Resources on and from communal land, such as farmland, firewood, and grassland, are often flexibly and temporarily assigned by local authorities (Fenrich et al., 2011) and are important safety nets and income-generating resources for local communities (Bekele et al., 2021; Oberlack et al., 2016). Large-scale acquisitions of communal land therefore involve similar socioeconomic risks as for LSLAs in general, which have been extensively documented in the literature. First, it is questionable that LSLAs in the agricultural sector will improve local food security. In principle, highly productive large-scale farms can lower local food prices and improve access to food. However, most of these farms do not produce food for local markets, but for export (Lay et al., 2021a).

Second, pastoralists and forest-dependent groups whose livelihoods often depend on communal land are unlikely to benefit from large-sale farms in terms of knowledge spillover. Furthermore, the evidence on spillovers to smallholder farms is mixed at best (Glover and Jones, 2019; Lay et al., 2021b; Minten et al., 2007). Lay et al. (2021a) also underline that large-scale infrastructure development in the wake of LSLAs did not happen.

Third, for employment, the literature suggests mixed but rather muted impacts (Lay et al., 2021a). The effects obviously hinge on the system that large-scale production replaces. If it replaces labour-intensive smallholder farms – which can be found on some communal land – LSLAs can negatively affect local labour markets. If communal lands are, however, characterised by extensive production systems with comparably low labour intensities, for example pastoral lands, few jobs would be lost and the net employment creation of LSLAs could be positive. However, numerous deals are not in production, or only partially, and while violating local land rights, they also do not contribute to economic development (Lay et al., 2021a).

Fourth, despite some potential positive employment creation, inequality and extreme poverty might increase in such circumstances since pastoralists and forest-dependent communities are often among the poorest and most marginalised groups in many regions (Newton et al., 2016; Vemuru et al., 2020) who may eventually not be the ones employed on large-scale farms. Baumgartner et al. (2015) find such heterogeneous effects for different groups within a community for a large-scale investment in rice production in Ethiopia.

Fifth, gender inequality might also increase. Decreased access to communal land may affect women disproportionately as they are frequently in charge of firewood and water collection (Deininger and Byerlee, 2011). Apart from the impossibility of extracting resources from territories converted into large-scale farms, empirical studies have found that fences around them increase the time required to collect water or firewood (Hak et al., 2018; Lanz et al., 2020). This decreases the time available to engage in any income-generating activities, thus reducing the resource they have control over (Hajjar et al., 2020).

3.3. Environmental risks

Today, it is widely recognised that local communities and indigenous people play an essential role in protecting important ecosystems (Gavin et al., 2015; Schwartzman et al., 2000). It is estimated that 36% of intact forests are within the land of indigenous peoples (Fa et al., 2020), and many of which are under communal tenure.[6] Turning communal land into large-scale investment projects thus carries environmental risks that are again determined by the type of land-use change, i.e., how sustainably the land was used by communities and how it is used by the investors when converted.

On the one hand, most of the investors recorded in the Land Matrix database acquire land to establish highly intensive agricultural production systems with high degrees of mechanisation, chemical input use, and/or irrigation. This has important repercussions for ecosystem functions, as more intensive agricultural production systems harbour less biodiversity in terms of aboveground and belowground species and whole-ecosystem multidiversity compared to less intensive production systems (Grass et al., 2020; Tscharntke et al., 2012). In addition, many crops that are cultivated on these estates are highly water intensive (Lay et al., 2021a).

On the other hand, while agricultural intensification reduces important ecosystem functions, the magnitude of the reduction depends on the characteristics of the prior land use on communal lands. Pastoral lands that are often under communal tenure have been shown to be valuable ecosystems with important synergies between biodiversity and

[6] Acknowledging this fact, the COP26 declaration recognized the important role of indigenous peoples in protecting forests and pledged US$1.7 billion in financial support to advance forest tenure rights of indigenous and local communities in tropical forest countries.

pastoralism (Dong et al., 2011; Notenbaert et al., 2012). Again, water matters, as communal lands often also include important water reservoirs. For instance, Tejada and Rist (2018) describe a case in Peru where an investor bought dry forest land (partly communal land) that was used for cattle grazing, gathering firewood, and collecting carob. The same investor acquired water rights to water from the nearby river threatening local water resources.

That communities and communal tenure can do a good job in protecting the environment is less obvious than it may seem from today's perspective. Some early studies on ecosystems and communal tenure argued that this tenure system is in general less likely to preserve important ecosystem functions. Hardin's (1968) tragedy of the commons' claims that community use of natural resources will lead to systematic overuse and degradation due the lack of excludability, an argument that is often followed by a call to establish individual ownership. The validity of this argument was soon questioned by the large number of examples of efficient and sustainable use of common-pool resources (Ostrom, 1990). The key insight from the latter literature is that communal land does not necessarily imply open access to land resources. Instead, land rights are controlled and allocated by distinct and exclusive groups (Boonzaier et al., 1990). Although there is no systematic evidence beyond case studies that compares the environmental outcomes of communal tenure systems with private and individual tenure, existing case study evidence refutes the notion that these tenure systems are bound to lead to environmental degradation (Powell, 1998; Sonak et al., 2012).

Such evidence suggests that communal lands can preserve important ecosystem functions if the traditional institutions are functional, serve the interest of the whole community, and avoid capture by villages elites. Still, communal land tenure arrangements may not be able to deal with large exogenous pressures, such as population and economic growth. Finding ways to maintain and potentially adapt communal land tenure systems (of indigenous peoples and local communities) can be an important element of policies intended to prevent further environmental degradation.

4. LSLA-induced pressure on communal lands: country level-evidence

Communal land rights are increasingly recognised and the area legally designated for and owned by IPLC and Afro-descendant Peoples increased by 103 million ha from 2015–2020 across 73 countries (Rights and Resources Initiative, 2023). However, there are important differences between regions and specific countries in terms of both legislation and effective implementation. Most countries in Latin America, for example, have since long granted local communities extensive and secure rights to communal land, including unlimited collective titles. In Africa, an increasing number of countries now recognise community-based ownership; yet, legal support is often limited, communities are unable to register effectively, and essential regulations and decrees are still missing. Actual progress in registration in Africa is driven by a few countries such as Kenya and Liberia (Rights and Resources Initiative, 2023). In Asia, there are quite diverse arrangements with a strong emphasis on social forestry schemes that only offer limited rights and community ownership is low compared to other world regions (Alden Wily, 2018; Dooley et al., 2022, Rights and Resources Initiative, 2023). To understand the implications of these different settings with respect to the identified risks, we examine three country cases from Latin America, South-East Asia, and Africa, respectively: Colombia, Cambodia, and the Democratic Republic of the Congo.

As we show below, the three selected cases have all been targets of large-scale land acquisitions for agriculture and forestry, but also for large-scale mining concessions. In the empirical analysis and for each of the three countries, we first assess the governance of communal land in legislative terms and regarding effective implementation. Second, we examine – to the extent possible with the limited available data – the overlap of LSLA with communal lands. Third, we provide evidence from selected cases on the negotiation, economic, and environmental risks associated with LSLA that affect communal land.

For our empirical analysis, we rely on the maps of communal land from Open Development Cambodia (2022) and LandMark (2022). LandMark is a global platform that provides spatial data on the location of the communal land of indigenous peoples and local communities.[7] For our analysis, we merge the location of LSLAs sourced from the Land Matrix with maps of communal lands.[8] We only use data on LSLAs for which either a polygon of the contract area or a precise point location is given. We therefore exclude deals with only approximate deal location information. In the case of point locations, we draw buffers calibrated by the contract size around the provided coordinates. We include intended, concluded, and failed deals in our analysis because we argue that LSLAs can affect the livelihoods of local communities at all stages of negotiation and implementation. We calculate the area of LSLAs that directly overlap with communal land and the area of LSLAs that lies within 1 km, 10 km, and 20 km of communal land boundaries, respectively. In all graphs below, we report cumulative figures. Therefore, the area of overlap is included, for example, in the area of LSLAs that is within 1 km.

4.1. Colombia

Officially, Colombia recognises communal lands with collective land titles granted to ethnic minorities. The constitution of 1991 established that collective titles of indigenous reservations are imprescriptible and inalienable (Articles 63 and 329). In 1993, claims to communal lands and the respective right to obtain collective titles were also granted to the Afro-Colombian ethnic groups (Law 70).[9] Although the collective titles of indigenous and ethnic minority groups are clearly delimited (see Fig. 1) and their protection is granted by the constitution, communities claiming communal land still face multiple challenges. First, despite the large area under collective titles, these titles do not always cover all areas that communities claim based on their ancestral rights. Estimates suggest up to 9.43 million ha of communal lands that are not legally recognized (Rights and Resources Initiative, 2023). Second, collective titles require the formal recognition of ethnic groups, which can be a bureaucratic and lengthy process.[10] Lastly, collective titles only offer protection within the demarcated areas. Land-use changes outside the territories that lead, for example, to decreased access to water reservoirs or the contamination of soil, air, or water within communal lands are rarely prosecuted. Overall, there are about 38 million hectares of land under collective titles, which is approximately one third of the national territory. Most of these areas are under the control of indigenous peoples (82%) while the rest belong to collective titles granted to Afro-Colombian associations (DANE, 2016). Current legislation requires that people or companies planning any economic activity verify that

[7] LandMark (2022) defines community land as "…lands that fall under the customary governance of the community whether or not this is recognized in national law. Community land is variously described as the community domain, community land area, community territory, or other terms." While the database defines indigenous land as follows: "Indigenous Lands or territories refer to the collectively-held and governed lands (and natural resources) of Indigenous Peoples. As with other community lands, some indigenous lands may be allocated with group consent for use by individuals and families."

