



Understanding Management of Community Zones in the Northern Plains

Final report



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List of abbreviations

CPA	-	Community Protected Area
CZ	-	Community Zone
MFI	-	Microfinance Institution
MoE	-	Ministry of Environment
PA	-	Protected Area
PDoE	-	Provincial Department of Environment
SMP	-	Sansom Mlup Prey
VMN	-	Village Marketing Network
WCS	-	Wildlife Conservation Society

Summary

Cambodia's protected areas comprise four distinct zones. According to the 2008 protected area law, the community zone is where communities and indigenous peoples with existing activities in the protected area can make use of land for their own purposes, such as for farming and residence. Land use and land titling require the approval of the Ministry of Environment. However, it is not specified how land in the community zone should be managed and used, or what criteria should be applied. Although socio-economic development is prioritised in this zone, it can also contain forests that store carbon, provide important habitat for wildlife, and hold values for the community. Without clear principles or guidelines for managing community zones, it is difficult to achieve conservation goals, and communities are placed in a precarious position in terms of access to land. To inform the management of these zones, it is important to understand which actors and factors are involved in currently shaping access to land in these zones, as well as the perspectives of different stakeholders.

We conducted an in-depth research project to better understand the ways in which residents and local authorities are accessing and managing land in one community zone in Kulen Promtep Wildlife Sanctuary, northern Cambodia. Over a period of five months, we visited three villages located inside the community zone and interviewed 60 households to understand their histories of land use. We also spoke with key informants, including key community members, local authorities, and officials from the departments of environment and land management, to better understand local perspectives on management of the community zone. Finally, we conducted focus group discussions and interviews to explore potential options for community zone management.

Our results show a land system that has changed significantly in the past 20 years. After the villages were re-settled following the reintegration of the Khmer Rouge in 1999, land was largely used for subsistence-oriented rice production limited by the availability of household labour and access to labour exchanges. Most families simply reclaimed their ancestral lands and continued to expand their lands following customary rules of access. These customary rules allowed land users to clear the forest behind the head (kbal) of their forest when this was needed, such as to provide land for children. This system depended on informal and familial relationships; state authorities were not involved.

After 2002, most land in the community zone was already subject to customary claims, and the small number of in-migrant families who began to arrive at this time had to purchase land from existing families in order to begin agricultural production. As the Royal Government of Cambodia developed physical and bureaucratic infrastructures in the region, village chiefs began to play a more important role in securing access to land and mediating conflicts. New crops and market networks were introduced, which have rapidly changed agricultural practices and relations with land since 2010. A shift to commodity-driven agriculture is well underway.

This shift has been driven primarily by cassava, a crop which is lucrative to smallholders because of the high returns it can generate on an annual basis. Cassava has relatively low initial capital requirements and is closely associated with the provision of materials and inputs on credit, and especially with microfinance loans. These loans are secured using soft titles on land in the community zone, provided by village and commune authorities. Because of these factors, agriculture is increasingly financialised and is limited primarily by access to capital, rather than access to labour, enabling farmers to cultivate much greater areas. In

particular, upland 'chamkar' areas have become increasingly important. This has driven large increases in the price of land. A hectare of land can now be sold for two or three, or potentially even four thousand dollars, up from around one hundred dollars twenty years ago.

Cash crop cultivation has attracted new waves of in-migration and investor interest, facilitated by powerful brokers and local authorities. For example, in the community zone, a new village (Prey Kol) of over 150 households has appeared in the last ten years, comprising migrant households cultivating cassava. Another investor has also bought over 100 hectares from local farmers to grow cash crops. These new actors have generated significant dilemmas for community zone residents with insecure lands, many of whom felt pressured to sell land. Land sales have also enabled households to meet emergency costs, such as medical expenses or loan repayments. However, such sales contribute to increased scarcity and younger households increasingly struggle to access sufficient land. These sales are facilitated by local authorities.

For most families, the only clear pathway currently available for them to achieve their aspirations, at least in the short-term, is to seek capital with which to finance the production of cassava. Research from elsewhere in Cambodia has shown that this development pathway is likely to lead to increased inequality and increasing demand for land. A continuation of the current trajectory is likely to lead to severe loss of forests in the community zone, together with increased inequality and consolidation of land in the hands of wealthy buyers. However, simply increasing enforcement to prevent access to forest lands is likely to have inequitable outcomes, to increase social differentiation, and will be politically challenging. Instead, efforts should be made to address the root causes of land clearing behaviours, which are motivated by desires to meet basic needs, such as shelter and healthcare, and to provide education to children. This could involve the development of new conservation-friendly value chains encompassing different cash crops, using conservation funds such as REDD+ to provide social security, and the provision of new legal mechanisms for communities to manage the community zones.

The development of clearer management processes and structures for the community zone, paired with this support, represents an opportunity to improve relationships with residents and between authorities. The development of a community zone management charter should clarify the significant legal rights of residents to manage their zones and should be developed on a village-by-village basis. Our research shows that many residents have concerns about equity in land access and would support restrictions on access to land if all families have sufficient land to support themselves. There is a consensus that most families require five hectares of land. A new land use planning process, complementary to the titling underway with Order 06, can clarify land holdings and inform the development of community rules governing access to land. It can also identify claimants to land containing important habitats and inform compensation or incentive mechanisms for protecting these lands. Law enforcement should focus on preventing land grabs within the protected area's other zones.

Recommendations

Community zone management charters

Community zone management charters should be developed by the Ministry of Environment in collaboration with local authorities and community zone residents, as a basis for collaborative management of the community zones. These should be developed on a village-by-village basis to reflect the varying needs and contexts of each village. Therefore, the community zones could be further divided to reflect the lands used by each village, following a participatory process. The goals of these management charters should not be pre-defined by PDoE but should be negotiated with each community and should be informed by a participatory planning process (see below). Land users in the community zone not resident inside the villages, but whose claims are considered legitimate by residents, should also be included in planning processes, and impacts on other vulnerable users or landless residents also need to be considered and mitigated.

Participatory planning processes

Following the completion of land-titling under Order 06, a further participatory land use planning process should be conducted to clarify land uses for untitled lands. This would help to identify lands which are claimed by families, which lands contain commonly valued resources, and which forests are priority for conservation goals. This will inform the development of management charters because it will clarify the distribution of landholdings and land claims within the zone, enabling transparent deliberation on future management. It will also enable conservation incentives to be targeted at households claiming valuable forest.

Supporting community zone residents

Management consultations should aim to identify what support and assistance the community would need in order to meet their basic needs and to be able to participate in conservation of priority habitats. Support should be provided unconditionally to all residents, but supplementary support could be targeted at landowners claiming ownership of priority habitats. This could include agronomic and business-planning support, such as the development of new conservation-friendly value chains, financial support such as favourable credit options or insurance, provision of medical assistance and access to education. In parallel with a community zone management plan, an investment plan could mobilise the resources needed to provide this support in return.

Prevent landgrabs outside the community zones

Land grabs in the core and conservation zones of the protected area undermine the incentives for community zone residents to steward their lands. PDoE should redirect enforcement and patrol effort away from the CZ towards these other zones. Reducing in-migration by landless households will also require deeper social safeguards at a national level and regulation of microfinance lending practices. Disused lands, such as disused economic land concessions, could be converted to social land concessions and redistributed to landless families, outside the protected areas.

1. Introduction

Cambodia is a rapidly changing country, evidenced by a fast-growing economy and one of the world's highest rates of deforestation and land-use change (Hughes and Un, 2011; Hansen *et al.*, 2013). State-led efforts to protect forests are centred on an extensive network of protected areas (PAs), mostly located in the more remote upland areas. These areas have remained forested due to their remoteness, and due to the widespread presence of indigenous peoples and local communities who have historically engaged in rotational agriculture and maintained forests for the diverse resources they provide. However, the changing Cambodian economy, the development of infrastructure, and the extension and consolidation of state power (which has been increasingly decentralised to the provinces since 2010) in upland areas are rapidly altering the relationships between these communities and their environments (Milne, 2015).

The areas where these communities reside and conduct agricultural activities are being zoned as 'community zones' (CZs), which are intended to be managed to balance conservation and development objectives, and which are the geographic focus of efforts to intervene in relationships between communities and their environments (e.g. Clements *et al.*, 2020). However, little is known about how these zones are being managed in practice, and no explicit management plans or guidelines for how such management plans should be developed exist. In this report, we present the findings of a research project which aimed to develop this understanding and inform the construction of guidelines for the development of community zone management plans.

1.1 Community zones in the protected area law

The community zones are one of four protected area zones provided for in the 2008 protected area law (RGC, 2008). While other zones, especially the core zone and conservation zone, are intended to be areas where conservation goals and ecological processes are given priority, the community and sustainable use zones are areas where residents are given certain rights to access and use lands and resources. Specifically, the sustainable use zone is where community protected areas (CPAs) are established. CPAs comprise forests that are patrolled and managed by the community in cooperation with the Ministry of Environment (MoE) and other authorities, and where resources such as timber and wild vegetables can be sustainably harvested by community members. The CZ is the area managed to serve the economic and social development of local communities who have existing activities, including farms. It is an area where communities may receive land titles and permissions to use land from the MoE, in accordance with the land law.

The wording of the PA law (Box 1) indicates that CZ management should prioritise "economic and social development". No explicit definition or vision of development is provided, but reference is made to rice fields and farms, suggesting that it includes the development of agricultural activities which are the dominant forms of economic production and subsistence in local communities. Conservation objectives are not explicitly mentioned. However, as all land use requires permission from the MoE, there is the possibility for the MoE to account for conservation values in their decision-making, although it is not yet clear how this should be done. Nevertheless, two points are implied in the wording of the law. Firstly, decisions need to be made in accordance with the land law, which sets out the regime of private and public land ownership and states that all forests are state public land.

This indicates that any forest within the CZ cannot be privately used unless it is granted as private title, presumably with the MoE's permission. Furthermore, the land law stipulates that title will be granted to those who possessed the land for five years prior to 2001 (RGC, 2001). Secondly, that use of the CZ is only for communities who have existing (or prior) activities. This suggests that non-local actors can be excluded from the CZ, but it is unclear how these should be defined. For example, whether this includes individuals or families migrating into the local community who may have local relatives.

Box 1: Excerpts from the protected area law (RGC, 2008), translated by the authors.

Chapter IV. Zoning

Article 11:

Each protected area shall be divided into four management zoning systems as follows:

[...]

4. Community zone: zone managed to serve the economic and social development of local communities and indigenous peoples who have existing activities including residence, rice fields, and farms. The issuance of land titles or permission for land use within this zone must have explicit prior agreement from the Ministry of Environment in accordance with the land law.

These ambiguities in the wording of the PA law, as well as uncertainty in how the PA law should be applied in connection with the land law within the CZs, generate the potential for institutional conflict as different authorities may interpret or seek to apply different sections of the law (Dunai, 2008). Conservation goals are very challenging to achieve in such a context. Local communities may also struggle to understand their rights and the appropriate processes that should be followed to ensure their lands are secure.

1.2 Land management in Cambodia

The politics of access to land in Cambodia has had a tumultuous history. Following decades of civil war and the destruction of all land records, the state has attempted to formalise the land system through systematic land registrations, but at present the system can best be described as a “quasi-formal system” (So, 2011; p139), combining elements of formal state-enforced property rights (i.e. land titling), and informal access depending on local customs and relationships with local officials.

Historically, all land belonged to the king and was used at his discretion (Chandler, 2018). However, across the country a norm of “possession by the plough” operated, allowing families to use land into which they had invested labour by clearing it of forest and bringing it under cultivation. According to some accounts, these usage rights on a particular plot of land would expire after three years of disuse (Ironsides, 2017). Cambodia has long had abundant arable land and a relatively sparse population, so it was not necessary to register or regulate land ownership at large scales. The concepts of private land ownership were introduced by the French colonial administration, which also developed the first cadastral system, but only

a small proportion of lands were brought under these systems and customary forms of access remained dominant (So, 2011).

During the Khmer Rouge occupation, private property was abolished, and cadastral records were destroyed. Between 1975 and 1989, all land belonged to the state and farmland was distributed to collectives of families. In reality, many collectives simply divided up the lands between households and farmed them separately (So, 2011). In 1992, the first land law was passed, re-establishing a basis for private ownership of land, and recognising ownership rights based on historical use. In many upland areas, peace opened up new frontiers for settlement, which were largely unregulated or dependent on local powerbrokers such as Khmer Rouge warlords, who settled their demobilised forces together with incoming migrants (Diepart and Dupuis, 2014). A further revised land law was passed in 2001 (RGC, 2001) which established the legal basis for private ownership of land, marking Cambodia's transition from a state-led collectivised economy to a free market. Both laws also formalised land ownership on the basis of prior use, setting off a wave of land grabs as individuals with bureaucratic power or connections used their positions to fabricate claims to lands (So, 2011).

The 2001 law also took all forest and unused lands into the possession of the state as state public lands (RGC, 2001). This enabled state actors, and others with state connections, to transfer public lands into private state ownership as economic land concessions. This policy, ostensibly intended to accelerate economic development through large-scale agricultural development, instigated huge conflicts as communities were forced off lands to which they did not yet have formal ownership (So, 2011; Beauchamp, Clements and Milner-Gulland, 2018). It also accelerated deforestation, as much of the granted land was located in upland forest areas where land ownership was yet to be formalised, and many concessions were even excised from protected areas (Davis *et al.*, 2015). A moratorium on economic land concessions was passed in 2016.