[8] The LMI dataset includes only land deals that are negotiated in or after 2000. For the case of Colombia, the LMI dataset does hence neither include extensive monoculture of banana plantations in the north of the country nor illegal appropriations for oil palm plantations by paramilitary groups and narcotraffickers that occurred before the year 2000.

[9] However, the proper implementation of this law has not been completed after almost 30 years (White-Nockleby et al., 2021).

[10] The Rumiñawi community, for instance, had to wait approximately 20 years to receive their collective title after numerous legal processes (Agencia Nacional de Tierras, 2022).

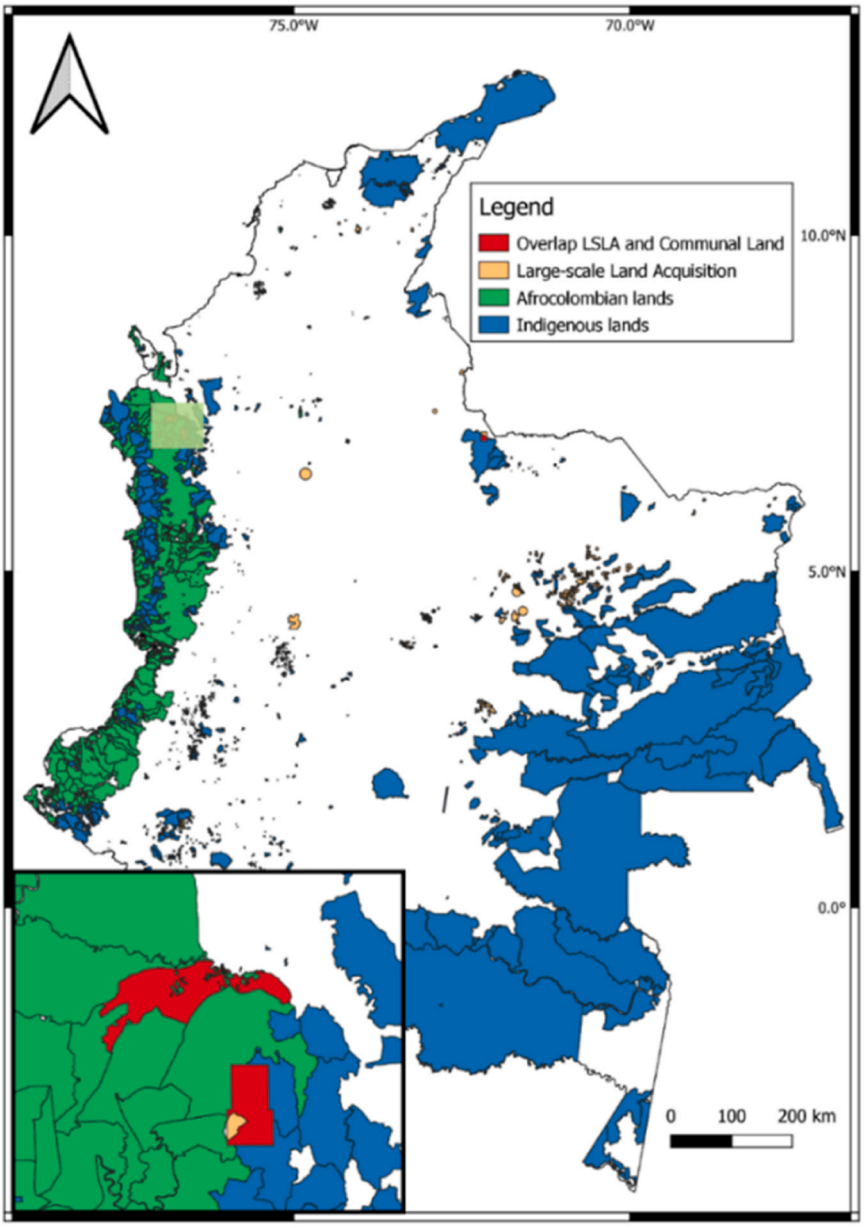

Fig. 1. Map of LSLAs and communal lands in Colombia. *Source: Land Matrix and LandMark data.*

there are no ethnic groups present in the affected area. If ethnic groups being present, a consultation process must take place.

Data collected by the Land Matrix Initiative indicate that 1580,184 ha were transferred for LSLAs between 2000 and 2022. [11] For deals with exact geolocations, we have data for 488,346 ha, reflecting the low transparency of LSLAs in Colombia (Fig. 2). This area is small compared to the 38 million ha of land under collective titles, which reflect the advanced formal recognition of communal land in Colombia. According to LMI data, there are only six deals that partly overlap with this collective land. The area of overlapping claims totals 53,369 ha, about half of which is associated with transnational investors. In relative terms, the much smaller collective titles of Afro-Colombian communities are significantly more affected by overlaps than indigenous communities, which could be related to the in general weaker protection of these areas compared to indigenous land. In general, the overlap area is relatively small, but large areas of LSLAs are in proximity to communal lands. Almost all recorded domestic and transnational LSLAs with exact geolocations are within a buffer of 20 km around some communal land accumulating to a total of 297,986 ha. This is because collective titles cover a substantial fraction of Colombian territory (Fig. 1). In addition to conflicts arising from overlaps, this suggests that spillovers from LSLAs could pose a significant problem in Colombia. Fig. 2 illustrates that transnational and domestic LSLAs occur in the proximity of communal land, but that the share of transnational deals increases disproportionately when considering larger distances. Although it is only indicative, this could suggest that transnational investments are less likely to encroach on communal lands.

Fig. 3 provides a breakdown of LSLAs in relation to their proximity to communal lands, categorised by their implementation status. About 50% of the LSLA area remains in the startup phase or lacks significant production activity, when we consider a buffer zone of 20 km, so there is a looming threat of indirect adverse effects if these deals come into

[11] The size is likely to be a lower bound, since land acquisitions unreported by media, research institutes or civil organizations are rarely covered. Data collection is also challenging in the context of Colombia's continuing internal conflicts that are linked to the concentration of land.

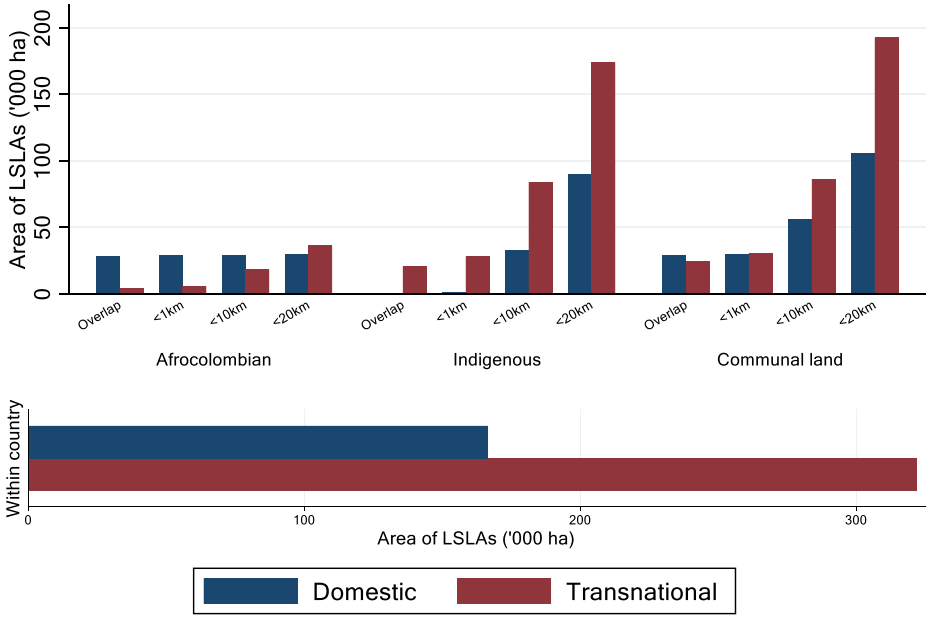

Fig. 2. Area of LSLAs in proximity of communal land by investor type (Colombia).

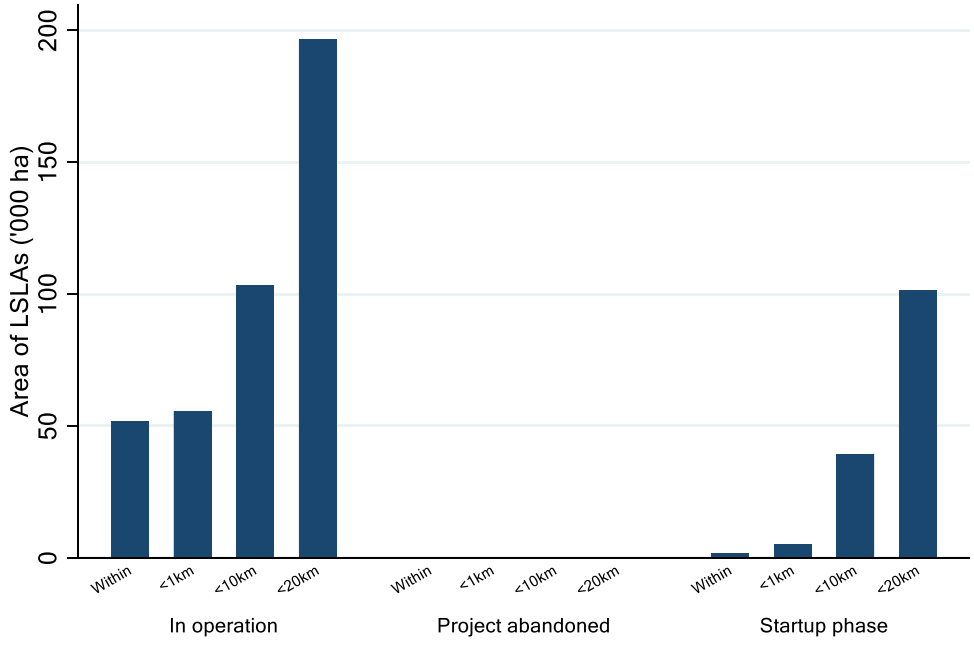

Fig. 3. Area of LSLAs in proximity of communal land by implementation status (Colombia).

operation. However, most deals overlapping with communal lands are already operational, as are those within a 1 km buffer. Concerning the intention of investment (Fig. 4), these deals that intersect with collective titles predominantly involve biofuel production and extractive industries, including oil palm plantations (Deal #806), copper and gold extraction (Deals #809 and #3103), as well as oil and gas exploration (Deal #805).[12] The importance of mining deals in proximity to communal land has two reasons: First, mining concessions typically cover very large areas for exploration. Second, these exploration concessions do not require consultation processes with communities, which only become mandatory when extraction starts. While agricultural production, except for biofuels, does not play a significant role in immediate proximity or within communal lands, LSLAs revolving primarily around agricultural commodities become the dominant investment in distances ranging between 10 to 20 km away from communal lands. These investments comprise inter alia the cultivation of oil palm, rice, and soybeans (see Appendix Figure A1).

Although communal lands are clearly defined and legally protected by the constitution, land conflicts related to LSLAs have occurred due to the poor implementation of consultation processes, or the lack of them.

[12] Number in parentheses refer to the identifier of the land transaction in the Land Matrix Database, where more specific details are available.

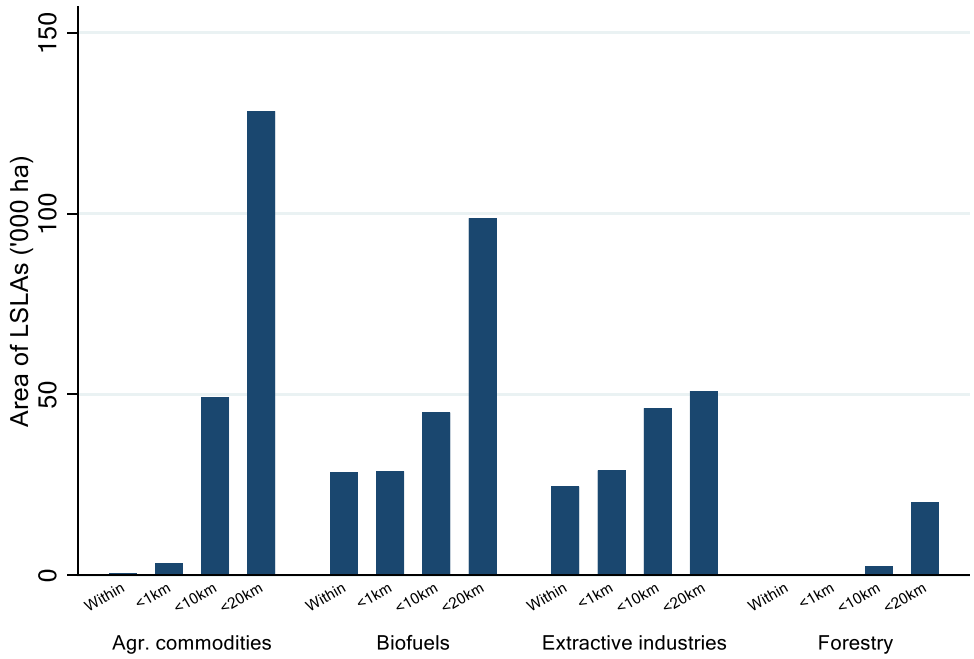

Fig. 4. Area of LSLAs in proximity of communal land by intention of investment (Colombia).

This is documented in three cases described in the Land Matrix database that underline the risks in Section 3.1. Overlapping and diverging claims by more than one community, uncertainties about the legitimacy of the negotiation counterparts, land-related corruption, and the related distrust of local communities in legal processes. In the first case, indigenous communities on the rivers Jiguamiandó and Curvaradó rivers dispute a 12,000 ha mining concession awarded to Rio Tinto for the exploration and future extraction of copper and gold (Deal #809). According to the communities, the consultation certificates were signed by people who do not live in their territories and apparently received bribes. In a second case, the U'wa community disputes the existence of a concession of almost 15,000 ha for the extraction of oil and gas (Deal #805). This concession was initially awarded to Royal Dutch Shell and Occidental Petroleum and was later transferred to Turkish Petroleum International and Ecopetrol. Indigenous communities refuse to participate in any consultation process because they argue that agreeing to these consultations would allow the companies to pretend that they have consulted affected communities and obtain the necessary certificate. Finally, a 10,000 ha concession awarded to Libero Copper Corporation for exploration purposes has raised opposition from three indigenous communities (Deal #3103). The Colombian government refused the communities' demand to decide through a referendum on copper extraction on their land and local community leaders received life threats. The company reports that it has reached an agreement with a neighbouring community. The environmental risks are, however, considerable, the extraction field could affect the main water source of almost fifty thousand people in the region.

4.2. Cambodia

Fig. 5 shows the three different forms of communal land in Cambodia, along with the LSLAs registered in the Land Matrix. Collective Land Titles (CLTs), created in the Land Law of 2001, were a first step in the protection of communal lands. The new law allowed indigenous peoples to apply for a collective title in territories intended to protect common resources, such as forests or water reservoirs, necessary for the livelihood of local communities. However, the implementation of this law has been insufficient. Of the approximately 450 indigenous groups around the country, only 33 have been recognised and granted a collective land title (33,899 ha), whereas 150 have been only recognized and are still waiting for the official transfer of title deeds (OHCHR Cambodia, 2020; Open Development Cambodia, 2021). A second instrument for the protection of communal lands are Community Forestry Schemes (CFS) established in the Forest Law of 2002. Under this mechanism, land remains the property of the state, but CFS shift the responsibility of forest management to local communities to protect the social and economic returns from forest production, as well as preserve the ecosystem functions of forests. However, these schemes face important obstacles. The communities must be registered by the respective Forestry Administration, which is a bureaucratic process and can take several years. Furthermore, many communities do not have access to CFS, as they can only be implemented in forest reserves assigned for production purposes but not protected areas (Lambrick et al., 2014; Oberndorf, 2006). The third form of communal land tenure refers to Community Protected Areas (CPA), created under the Protected Area Law of 2008. It enables local communities to administer common resources in protected areas. Within protected areas, these community zones are those territories with the least ecological preservation. In 2022, there were 182 CPA that comprised almost 310,000 ha of land. Apart from the benefits of extracting resources, communities lack tenure security within these schemes, as they cannot exclude outsiders. Additionally, the legal establishment of new CPAs is again highly complex (Sath et al., 2022). The area under CPA and CFS covers approximately 800,000 ha and 1400 villages (Hing and Riggs, 2021), which is much more than the 33,899 ha of land under collective land titles. The extent of secure titles that allow extensive ownership and with tenure security is hence extremely limited.

Cambodia has been a major target country of LSLAs. Endowed with relatively abundant natural resources, a state that owns most of the country's territory, and a conducive institutional environment established in the Land law of 2001, the country witnessed the transfer of large concessions to investors. The Land Matrix database has recorded in total 2318,478 ha of land transactions, most of them exactly geo-located (2117,779 ha, see Fig. 6).[13] Domestic deals accumulate to a total of

[13] Other studies estimate about 2277,000 ha since 2000 (Magliocca et al., 2020).