In the resulting 'hybrid' system, formal land rights and registrations co-exist in a dynamic tension with informal methods of accessing and securing land. Implementation of the registration effort is incomplete, sometimes intentionally so when complex conflicts are difficult to resolve. For example, systematic land mapping and registration initiatives begun in 2002 with support from the World Bank systematically avoided the most conflict-prone areas, which tend to be situated in the upland areas. Instead, they titled lands held in areas where lands were already secure and free of conflict, a so-called "geography of evasion" (Biddulph, 2011). Dwyer (2015) argues that the land registration is often seen by development actors as a "formalisation fix" to land insecurity, but that it frequently fails to achieve this goal because it glosses over the local politics of land. Moreover, at the local level, formal documented tenure is not always necessary to secure access to land, and land-users may sometimes forego the high costs of bureaucratic registration, instead relying on their relationships with local authorities, who in turn frequently recognise and acknowledge customary claims to land (Diepart and Sem, 2018). Efforts to formalise land systems have thus not been successful at securing smallholders access to land, but instead have brought smallholder and public lands into a land market so as to facilitate economic production based on capitalist relations, i.e. by making land amenable to sale to more "efficient" producers (Land Tenure & Development Technical Committee, 2015).

The drive to privatise land (or classify other lands as state land) also sits uneasily with the diverse collective and customary forms of land use practiced by communities throughout Cambodia, which includes forests held in common as spirit forests, as sources of forest

products, and through individual ownership of resin and nut trees which are dispersed over large areas held in common (Baird and Dearden, 2003). Many of these areas are vulnerable to grabs through privatisation under the land law's formalisation processes (Ironside, 2017).. For indigenous communities, there is the possibility to receive collective land titles, formalising their collective ownership over lands including reserved forest lands. However, these efforts are significantly challenged by the changing agrarian landscape, which is increasingly financialised and incentivises households to take loans using individual landholdings as collateral, undermining communal solidarities. State agencies often delay approval of these areas while they are whittled down by outside grabs and internal defections. A later systematic land registration effort under Order 001 (2012) focused specifically on titling occupied state lands, and had the effect of fragmenting indigenous territories and formalising land alienation (Milne, 2013).

1.3 Agrarian change in Cambodia

Researchers have documented a rapidly changing agrarian landscape in recent decades. Previously, most smallholders in both upland and lowland areas relied on rice production for familial subsistence. In the more sparsely populated uplands, rice production was often part of a swidden system where lands would be left to regenerate forest for periods in between cultivation. The liberalisation of trade has led to the introduction of new crops and technologies which have had far-reaching consequences (Hughes and Un, 2011). Many of these crops are so-called 'cash crops', such as cassava, cashew, maize, and many others, and are grown to generate income and satisfy market demands rather than for direct use. In the Northern Plains, the proportion of households engaged in cash crop production has increased from 8.3% in 2008 to 61.6% in 2021 (Travers, 2021). The permanent or perennial nature of these crops has necessitated a shift from rotational swidden agriculture to permanent cultivation, incentivising farmers to bring more of their lands under cultivation. Furthermore, the value of the uplands where these crops are grown has increased considerably. These factors have resulted in a decrease in forest cover and common lands (Padwe, 2011; So, 2011).

In upland and forested areas, including in Preah Vihear, cassava has had potentially the largest impact. This crop was introduced to Cambodia and has undergone a rapid expansion in cultivation since 2005. Cassava is important and accessible to smallholder farmers because it is cheap and easy to start cultivating: the stems from previous years can be shared and planted directly into the ground, and very few inputs are required initially. Moreover, a full cultivation cycle can be completed within one year, providing farmers with a fast and flexible source of income. This aspect of cassava production also makes it a useful way to secure claims to forested land; as land that might otherwise remain forested can be brought under cultivation by renting it to cassava producers and then taken back after a few years (Mahanty and Milne, 2016).

But cassava also presents risks to smallholders, who often rely on credit to support production. Without fertilisers, which are bought on credit, yields decline after several years. Prices are unpredictable and, in remote rural areas, may be set by powerful monopolistic traders. As a result, smallholders become more vulnerable to price shocks, and can find themselves struggling to pay off loans when prices or yields decline. This can deepen their dependence on cassava production, or cause them to lose their lands, which they have secured using cassava as collateral. In this way, cassava has deepened smallholders'

relations with the markets (Mahanty and Milne, 2016). Other crops are also becoming commodified in ways that reinforce one another and have wider impacts on village life. This process is facilitated by state institutions at the local level, especially commune councils, who provide the documentation required to secure loans and collateralise land through soft titles, and use their power to enforce repayments (Green, 2020b).

The widespread, and sometimes aggressive, provision of financial credit encourages households to also take on so-called 'non-productive' loans, which do not directly generate income and which are now the dominant use of credit nationally (Green and Bylander, 2021). This can include loans taken to pay for basic needs such as medical expenses, education, or housing. Farmers who struggle to pay back loans, due to a disappointing cassava harvest for instance, may take on additional loans from informal sources to plug the gap in their finances or migrate to other areas to seek waged labour (Green and Bylander, 2021). Indeed, households with loans are more likely to migrate to seek labour than other households (Bylander and Hamilton, 2015). Re-allocation of labour off-farm further increases dependence on capital to maintain agricultural yields, necessitating hire of labour, machinery, or chemical inputs. This has precipitated a major shift in rice production methods. While previously rice seedlings were grown in nurseries and then manually transplanted into the inundated fields, many farmers now simply scatter, or broadcast, rice seeds directly onto the wet soil. This requires less labour, but causes the rice to be more vulnerable to extreme rainfall or weed growth, necessitating application of herbicides and thereby furthering reliance on capital and credit (Green, 2020a).

As soil fertility and yields decline, the only option for many farmers is to increase their reliance on capital and credit to purchase the chemical inputs necessary for increasing yields. Those in more favourable financial conditions may be able to use their resources to make the upfront investments required to upgrade their production to more profitable perennial orchard crops, such as cashew or pepper, which often have expensive multi-year waits before they yield any product. However, for others, indebtedness can result in the loss of lands and exit from agriculture altogether. Such farmers may migrate to urban areas to seek waged labour (Mahanty and Milne, 2016; Hayward and Diepart, 2021). Compounding environmental shocks in the context of global climate breakdown are also driving farmers from their lands (Bylander, 2015). Successful farmers or wealthier outsiders may then buy lands from indebted families to expand their own production, concentrating land ownership and increasing inequalities (Diepart and Sem, 2018; Hayward and Diepart, 2021).