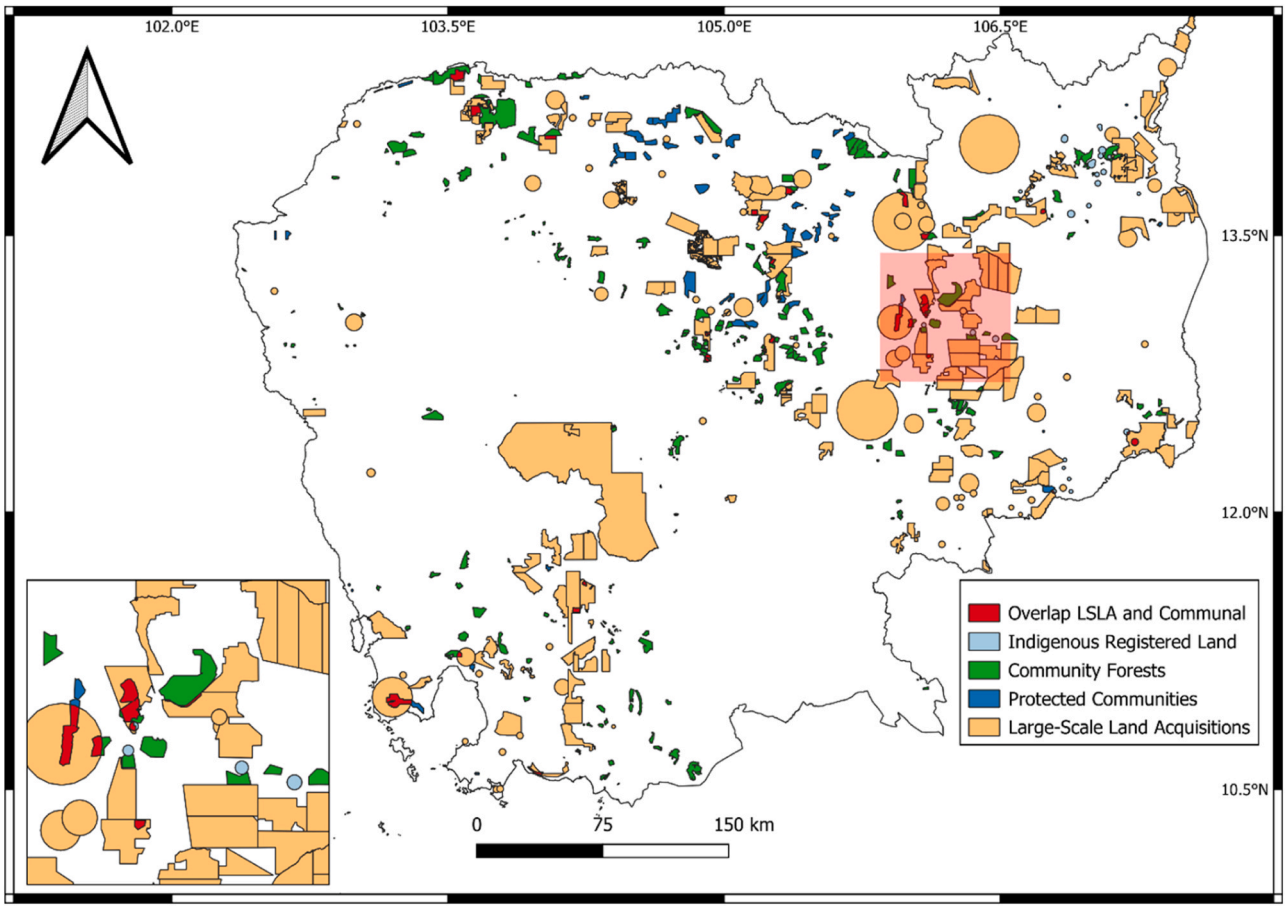

Fig. 5. Map of LSLAs and communal lands in Cambodia. *Source: Land Matrix and Cambodia Open Development data.*

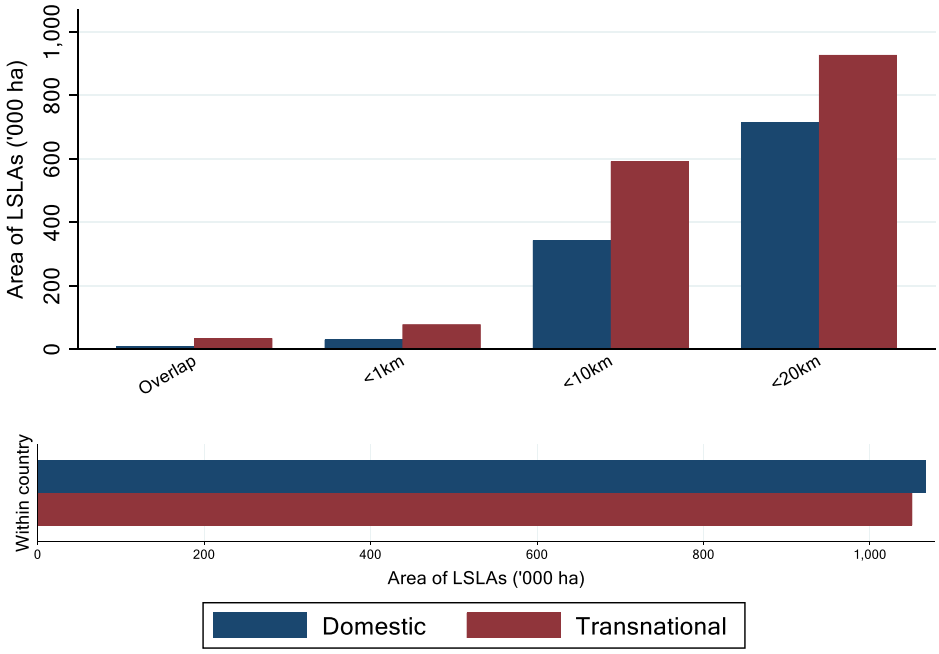

Fig. 6. Area of LSLAs in proximity of communal land by investor type (Cambodia).

1067,020 ha, while transnational deals reach 1050,779 ha. These numbers illustrate that, unlike Colombia, LSLAs by far outsize the formal communal land in Cambodia. However, the area of overlap of LSLAs with formal communal lands is small with 43,150 ha (Fig. 6). In relative terms, about 2% of formal communal land overlaps with LSLAs. This suggests that although most formalised communal lands in Cambodia

are not directly affected by LSLAs, some formally protected land is encroached in practice.

We also acquired data on the location of territories belonging to indigenous communities, which are officially recognised by the government, but have not yet obtained formal collective titles. An analysis considering only these communities – which did not yet attain collective titles – shows that among the total of 58 such communities almost a third are situated within the confines of LSLAs. Although more extensive and detailed data are missing, this suggests that, in contrast to formalized communal lands, the extent of total overlaps between informal communal lands and LSLAs could be considerable, in particular since some estimates suggest 1.68 million ha of unrecognized communal lands in Cambodia (Rights and Resources Initiative, 2023). However, negative impacts of LSLA on communities and their land may not only arise in the case of direct overlaps: up to 1,7 million ha of LSLAs are located within a 20 km buffer zone from the boundaries of collective territories (Fig. 6).

The direct effects and potential spillovers of LSLAs depend – inter alia – on the implementation stage of the respective project. Generally, most LSLAs within communal lands are operational: almost 23,571 ha are under production compared to 8560 ha without registered production (Fig. 7). Data from the Land Matrix show the substantial order of magnitude of LSLA in Cambodia that have been put into operation since 2000. Almost 1 million ha (981,000 ha) of LSLAs with actual production on site are in proximity of communal land (in the range of 20 km) and another up to 365,000 ha are in the pipeline, i.e. in the start-up phase.

In many cases, even the LSLAs under operation are unlikely to contribute to local food security. While Fig. 8 shows that most deals are for agricultural production, further disaggregation shows that these are rarely food crops but rather agricultural non-food commodities such as rubber or acacia plantations for timber production, destined for export markets (Figure A3 in the Appendix). Investments to produce biomass for biofuel production are of lesser importance and accumulate to 70,706 ha in the vicinity of 20 km, respectively.

Although Cambodia officially allows for the legal recognition of communal land, conflicts still regularly occur due to the limited implementation and action on the ground that diverts from statutory law. For example, Cambodia's first large-scale reforestation project with 34,007 ha by the company Think Biotech was officially designed for carbon sequestration and reforestation by establishing a sustainable production forest (Deal #3554). On the ground, however, various forests ended up being logged and converted to acacia monocultures and the land rights of indigenous people and local communities were violated (Scheidel and Work, 2018). The project was established close to Prey Long, one of the few remaining lowland forests in Southeast Asia, where indigenous Kuy and Khmer farmers practise shifting cultivation. According to the communities, no adequate prior consultation took place and communities saw their livelihoods threatened as communal lands for farming, including shifting cultivation, were lost. Even officially protected areas in the Prey Long forest that also include land claimed by local communities for cultural purposes are not safe from deforestation. A recent concession led to the logging of vast areas of forest within the protected area, even so the concession was awarded for a feasibility study for limestone mining. The timber was then sent for laundering through sawmills located in the reforestation concession of Think Biotech (Flynn et al., 2022). These examples document again the risks in negotiations processes, which result from the discrepancies between established instruments and processes, such as protected areas, and actual conduct on the ground by companies. They highlight the economic vulnerability of marginal groups whose land rights are not effectively protected.

4.3. *Democratic republic of the Congo*

Contrary to the Colombian and Cambodian cases, the DRC has no specific and clearly outlined legal forms that involve the clear demarcation of communal lands for their protection. Land governance in the DRC reflects a state of legal pluralism, resulting from customary pre-colonial arrangements, legal frameworks imposed in the colonial period, and the state ownership of all land introduced in the Land Act of 1973 (Samndong and Vatn, 2018). Statutory laws are mainly applied in urban and peri-urban areas and approximately 70% of the country is managed under customary land tenure systems (Huggins, 2015). The Land Act of 1973 allows the government to grant two types of land concessions, yet land remains under property of the state. Perpetual concessions are only granted to private Congolese. Standard concessions are generally granted for 25 years to nationals or foreigners and are concentrated in urban areas or highly productive rural territories (Samdong and Nhantumbo, 2014). Even though reforms of national land policies have been

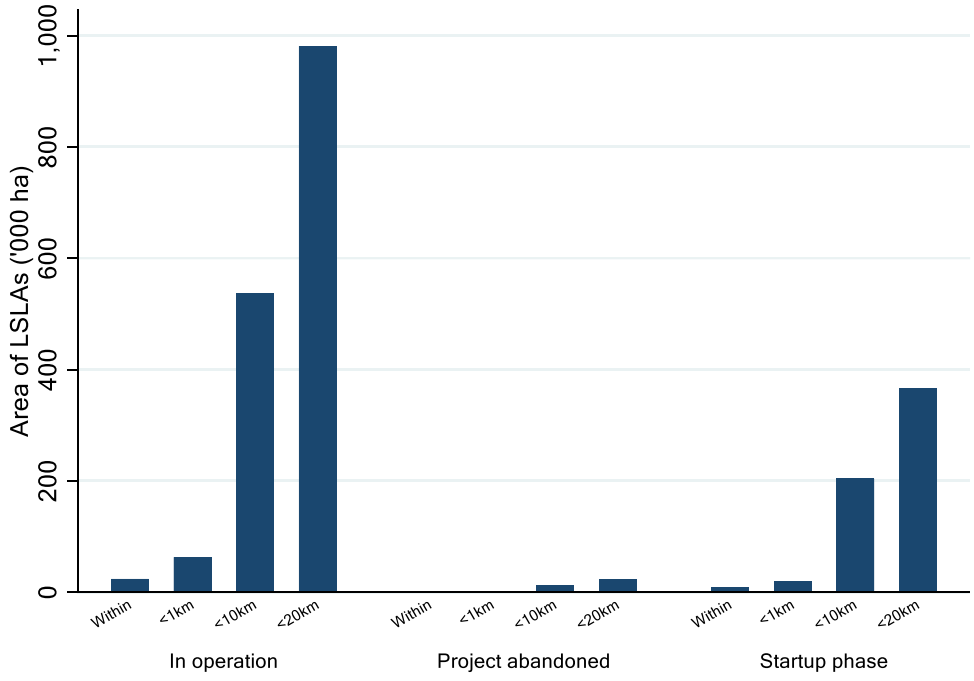

Fig. 7. Area of LSLAs in proximity of communal land by implementation (Cambodia).

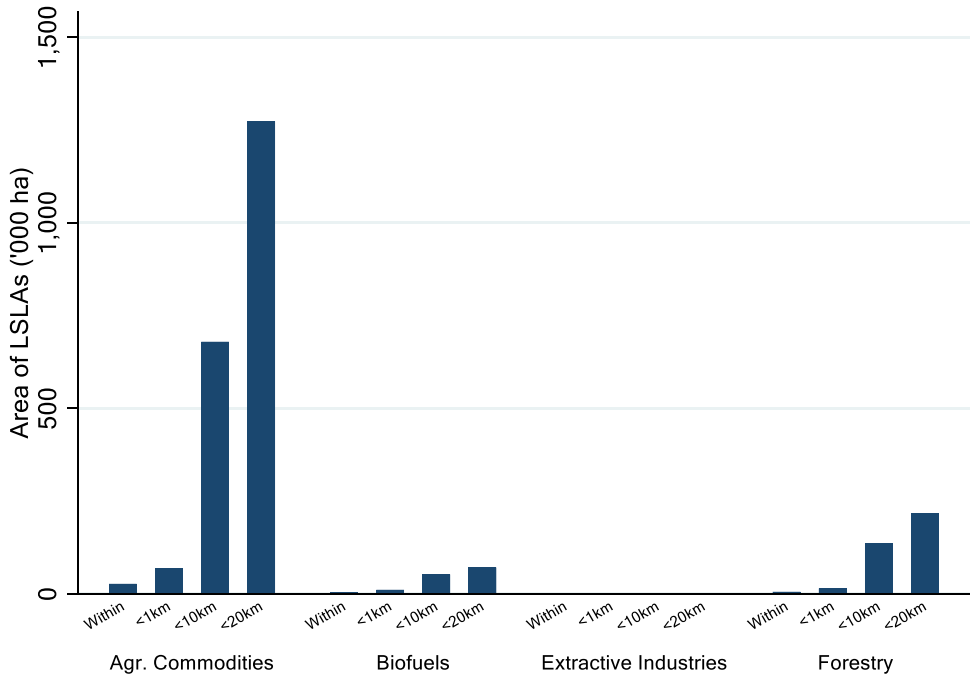

Fig. 8. Area of LSLAs in proximity of communal land by intention of investment (Cambodia).

discussed for a decade, no clear procedure exists for the protection of communal land under customary land tenure systems in the DRC. While local community forest concessions have been granted since 2017 that cover about one million ha of land, the absence of operational guidelines is a major obstacle to the effective implementation (Rights and Resources Initiative, 2023). A law enacted in 2022 for the protection and

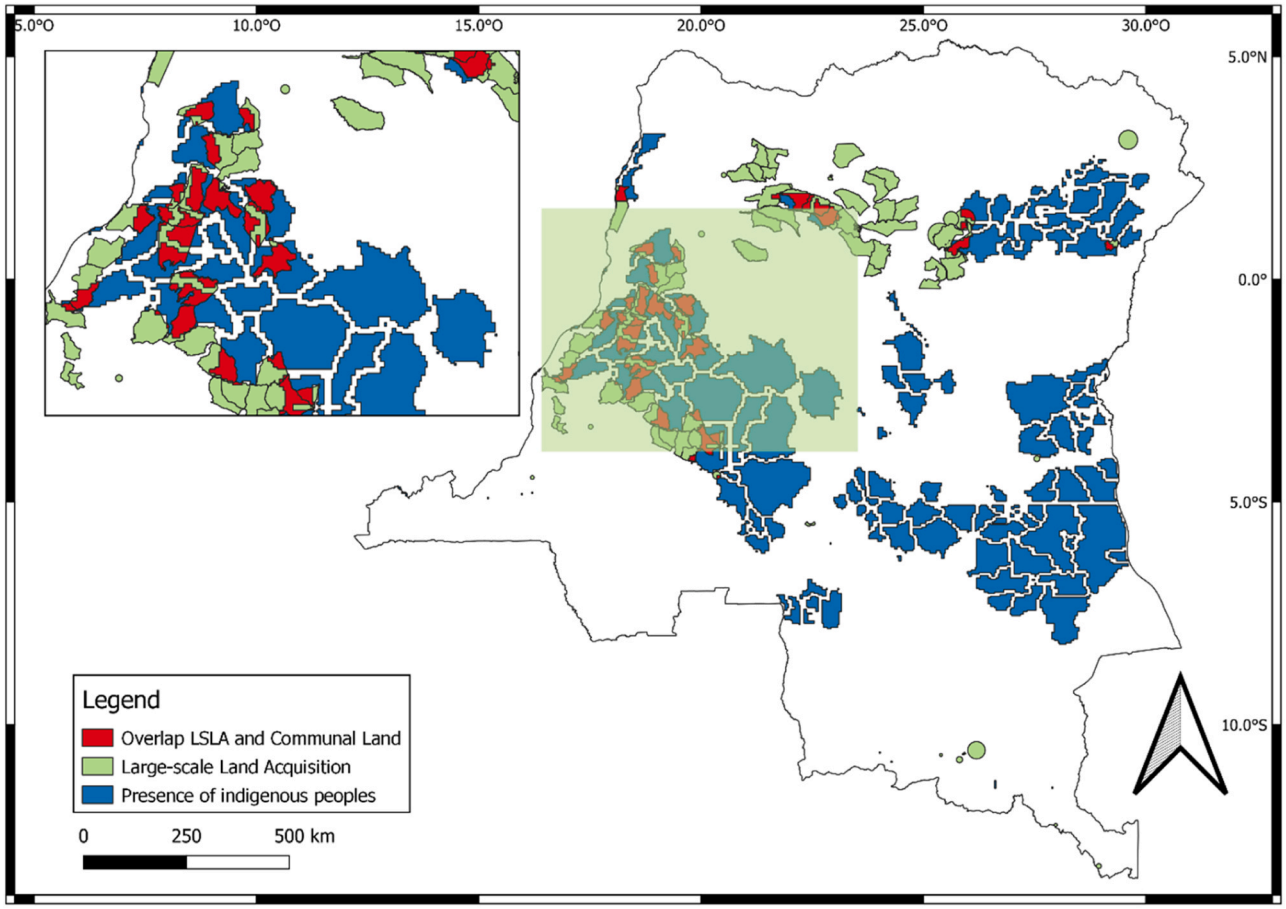

Fig. 9. Map of LSLAs and communal lands in DRC. *Source: Land Matrix and LandMark data.*

promotion of indigenous Pygmy peoples recognizes their access to land and strengthens the existence of customary land tenure systems (République Démocratique du Congo, 2022). However, this policy also does not create collective titles to effectively protect the land rights of local communities. The distribution and access to land remain hence de facto under the control of local chiefs (Samdong and Nhantumbo, 2014).

In recent years, the DRC has become an important target of LSLA in Africa. These land deals cluster in the sparsely populated western and northern regions of the country (Fig. 9). However, although these deals are located in areas with low population density, they are likely to affect communal lands which are common in these regions (Huggins, 2015). According to Land Matrix data, approximately 14.2 million ha of land in the DRC are destined for LSLAs (13.3 million ha covered by deals with exact geolocation). Domestic deals accumulate to a total of 2.5 million ha, while transnational deals reach almost 11 million ha (Fig. 10).

Fig. 10 shows the distribution of communal land in the proximity of LSLAs in the DRC. In contrast to Colombia and Cambodia, there are no clearly demarcated formal communal lands in the DRC. Therefore, the map depicts the second-level administrative divisions of the DRC (territories) with known presence of indigenous peoples. Using these administrative boundaries as a proxy for communal land, we find a substantial overlap between communal land (so defined) and LSLAs. This overlap amounts to 3.28 million ha, of which 2.33 million ha are transnational deals. These figures have, however, to be interpreted with caution, since our procedure overestimates the amount of land on which these communities have legitimate claims for. Using data from extensive mapping exercises in one territory, we find that communal lands cover almost a third of the total area in the respective territory.[14] Assuming similar fractions in other territories, it is possible that LSLAs overlap with close to one million ha of communal land in the DRC.

The extent of overlap – although measured with uncertainty – is alarming and by far outsizes the overlaps of 53,369 ha for Colombia and 43,150 ha for Cambodia. The overlaps are also comparably large in relation to the size of LSLAs that are outside of the regions with communal lands but in their proximity. In total, 6.85 million ha of LSLA are within the range of 20 km.

However, not all these deals are yet fully operational (Fig. 11). In regions with communal land, only about 1 million ha are in operation, while about a quarter of the area of all deals within regions with communal land are actually abandoned. This reflects the difficult investment climate in the DRC, but potentially also conflicts around land rights. Including also deals within a proximity of up to 20 km yields 2.3 million ha LSLAs in operation, 3.1 million not yet productive, and 0.9 million ha already abandoned.[15] This high share of failed deals is in line with the general patterns of LSLAs in Africa (Nolte, 2020), but should not be interpreted as communal lands being saved from the direct impacts of LSLAs. On the contrary, our review of the literature underscores the manifold risks that negotiations pose to communities, even in cases where investments have eventually failed to materialise. Additionally, the large scale of LSLAs in the start-up phase suggests that a significant number of negative impacts are still to be expected.