At the forest frontier, the exit from agriculture can be delayed or averted because there is the possibility of clearing forest and expanding landholdings to access more fertile soils and increase production. For this reason, the forest frontier is also an attractive migration destination for farmers without sufficient land in their home regions. Indeed, while many indebted families send members to urban areas seeking waged labour, most household migration in Cambodia is rural to rural: from lowland areas to upland areas where land is cheaper and more readily available at the forest frontiers (Diepart and Ngin, 2020). However, land is a finite resource, and as it becomes scarcer at the forest frontiers, those farmers in less favourable circumstances are squeezed out. Migrations therefore further intensify the social differentiation and concentration of land ownership, as those coming into an area with capital are able to buy up lands, while others come as wage labourers or tenants. Many of the remaining forest frontier regions are now also situated in legally protected areas, where farmers must also navigate restrictions on access to forest lands enforced by the MoE. For those residents in or around the PAs, these struggles are situated within the Community Zone.

1.4 Research aims

How CZs are managed will have significant implications for the lives and livelihoods of local communities, as well as for the remaining forests situated inside the CZ. The ambiguities in the PA law, and the unresolved trade-offs between conservation and socio-economic development objectives, mean there is currently significant scope for further clarity and input from stakeholders, and the choices made will lead to a potentially broad range of outcomes. In a rapidly changing agrarian context, any attempt to inform CZ management will require an understanding of how actors in the CZ, such as members of the community and local authorities, think and act in relation to land use, as well as the contextual factors and processes that are shaping their decisions.

This research project aimed to build this knowledge and inform the development of CZ management guidelines. Specifically, we aimed to answer the following research questions:

1. How do residents currently access land, formally or informally, and what actors or processes are involved?
2. What factors (i.e., debt, migration, generational inheritance, finance, agriculture) shape decisions around land-use and land clearance?
3. How do external actors, such as market actors, state, or conservation institutions, shape land-use decisions?
4. How might households respond to different potential management scenarios, what forms of governance would be effective and just, and what role can conservation financing play?

2. Methods

This is a qualitative case study. In-depth case study research is well suited to uncovering the processes and factors that are at play within a specific case and context, enabling depth of understanding. This kind of detailed knowledge is important for informing social & policy actions because it explicitly accounts for the ways in which context shapes what happens (Flyvbjerg, 2006). Case studies can also contribute to general knowledge through strategic sampling. Our study acts as a paradigmatic case, as it is the first community zone to be studied in this way, enabling us to generate understanding and further questions that might be confirmed or tested through research in other community zones. Our study site was also chosen as a 'maximum variation case', because it is known to encompass a wide variety of conditions across the villages it contains, enabling us to unpick and generalise the influence these factors may have across the landscape.

2.1 Study site

Our study consists of an in-depth qualitative investigation of land use and management in one CZ located in Kulen Promtep Wildlife Sanctuary, Preah Vihear province. Kulen Promtep, forms part of the Northern Plains landscape, together with two other wildlife sanctuaries: Chhaeb and Preah Roka; and the Phnom Tbaeng Natural Heritage Park. This area comprises the largest remaining fragments of lowland forest in mainland Southeast Asia and

is home to at least 29 Critically Endangered or Endangered animal species. As such, it is the site of intense conservation efforts including technical support for management of the protected area from the Wildlife Conservation Society (WCS), and several community-focussed interventions including community-based ecotourism development and IBIS Rice conservation-agriculture programmes (Clements *et al.*, 2020).

The community zone is located in Srayang Commune, Kuleaen District and comprises 8424ha, of which 6761ha (80%; according to MoE data from 2020) is forested. Initially, we believed that this community zone encompassed two settlements, Prey Veng and Sambour, but in the course of our fieldwork, we determined that a third settlement exists in the community zone, Prey Kol. Formally, Prey Veng and Prey Kol are not recognised villages, but fall under Sambour village as sub-villages with their own 'group chiefs'. According to administrative data, there were 454 families resident here in 2021, of which 152 were in Prey Veng and 302 in Sambour and Prey Kol. A map of the study site is shown in Figure 1, with the provisional boundaries of the community zone encompassing the three villages. A fourth informal settlement, comprising approximately 30 households, is also known to exist in the community zone at private Chamkar fields north of Prey Veng village, but no interviews were conducted here as residents were nervous about our presence.

This site was chosen because it encompasses a wide variety of phenomena and conditions that are thought to impact decision making around land use. Survey data from the Northern Plains has indicated a rapidly changing landscape. Many households have shifted from rice production and collection of forest products, to focus on cash crop production. Increasingly, households are taking on loans, largely to finance farm inputs, although non-productive loans are also common (Travers, 2021). Sambour and Prey Veng both have lands adjacent to a large economic land concession, located to their south. Sambour has had a good laterite road built in the last few years, providing easy access to the commune and markets, while Prey Veng remains remote and difficult to access. Prey Veng also has a community-based ecotourism lodge supported by WCS, which brings nature-related income for the development of the village. The villages also vary in terms of participation in conservation interventions (Prey Kol does not participate, while Prey Veng is a key focus), geography and access to different kinds of croplands, and infrastructure and access to markets.

The IBIS Rice programme, implemented by Sansom Mlup Prey (SMP) is particularly important because it intervenes directly on household land use. Both Sambour and Prey Veng villages were early foci for the IBIS Rice programme, although participation has declined and is currently low. Participating households agree to produce rice using organic methods, and to respect the PA rules, including a commitment not to clear further forest. Their lands are mapped and monitored to ensure compliance. In exchange, their rice is purchased for a significant price premium. Many activities in the village are managed by an elected committee known as the Village Marketing Network (VMN) committee.

2.2 Data collection

The study ran between December 2021 and June 2022. We began by conducting a stakeholder workshop, with representatives from the MoE, local government, and the communities. In this workshop we undertook a conceptual modelling exercise, asking participants to contribute explanations for decisions to clear land in the community zone. We then synthesised the conceptual models generated with our understanding of the literature and used the resulting model (see Appendix 1) to guide the design of our research.

The main phase of research consisted of household interviews in Sambour, Prey Veng, and Prey Kol villages. Through these interviews, we collected information about the histories of each household's land use through a combination of narrative and participatory mapping techniques. We asked respondents to describe the history and status of their family, and, if they were able, to draw a map showing their lands in relation to the village. We also asked about the nature and history of each plot of land they used or owned. Households were selected through a mixed purposive and convenience sampling strategy: we walked through the village and interviewed residents encountered at their homes. We tried to cover the different parts of the village equally and conduct interviews with households that looked wealthy and poor, old and new, in order to learn about the broad range of household experiences. In some cases, we used a snowball approach to identify households with experience or knowledge of specific events. Observations and informal conversations during our stay in the villages also informed our understanding, and we occasionally combined interviews with visits to fields or other lands around the village to gain a clearer sense of how these histories were situated in the landscape.