The intention of investing in DRC is clearly different from the previous patterns (Fig. 12). Most of the land is acquired as logging concessions to extract timber (Figure A4 in the Appendix), with approximately 3.3 million ha directly overlapping with districts where indigenous people live.[16] While still threatening local land rights, these logging concessions may not always imply a complete disruption of previous land uses, since these vast concession are only partly under production and companies often only selectively harvest the most valuable tree species (Kranz et al., 2018). Other sectors are marginal compared to the forestry sector: only 6000 ha of land were acquired for agricultural production and mining within territories of indigenous peoples. When considering proximities of 20 km from collective territories, this area increases to almost 50,000 ha, a non-negligible amount, but still much less compared to the land under logging concessions.

Two land transactions, one involving a transnational company and the other a domestic one, illustrate the risks that LSLAs imply for local communities in DRC. The first refers to an oil palm project of more than 100,000 ha acquired from Unilever in 2008 by Feronia Inc., a Canadian company (Deal #1999). During the past decade, community members have repeatedly protested against this project, citing two main concerns: the absence of consultation and the expropriation of their ancestral lands. However, their legitimate grievances have often been met with police intimidation and even arrests. Despite the creation of jobs in the project, the quality of the jobs is generally poor. Few actual members of the community are employed, wages are relatively low, work safety is limited, and no permanent contracts are offered. The second case relates to a land acquisition by Somicongo, a domestic company that initially managed almost 300,000 ha for forest logging and currently for carbon sequestration (Deal #8906). As reported in the previous case, the labour conditions have been poor. For example, employees report that their salaries had not been paid for more than a year. Communities also report land conflicts due to inadequate consultation. They argue that the company never informed them about the shift to carbon sequestration under the Reducing Emissions from Deforestation and Forest Degradation (REDD+) framework. Furthermore, communities resent the poor representation of their claims by local authorities. Therefore, an informed decision on the land deal was hence not possible for the local communities. The lack of consultation and general protection of communal land in DRC also explains the excessive scale of both land deals, which would not have been possible in countries with formalised communal land. Both cases also reflect the problem of very limited if not negative adverse socio-economic impacts, here the generation of few low-quality jobs for local people.

5. Policy recommendations

Several acknowledged voluntary guidelines exist that include guiding principles for large-scale acquisitions of communal lands. This includes the Principles for Responsible Agricultural Investment (PRAI) that cite the formalisation of land rights including the ones of communities as a necessary precondition to engage in negotiations with investors (FAO, 2010). The Principles for Responsible Investment in Agriculture and Food Systems (CFS-RAI) also provide guidance on regulating large-scale land acquisitions, but take a less business-orientated approach (FAO, 2014). In most cases with respect to customary tenure, the CFS-RAI reference, however, the VGGT as guiding document.

With its commitment of governments, private sector actors, and civil society, the VGGT represent potentially the most important global framework on land tenure and, by extension, on communal land tenure (FAO, 2022a; Myers and Sanjak, 2022). The VGGT declare that states

[14] The actual size of land under communal tenure may differ from the area of an administrative unit. For instance, the westernmost territory with a known presence of indigenous peoples has an area of almost 15.4 million ha. A study by The Rainforest Foundation UK, MEFP, CADEM, GASHE, RRN (2015) which mapped communal lands with the support of local communities indicates that these land amount only to an area of 4.2 million ha in the territory. While this shows that the size of communal lands is considerable, we overestimate the actual overlap by a factor of 3.7 in this respective territory. The study has not been implemented at national level.

[15] According to the Land Matrix data, there are, approximately, 200,000 ha of LSLAs within communal territories with no information regarding implementation status. This number increases up to 370,000 ha with a buffer of 20 kms from collective areas.

[16] The area of overlap increases to more than 6 million ha when considering a distance of 20 km between LSLAs and communal territories, as Fig. 12 shows. Magnitudes of overlap in this case are considerably large due to the lack of exact boundaries of collective lands.

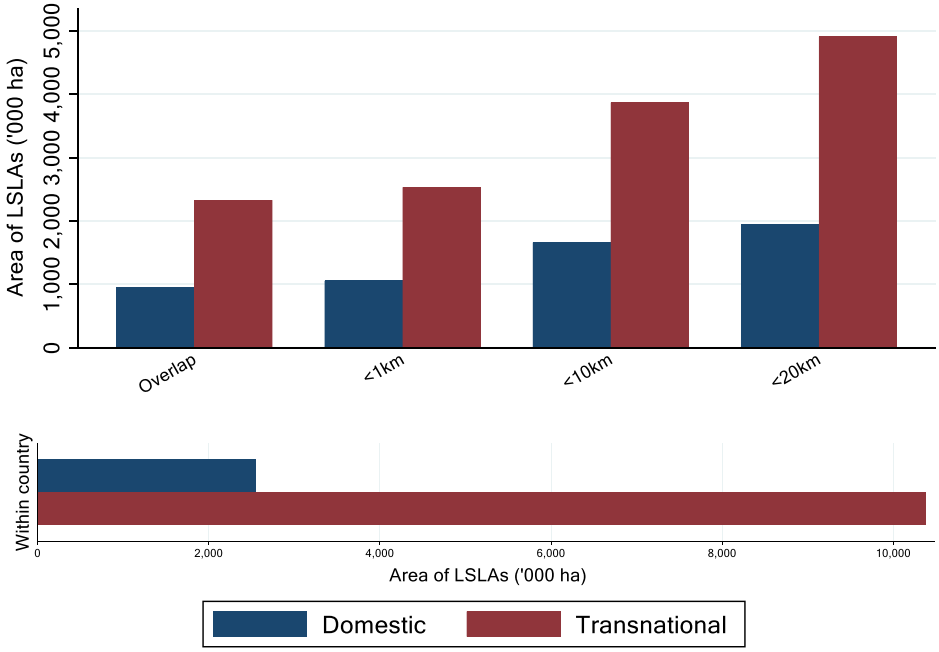

Fig. 10. Area of LSLAs in proximity of communal land by investor type (DRC).

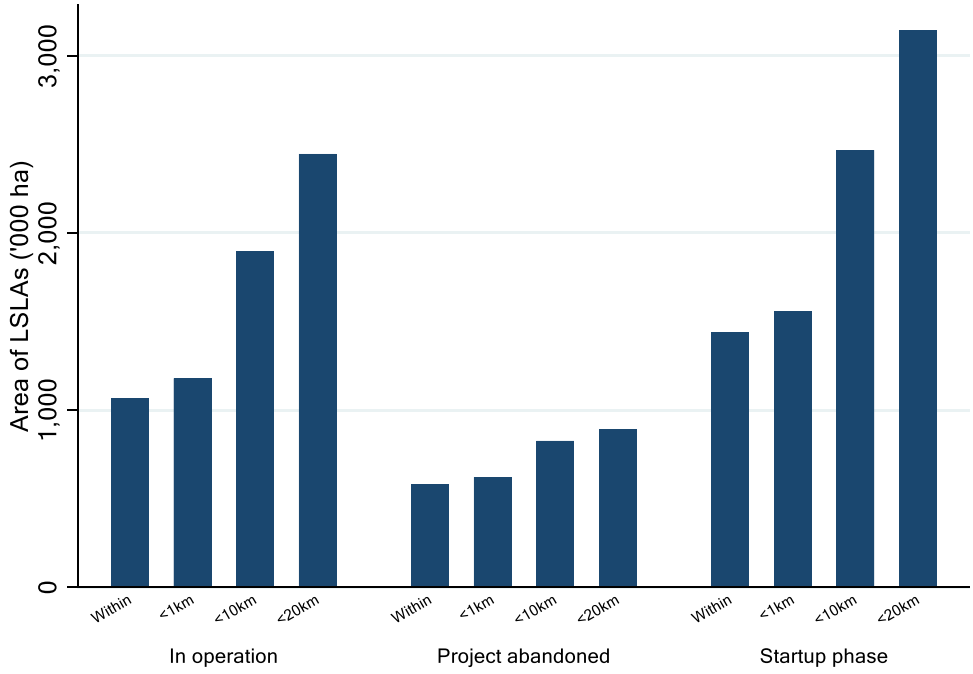

Fig. 11. Area of LSLAs in proximity of communal land by implementation status (DRC).

should identify all existing tenure rights and right holders, whether recorded or not (Article 7.3), an ambition that in particular countries such as the DRC fall short of. In addition, the VGGT demand, where possible, legal recognition of the land rights of individuals, families, and communities (Article 7.4).[17] Aside from state responsibilities, the guideline emphasises that responsible investments should not cause harm, safeguard against expropriation of legitimate owners of tenure rights and environmental damage, respect human rights, and ensure that

[17] Inventories are also recommended that record the agencies responsible for administration as well as any legitimate tenure rights held by indigenous peoples and other communities with customary tenure systems (Article 8.4). To this end, state agencies should assist to formally document and publicize information however under the condition that communities do not object (Article 9.8).

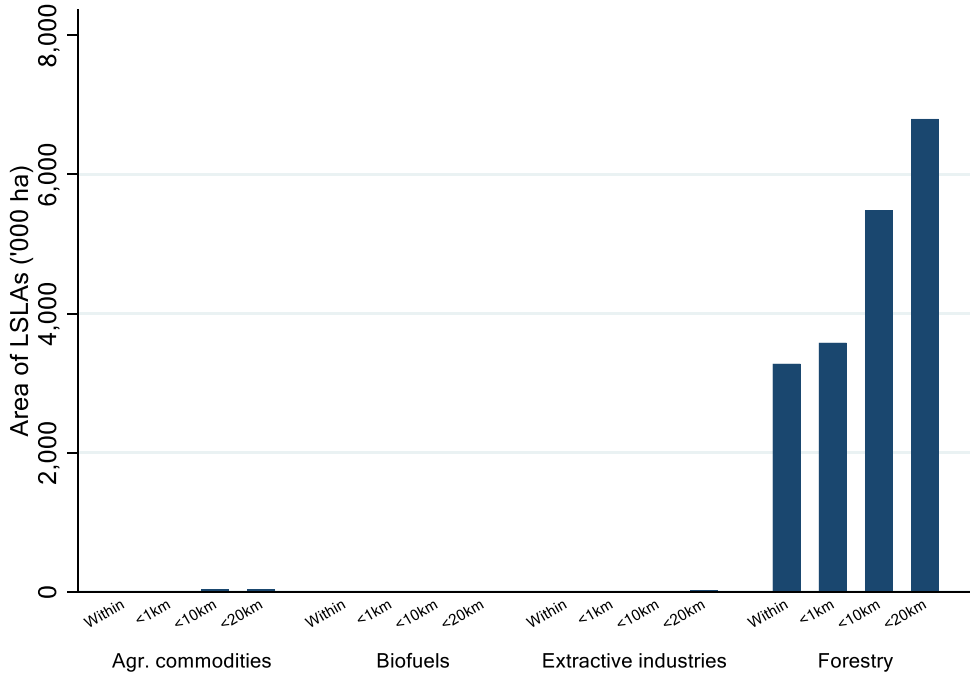

Fig. 12. Area of LSLAs in proximity of communal land by intention of investment (DRC).

affected communities are consulted (Chapter 12).

Several measures are in place to increase compliance of today's national land governance systems with the VGGT. Among the various instruments described in Section 4 for Colombia, Cambodia, and the DRC, social forestry schemes that allow community forest management, but only provide limited rights and protection, have gained traction, in particular in Asia (Rakatama and Pandit, 2020), as have collective titles in Sub-Saharan Africa (Alden Wily, 2018; Chimhowu, 2019). However, the formal recognition of communal rights should not be seen as panacea to land issues in the context of rural development due to the multiple problems that also plague customary systems that govern communal land. A recent example of some important innovations can be found in the new Customary Land Rights Act 2022 of Sierra Leone, which regulates the management of communal lands that were under the custodianship of local chiefs. The customary laws that governed these lands were widely criticised for being discriminatory against certain groups of people based on ethnicity, gender, and age. Furthermore, they often failed to protect the rights of local landowners and communities facing LSLA. In response to criticisms, the new law determines that landowners not only have the right to be consulted in case of land-based investments but need to consent. Further, the inclusion of women is key in the new legislation demanding, for example, written and informed consent of at least 60% of the male and female members of the family before a land transaction can be executed (FAO, 2022b).[18] The VGGT played an important role in informing Sierra Leone's land governance reform.

An additional leverage point for the better protection of communal land rights in the context of LSLA are global supply chains. The majority of the land deals referred to in this paper eventually produce agricultural and non-agricultural commodities that enter global supply chains. This also places a responsibility on importing industries and countries. Several new regulations in high-income countries already do or will soon require companies to adhere to human rights and environmental due diligence (HREDD) in their supply chains. If HREDD laws are effectively enforced, downstream industries, including manufacturers and retailers, will have to monitor and address socioeconomic and environmental risks arising from LSLAs in communal land. However, community-based information often lacks influence and often does not reach the responsible entities. In addition, companies will struggle with compliance and upstream sources that provide incomplete and unverified data, in particular in light of the legal pluralism and competing claims that often exist in these regions. Still with improved communication and support for local CSOs and affected communities, the HREDD law could play a major role in minimising the risk of LSLAs in communal lands.

Both land policy reforms and supply chain regulation need better data to raise awareness, assess risks, and monitor policy outcomes. Empirical analysis of Land Matrix and LandMark data shows that a substantial improvement in the quality and quantity of available data is needed to fully assess the extent of the environmental and socioeconomic risks of LSLAs in the context of communal land. The location and extent of communal lands, for example, lack accurate documentation. In the case of the DRC, only administrative units with confirmed presence of indigenous populations are identifiable. Colombia and Cambodia have spatial data on formalised communal lands, but complete maps of the location of communal land under customary tenure regimes are missing.[19] While investment in regions with the presence of communal lands should receive particular scrutiny under the framework of the HREDD law or the VGGT, the current availability of data suggests considerable challenges for risk assessors in the private sector.

Data also remain scarce for LSLAs despite the efforts of the Land Matrix. The chronic lack of transparency has led to incomplete data on LSLAs in some countries. In addition, not all recorded LSLAs have been mapped with precise boundaries, and of those with point locations, some only indicate an approximate location. This underscores the necessity for government bodies to enforce the disclosure of transparent and open data by companies and investors regarding LSLAs. Better data could also

[18] In addition, the law establishes local land committees that manage communal lands with a quota of at least 30% women (FAO, 2022b). These reforms also explicitly diminish the power of local chiefs that were often blamed for an exclusive and corrupt management of communal lands.

[19] Also, in the case of other countries that were not analyzed such as Indonesia only point locations are available which impede precise estimates on overlaps between communal lands and LSLAs.

support local communities and CSOs in assessing and potentially addressing threats from land-based investments to their territories. Yet, even examples of countries with relatively good spatial data on LSLAs such as Cambodia show that data transparency is not a mean by itself. The actions of the Cambodian government concerning community land titling and transparency are often disregarded as being only political show cases, while actual conduct on the ground remains largely unchanged (Dwyer, 2015; Loughlin and Milne, 2021).

We acknowledge that potential solutions can be also found in technological innovation in land administration. While the usage of mobile applications, drones, and remote sensing is far from new - albeit consistent implementation is still lacking - even blockchain technologies for land administration are piloted in the Global South (Makala and Anand, 2018; Stöcker et al., 2022).[20] However, if the technologies are deployed within deficient legislative frameworks, they are unlikely to contribute to more equitable and secure land governance. Second, experiences from, for example, Ghana show that the actual implementation is often far from initial aspirations (Ameyaw and De Vries, 2023). Finally, while many technologies claim to reduce per-unit costs of land registration, minimize processing time delays, and enhance the accuracy and consistency of land records, it is crucial to note that registering extensive communal lands should inherently be more cost-effective and swift compared to registering numerous smaller private plots. The bottleneck in this context is more likely rooted in the willingness of political elites to share power over land and the need for a consensus among communities regarding borders and ownership. These challenges are complex social and political issues that are unlikely to be fully addressed by technological solutions alone.

6. Conclusions

This article conceptualises and empirically assesses the socioeconomic and environmental risks of LSLAs for communal lands in the Global South. These risks include displacement of local communities due to insufficient formal recognition of communal land and defunct negotiation and consultation processes of communities with investors who frequently exploit the legal pluralism inherent in these tenure systems. Furthermore, LSLAs often imply the loss of important ecological and socioeconomic functions that communal land holds for local communities across the world. This includes, among others, the collection of forest products, grazing ground for cattle, water resources, and spiritual and cultural functions. Among users of communal land, these risks are even more pronounced for already marginalized groups such as women and ethnic minorities.

We analyse spatial data on LSLAs and communal lands for three exemplary countries that reflect the different stages of recognition of communal land in three major world regions, Latin America, sub-Saharan Africa, and Southeast Asia. In the case of Colombia, where communal lands are relatively well documented and protected, we still identify overlaps and conflicts resulting from deficient consultation, primarily linked to extractive industries. Similarly, in the case of Asia, Cambodia formalises communal lands, but the actual extent of collective titles remains limited, and the dominant social forestry schemes in the country (and beyond) provide only restricted land rights and limited protection. This leaves local communities with much less and less well-protected land. In addition, the actual conduct of investors on the ground often diverts from statutory law, leading to frequent land conflicts. For both Cambodia and Colombia, most LSLAs are in proximity to communal lands, and potential risks could also derive from spillover effects such as threat of water reservoirs or decreasing regional biodiversity. In our analysis, the DRC surely the most problematic case with potentially close to one million ha of overlap between LSLAs and regions with communal lands. Therefore, thousands of hectares of communal land could be exposed to the environmental and socioeconomic risks we have described with almost no effective safeguards in place to address them.

Our analysis underscores the existence of many and severe socioeconomic and environmental risks inherent in the acquisition of communal land and that these risks exist for large tracts of land across the world, with the DRC as a hotspot. The formalisation of communal land is one potential measure to limit the direct risks from LSLAs, and it is not surprising that Colombia with formalised communal lands covering almost a third of its national territory was targeted to a lesser extent by LSLAs. However, formalising communal land does not come without its own risks, as evidence points to severe equity issues in customary tenure systems. The chances of governments globally transferring significant authority over land to local communities, as observed in many Latin American countries, remain also low. In addition, not all countries around the globe engage with the VGGT and are willing to reform national land policies accordingly and effectively. Recognising the limitations of national legislation in target countries, new supply chain regulations such as the HREDD law may complement and support efforts at the national level to mitigate and prevent risks related to large-scale acquisitions of communal land. This could be a viable approach, as many of these investments are intended to produce commodities for the global market. However, to protect communal land from land grabbing and to ensure equal and just access to land within these tenure systems, actual conduct on the ground remains a critical challenge. If progressive land policies modelled on the VGGT are not implemented or claims from local communities do not reach responsible downstream industries, legislative progress will not translate into better outcomes on the ground.

CRediT authorship contribution statement

Rincón Barajas Jorge A.: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Kubitza Christoph:** Writing – review & editing, Writing – original draft, Validation, Methodology, Data curation, Conceptualization. **Lay Jann:** Writing – review & editing, Writing – original draft, Supervision, Conceptualization.