We conducted interviews with key informants, including the village chiefs, CPA chiefs, and VMN chiefs. Through these discussions, we were able to clarify our understanding of key events and add context to information provided by household respondents. These interviews helped us to bring together and synthesise data about how individual household's access to and use of land has changed over time, enabling us to trace the broader changes in land management systems that took place in the last decades, and identify the conjunctures that produced these shifts. Through these conversations, and by interviewing the protected area director and the deputy director of the department of land management, we also delineated the understandings, perspectives, and positions held by key stakeholders involved in managing the community zones.

In May 2022, we held preliminary discussions with representative from the MoE and PDoE, to discuss the possibilities of community zone management. Through these discussions, the key features of future management planning were identified. Subsequently, we returned to Sambour and Prey Veng villages and held focus group discussions with approximately 10 participants in each village, to discuss these options and gain community perspectives. Finally, we again interviewed key village informants.

2.3 Ethics

Conducting research about land-use in Cambodia's protected areas is fraught with ethical challenges. For example, information revealed about land-use not approved by authorities can have significant repercussions for individuals and families. Prior to their participation, we informed all research participants about the purpose (to inform management of community zones) and the nature of our research project and informed them that we are working on behalf of SMP. Participants were informed that our aim was to support the MoE. We gave participants the opportunity to ask questions and then asked for their consent to participate. In many cases, consent was requested on multiple occasions. We did not ask for participant's names and recorded all their responses anonymously. All the data collected will only be seen by the research team and kept on a password-secured drive. These protocols were approved by the WCS ethical review board (#21-49 & #21-62RN).

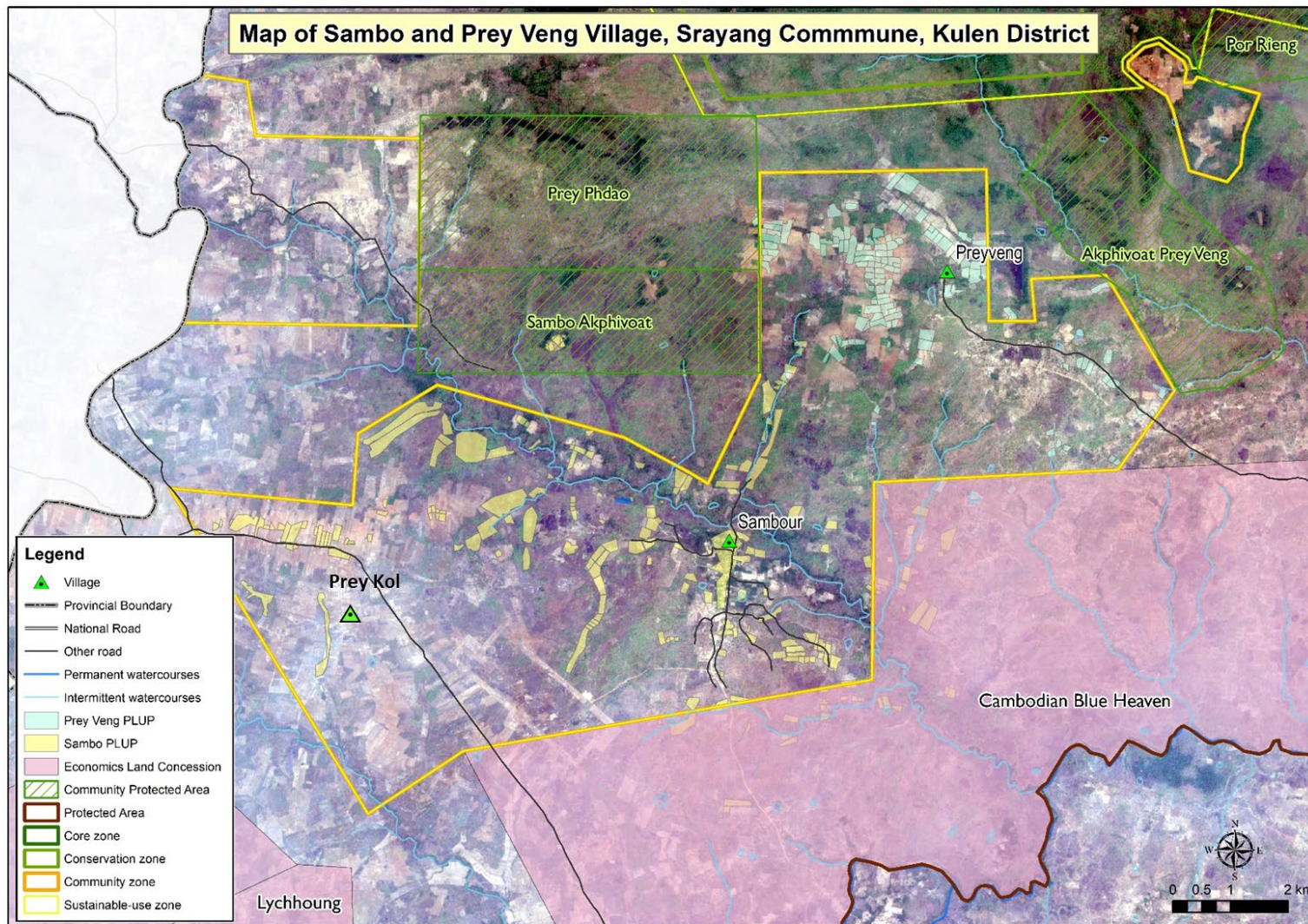


Figure 1: A map of the study site, showing the proposed boundaries of the CZ. Areas marked as 'PLUP' are agricultural lands that have been mapped in each village as part of past 'participatory land use planning' processes, a pre-requisite for participation in Ibis Rice.

2.4 Analytical approach

Our analysis took an iterative mixed (inductive & deductive) approach. We began by coding the data using predefined themes related to the research questions, using the open-access Taguette software (Rampin and Rampin, 2021). Coding is a process of attaching labels to textual data, to organise data that is relevant to particular questions or topics. After each round of coding, we reviewed the data and revised our codes to better reflect our updated understanding of the data, such as by modifying or splitting up existing codes, and establishing new codes based on themes that emerged from the data. In this way, we developed a comprehensive set of codes, each reflecting discrete phenomena such as particular methods of accessing or securing land, which we used to summarise the data for each code. Subsequently, we synthesised the data, bringing together separate but related codes to develop and test explanations and descriptions of how the system of land management has taken shape.

3. Results

We conducted 60 household interviews: 26 in Prey Veng, 18 in Sambour, and 16 in Prey Kol; and interviewed nine key informants, including all three village chiefs, as well as CPA chiefs, VMN chiefs, PA officials, and a representative from the Department of Land Management, Urban Planning, and Construction. Finally, we held group discussions in Prey Veng and Sambour villages, with 8 and 10 participants respectively.