Declaration of Competing Interest

All authors declare that they have no conflicts of interest.

Data Availability

The data are from open data platforms such as the Land Matrix and LandMark that are accessible without restrictions. Data are described in the paper.

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[20] Blockchain technologies, for example, can address the pervasive lack of transparency, asymmetric information, and affiliated elite capture in the management of land records, which also includes communal lands. In addition, blockchain technology can enable multi-signature transactions that require the consent of several parties, which could be, for instance, women or other vulnerable groups that are often neglected in transactions involving communal land (Makala and Anand, 2018).

Appendix

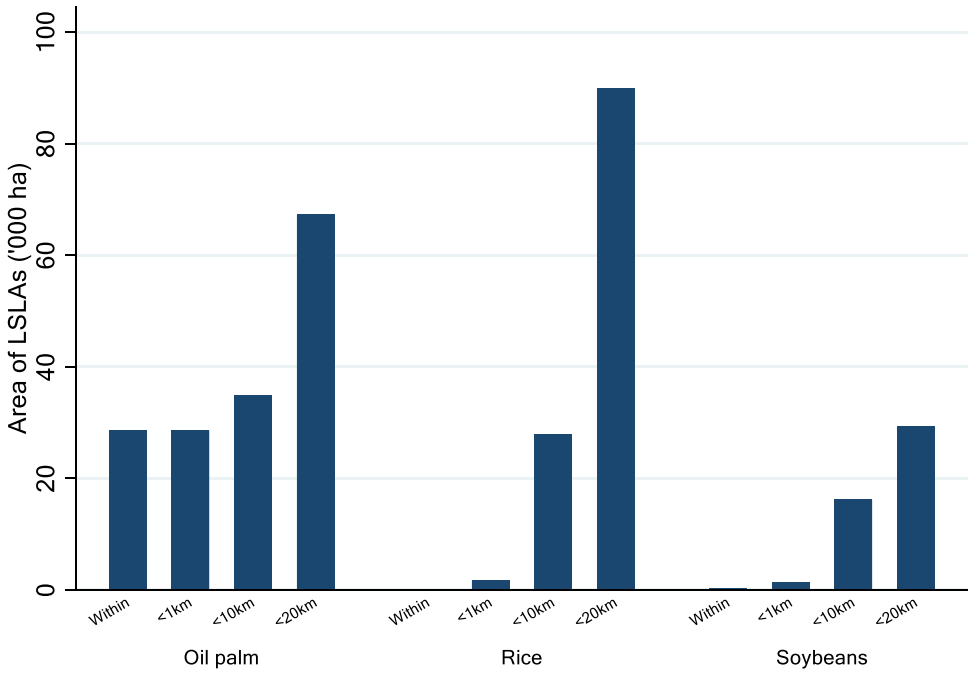

Fig. A1. : Area of LSLAs in proximity of communal land by main crops in Colombia.

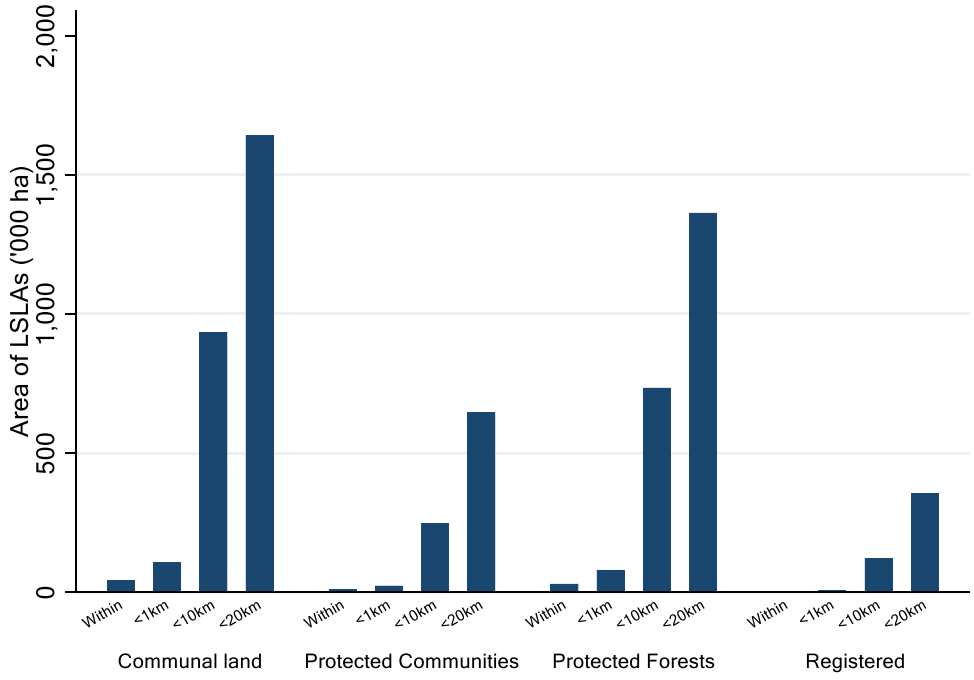

Fig. A2. : Area of LSLAs in proximity of communal land by type in Cambodia.

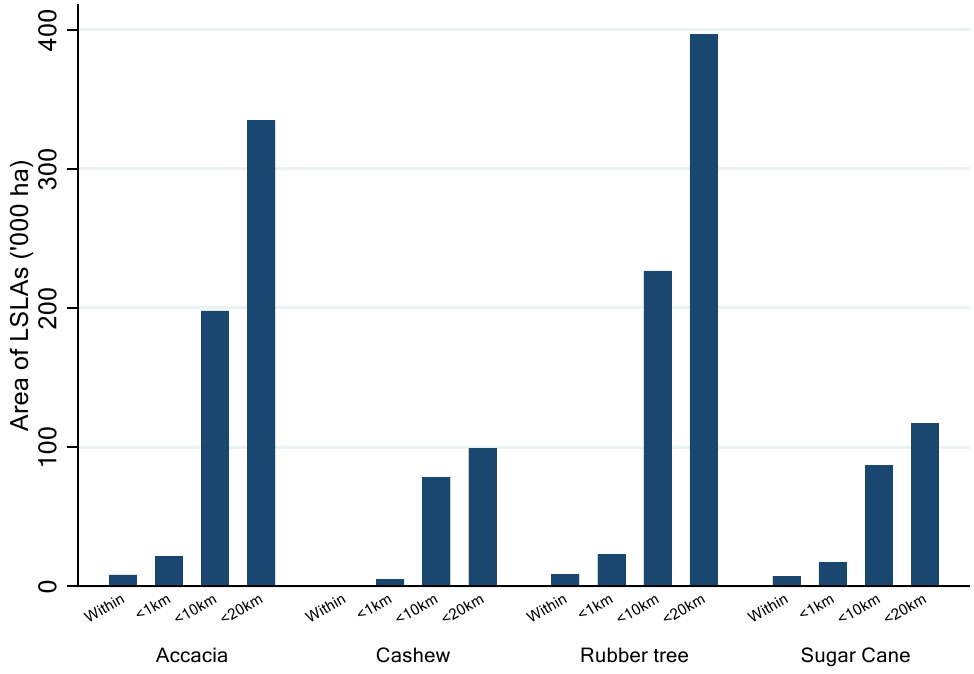

Fig. A3. : Area of LSLAs in proximity of communal land by main crops in Cambodia.

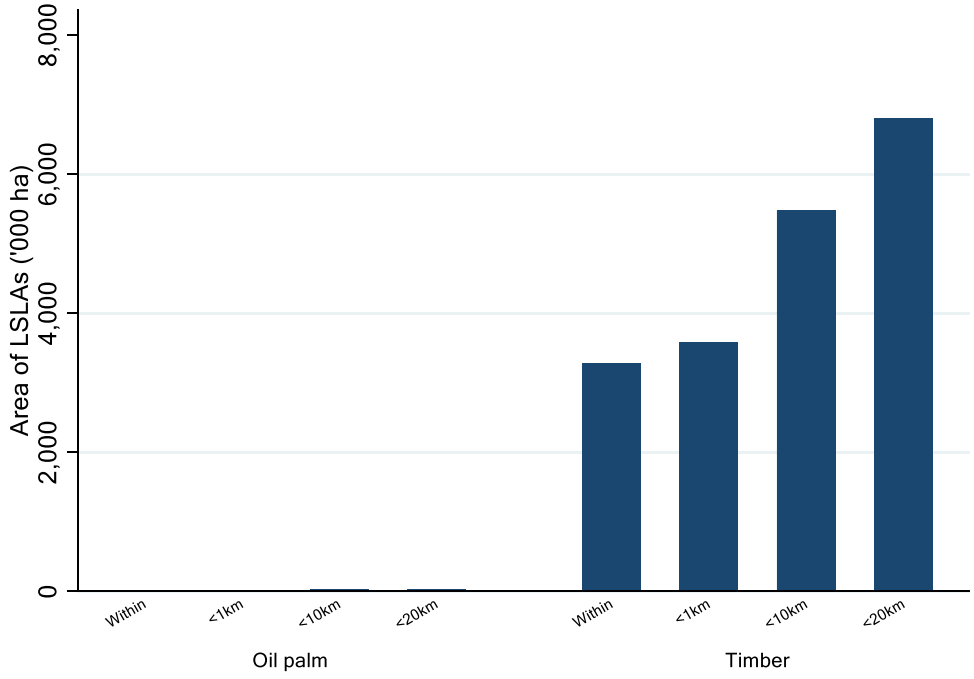

Fig. A4. : Area of LSLAs in proximity of communal land by main crops in DRC.

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