3.1 The evolution of land use in the community zone

In describing our results, we adopt a narrative perspective. Such a perspective helps to clarify the causal relationships driving change in the community zone. This is related to Tania Li's 'analytic of the conjuncture' (Li, 2014), which emphasises how dynamic factors and elements come together at historical moments to produce change. In our study, we identified important factors that led to change in the CZs, including agricultural technologies and crops, infrastructure, finance, migration, demographic change, and public policy. It is the 'conjuncture' of these elements at particular times, rather than any element in isolation, that is producing the changes observed by CZ residents. Tracing the history of change also takes us closer to the perspectives of community zone residents, bringing our attention to the events and shifts experienced by different households.

3.1.1 The re-establishment of Sambour & Prey Veng villages

Sambour and Prey Veng villages were both settled in the late 1950s. At the time, Sambour was called Tlat Kvay, Thai for 'buffalo market', reflecting the isolated location of these villages and the close links they enjoyed with neighbouring Thailand, which was more accessible than the rest of Cambodia. In 1972, the Khmer Rouge guerrillas entered the area, and renamed the village to Sambour (meaning richness), as the rich agricultural production in the area was used to support their military efforts. Many villagers joined the Khmer Rouge military and remained in the area until 1983 when conflict pushed them north to the Thai

border area. In 1999, after peace agreements were made, families were allowed to return to the villages and began to reclaim the lands they had previously farmed, or which their parents had farmed. This means families do not fulfil the five years of possession prior to 2001 to achieve title under the 2001 land law. According to informants, it was clear which lands belonged to which families, and there were almost no disagreements or conflicts about land ownership. Access to land and conflicts over land were managed informally and directly between families, or through the mediation of other family and neighbourly relations. One village chief described this as a 'family system' of land management, as state authority was not yet functioning and did not play a role. Indeed, one informant stated that "there was no village chief", at that time. Land and forests were abundant, and new lands could be freely taken where required.

Land was then a means of subsistence, and families grew mixed rice crops using labour intensive organic methods such as transplanting rice manually. Households relied on all able members to participate, and further labour was accessed through reciprocal exchanges with other households. The high labour requirements of rice production meant that not all the land a family claimed to own could be farmed at once, and much of it was kept in reserve as fallow for future rotation or to pass on to the next generation. Land and forests were abundant, and when more land was required, such as to provide for a new family, lands could be freely taken. The easiest lands to access were those forests located behind or adjacent to the family's existing plots. Notably, both lowland and upland areas were used for rice cultivation.

3.1.1 Customary rules governing land access

The familial system governing access to land became increasingly significant as the population grew, and unclaimed land became scarcer. A set of customary rules emerged to govern access to land, drawing on longstanding customs such as 'possession by the plough'. These rules set out which lands could be accessed by which families and prevented conflicts from emerging because they were widely understood and considered to be fair. Although they are unwritten, and exist outside formal legal institutions, their enforcement is often dependent on the intervention of the village chief. Under these rules, families could generally lay claim to forest land adjacent to or behind their plots, or the 'kbal' (head) of their land (Figure 2). The heads of agricultural lands, especially rice fields, are often arranged in strips along a path or watercourse, and families were given the right to expand behind their head. Indeed, many families are still unfamiliar with the area (i.e., the number of hectares) of their lands, and prefer to describe their landholdings by the length of the head. When conflicts did arise, the rules suggested a way that they could be resolved, although the intervention of a respected elder or village authority was needed in more complicated cases. In cases, where the forest land in between two heads was disputed, the land might simply be divided. If further forest land was available in another direction, then it might be agreed to allow one farmer to expand in this new direction.



Plate 1: a 'kbal', or head, of land, with the claimed forest behind

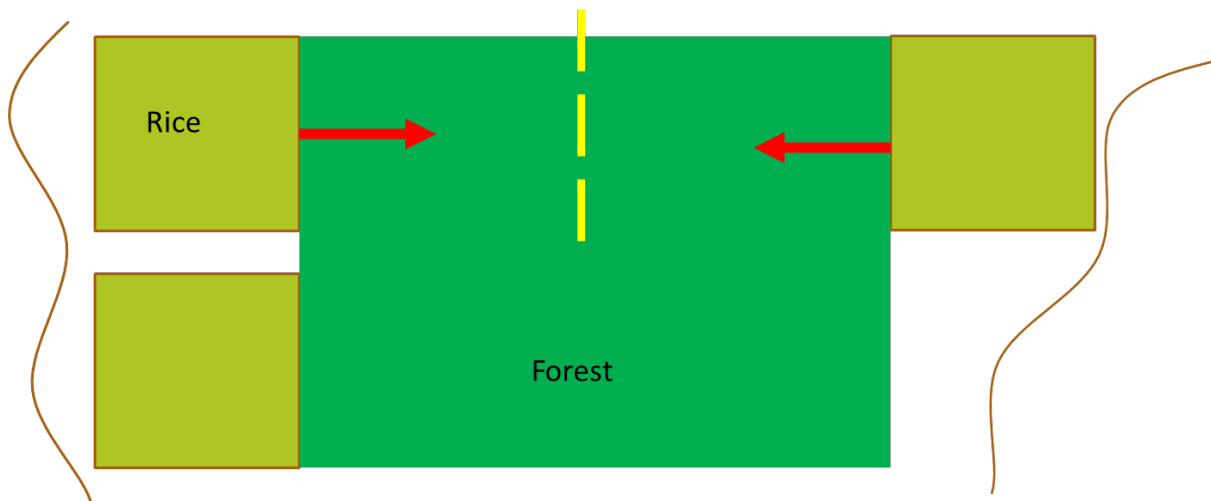


Figure 2: An illustration of how customary claims to forest land are organised behind the 'kbal' (or head, light green, labelled 'rice'). The forest behind the head can be expanded into by its owner. If two farmers approach each other, the land might be divided equally (yellow line). The brown lines represent rivers or roads.

3.1.2 State formation and in-migration

The first recorded cases of households without ancestral (or pre-war) claims migrating into the CZ date back to 2002, reflecting the increased integration of the region into the developing Cambodian state. Most of these early migrants were living at the nearby district or provincial towns, which were beginning to develop as important transport, administrative, and market centres. An interesting exception is a family that migrated to Prey Veng from Kampot province. However, all migrant families were motivated to move due to a lack of land or job opportunities in their home regions, and the perception that land was more easily available inside the protected area. Many had relatives already living inside the villages and were therefore able to settle easily, in some cases even receiving land from relatives. Those without relatives and with financial means purchased land, which cost around \$200 for a cleared hectare. Those households without financial means relied on forest resources until they had built the social or financial capital to access their own land. For example, one household in Sambour subsisted by fishing until another family agreed to give them some rice fields.

These early cases of migration show us that most lands around the village were already subject to customary claims, and newcomers needed the consent of existing families to access lands, either through purchase or gift. For most families, taking new plots of forest land was already largely impossible, or at least very risky, because this would conflict with existing land claims. Indeed, we only recorded two cases of lands being taken by residents without permission from village authorities occurring after 2002, and in one of these cases the possession is extremely insecure. Similarly, purchase of distant forests (far from the head) was risky because conservation enforcement might prevent access to this land. Instead, the land being bought and sold was typically cleared land that was already under cultivation (i.e., the head), and the selling family would recoup the lost land and maintain their claim to further forest land by expanding beyond the plot. Often, the buyer's land would therefore be surrounded by land being cultivated by others, which means they did not have a legitimate claim to clear further land. As land has become scarcer, many families find their head is surrounded and they can no longer access sufficient land to provide for the next generation.

As outside families began migrating into the villages, and the capacity of state institutions expanded, the village chiefs started to play a more important role in organising access to land, and new families needed their permission to settle. In some cases, village chiefs might also allocate and grant unclaimed lands to migrants, but they would always respect the customary claims of existing families, to avoid creating conflict and jeopardising their legitimacy. Usually, this meant granting forest land of poor quality at some distance from the village. Although both villages were re-settled at a similar time following the war, and many Sambour residents were born closer to where Prey Veng is now situated, Prey Veng village was slower to be integrated into the state system and was labelled as an “anarchy village” until it was granted status as a sub-village of Sambour. This is reflected in the higher proportion of households in Prey Veng that have a migration background.

3.1.3 Cash crops

When the IBIS Rice programme was conceived and first implemented in 2008, Prey Veng and Sambour were early targets. Due to their remote locations within the protected area, they were situated near important habitats for conservation. Households there were also at a disadvantage when it came to selling rice, as it was simply not worth the effort and time

needed for many rice traders to travel to the villages. It was also expensive because large trucks could not reach the villages, so these traders offered low prices to farmers. Moreover, since only a handful of traders accessed the villages, they had a free hand to set prices lower than was fair. IBIS Rice presented a lucrative alternative because it offered a fair and guaranteed price. Moreover, most families were already producing rice in a manner compliant with the organic certification (which was introduced in 2015), and there were few barriers to participation, resulting in high uptake. For example, in Prey Veng, nearly all resident families participated in the programme from 2009 until 2015.

However, the conditions that were so favourable to the IBIS Rice programme gradually began to shift, starting in Sambour, which is located closer to the commune and the new national road 64. Concurrent with the expansion of infrastructure and administrative capacities, was the expansion of the market as traders began to visit the villages, promoting new crops, practices, and technologies, from which they hoped to profit. Migrants, especially those who came to establish small shops or businesses, also brought with them access to networks of trade and information and were valued by villagers for this. After 2010, many villagers began to experiment with soybean, a newly introduced cash crop, particularly in Sambour. Soybean did not prove to be hugely successful, and farmers complained of low prices and unpredictable markets, but it marked the first engagement for many farmers with a network of agricultural trade beyond rice and forest products such as resin and showed that the upland areas could be valuable in a new way. It was another crop, cassava, which would have the largest impact, and which continues to catalyse significant changes in the landscape.

Cassava production in Cambodia has expanded rapidly since 2006, but despite a few early adopters, cultivation did not begin in Sambour village until approximately 2010, and even later in Prey Veng – 2018, because a passable road is required to transport the high volumes produced. It is now considered the most lucrative crop available to many farmers and has driven a rapid change in the agricultural system. For example, our respondents reported yields upwards of four tonnes of fresh cassava per hectare, even up to 20 tonnes with chemical inputs, compared to one or two tonnes they expect to yield on their rice fields. Furthermore, the price of cassava, although it fluctuates, is favourable compared to the price of rice, and in recent years a farmer could earn around 250 riel per kilogram of fresh cassava or over 700 riel per kilogram dry (Plate 2). This results in profits significantly greater than for rice production, at least in the short term (Table 1). During the COVID-19 pandemic (2020) the price increased even further, to over 1,500 riel, prompting many more farmers to begin cultivating. Cassava is also attractive to farmers because it is easy to begin cultivating and requires little capital initially. The stems are easily shared and replanted, and it grows well on newly cleared land. Importantly, it takes less than a year from planting to produce a yield, so farmers can get a quick return on their investment.



Plate 2: Cassava being dried in the sun

Table 1. Costs of cassava production as reported by farmers, converted from Khmer Riel to USD at 4,000 to 1. Actual costs will depend on the amount of labour available to the farmer, and the chemical inputs used. Increased yields will also lead to increased labour costs.

Item	Cost per hectare (USD)
<i>With own land and labour</i>	
Tractor rental for first plough (Nr 3 tiller)	150.00
Tractor rental for second plough (Nr 7 tiller)	112.50
Tractor rental to prepare ridges	112.50
Purchasing cassava stems (approximately 200; initial cost only)	125.00
Herbicide	35.00
Rooting supplement	17.50
Tractor rental to clear cassava roots after harvest	87.50
<i>With hired labour or land</i>	
Tractor rental to clear dry forest (depends on density of forest)	150.00 – 400.00
Rental of chamkar land	200.00
Hire workers to plant	87.50
Hire workers to spray chemicals	12.50
Hire workers to cut and harvest (assuming 10 tonnes/ha)	625.00
<i>Range of total expenses</i>	640.00 – 1,965.00

According to informants, cassava is now a “principal actor” in the community zone, together with rice, which is still important for subsistence and income generation. Cassava, like soybeans, is farmed in plantations situated higher than rice fields and which do not flood. Lands with red soil are considered particularly fertile. Previously these lands were also used to grow upland varieties of rice, but virtually all farmers possessing such lands have now switched to the production of cassava. Farmers who did not yet have chamkar lands under cultivation sought to access them. Where the topography was favourable, some were able to expand into higher lands adjacent to their existing rice fields, following their customary claims. Most of those who have not yet done so plan to do so in the near future once they have sufficient capital to begin production. This includes many households who were previously participating in Ibis Rice. For example, one prominent villager stated that he “used to be an IBIS Rice farmer, but I stopped in 2020 so I could expand my chamkar” and grow cassava. In a small number of cases, families have had the financial means to purchase chamkar lands from others, typically when the original landowners had emergency expenses or no longer lived in the village.

Another cash crop that is present in the community zone is cashew. However, we only spoke with four families cultivating cashew across all three villages. For many families, cashew cultivation is not feasible because of the high upfront costs of purchasing the trees (each tree is approximately 2,500 riel) and the long three or four years wait before any fruit can be harvested. Those families who have been able to cultivate cashew all started in 2016 or 2017. They used profits from cassava production, loans, or other sources of income such as retirement savings to fund this. In two cases, cashew production is being gradually scaled-up through intercropping with cassava or by replacing more cassava with cashew each year. Cashew yields and profits were unclear to us, but most households expressed their dissatisfaction to us, referring to challenges like poor soil, or water management issues.

3.1.4 Financialising agriculture

As with cashew, many farmers who have access to suitable land but who have not yet begun cultivating cassava explain that they have insufficient capital. Similarly, farmers who are already cultivating cassava explain that their production is limited by financial capital. Although the capital input requirements for cassava are lower than for other cash crops, they are still significant for households (Table 1). This includes the costs of the cassava stems, the costs of hiring the machinery (tractors or hand tractors) to prepare the land by clearing trees, ploughing, and forming the rows in which the stems are planted. Once the cassava is growing, chemical herbicides and pesticides are often required, and as soil fertility declines fertilisers are also applied. If production is on a large enough scale, labourers need to be hired to harvest and cut the tubers. Finally, if the fresh cassava cannot be transported to market within 48 hours, it needs to be dried, and chippers are needed to prepare the cassava chips., This delays sale but ensures a better price. Transportation, such as a hand tractor, may also need to be rented in order to transfer produce to market (traders can also come to collect produce but they will pay a lower price).

Some farmers continue to rely on their own labour to cultivate modest amounts of cassava, perhaps on the margins of their rice fields. Others are able to finance production using loans from relatives, or by accessing equipment and inputs on credit which is repaid to the service provider using a portion of their yield. Some use the proceeds from sales of rice or income earned through wage labour. However, it is the provision of credit from Microfinance Institutions (MFIs) that has enabled most farmers to begin and subsequently scale-up their

cassava cultivation. Indeed, while other loans, such as from friends or relatives, are often taken to cover emergency medical costs or fund house construction (these non-productive loans were particularly common in Sambour), the most common use of MFI loans was to fund agricultural production, especially cassava, and a majority of the cassava farmers we interviewed had taken MFI loans for this purpose. MFI loans are the most common source of credit provision reported by our respondents and have increased markedly in the last two or three years. The earliest MFI loans we recorded date to 2016, concurrent with the rapid increase in cassava production. Although there are a significant number of households who say they do not dare to take loans from MFIs, there are many households, especially in Prey Veng, who plan to take loans for the first time to begin producing cassava in the coming year. Agriculture is likely to continue becoming more heavily financialised as a result.

Rice production is also becoming capital-intensive, and less limited by labour. Since 2017, nearly all farmers have stopped labour-intensive rice farming methods, such as transplanting, in favour of broadcasting. For many farmers, this is because they prefer to allocate their available labour to cassava, which is considered more profitable. For farmers with several hectares of cassava, harvesting can start in January and continue until June or July, overlapping with the beginning of the rice transplanting period. The subsequent reduction in rice yields is accepted because the rice is only kept for home consumption, while income derives from cassava. Some respondents suggest that yields are reduced by 50%, but weeds may also threaten the entire crop. Farmers also report the rains they rely on for planting are becoming more unpredictable, a change they attribute to climate change, and there is often a dry spell in the middle of the traditional rainy season. This makes transplanting rice riskier, because it requires a large investment of time, and a drought would kill the crop. By contrast, broadcasting can be done in a short time frame and timed to follow the shorter rainy season. However, the effects of weather seem to be heterogenous and dependent on the topography of the farmer's fields. Some farmers also prefer to broadcast because it saves them time, freeing them up to pursue other income-generating activities, or to look after their children, while at the same time it has become more difficult to access sufficient labour as traditional labour exchanges have broken down due to the focus on cassava production. Some respondents described the cost of hiring labour as an impediment to be doing transplanting, preferring to allocate their capital to cassava production. However, because broadcasting makes the rice crop more vulnerable to weeds and pests, it necessitates application of herbicides, which are usually also bought using credit. This has been the largest reported reason for farmers becoming non-compliant with the IBIS Rice programme. For example, two respondents stated:

“Transplanting gets a lot of rice, but it takes more time. Broadcasting gets more grass [weeds], so we have to use herbicide when we have the money.” (Respondent, Sambour)

“I changed to broadcasting a few years ago after my children left, and I had less labour available. This can cause a big increase in grass and reduce the yield, depending on the type of land you have. I was a member of Ibis Rice before everyone else, and I always sold to them. I used to get 4 or 5 tonnes, but after broadcasting I only get 3 tonnes.” (Respondent, Prey Veng)

With access to finance, farmers have been able to increase their production and expand the lands they bring under cultivation for cash crops, while those without access to chamkar land are expanding their rice production in the same way. Land that previously had been kept as forest is now being cleared and brought under use, with credit facilitating access to the

machinery required to do this, such as rental of tractors or purchase of hand tractors. Financial credit enables farmers to work more lands through the use of chemical inputs and machinery and surpass production limitations related to labour availability. In Prey Veng, one individual has used credit to purchase a harvester and a tractor. This enables them to rent and cultivate six or seven hectares of land from others each year, and they can earn additional income from farmers hiring her equipment. For labour intensive processes, such as the cassava harvest, capital also allows farmers to hire labourers in the village where they are available. As two informants explained:

“In the past, people could leave their chamkar as forest. They didn’t have the manpower to clear it all. But now it is all cleared and cultivated”. (Informant, Prey Veng)

“No one keeps forest land now. We used to keep and care for the forest, but the economy now depends on agriculture. If we don’t make a profit, we aren’t helping the economy.” (Village chief)

Because they enable these increases in production and income, MFI loans are generally viewed positively and increasingly essential. As one village chief explained, *“if we can’t borrow money, it is difficult because there is nothing else you can do to improve your life or your family”*. Nevertheless, there are concerns about the dependencies these loans create. Another village chief claimed that: *“Two hundred percent of the village has a loan. Why do I say 200%? Because most people have more than one loan, they use one loan to pay back the other”*. In our household interviews we only recorded a few instances of households with multiple loans. Sometimes, loans were used opportunistically for purposes that were not declared to the MFI. For example, one household in Prey Veng borrowed money to purchase a hand tractor but then had the opportunity to buy a plot of land. Nevertheless, most borrowers seem to be cautious, and many respondents expressed awareness and concerns about the risks of borrowing. The median loan size in both villages was a very manageable \$1000, although there are outliers with larger loans, such as a resident who has taken a loan of \$20,000 to buy a harvester and another loan to buy a tractor.

3.1.5 Increasing land values

MFI loans are collateralised with soft land titles on village house plots or agricultural plots, which are provided by the village chiefs and signed by the communes. Because Prey Veng is a sub-village of Sambour, soft titles in Prey Veng require the agreement of both chiefs. Although currently, no hard titles have been issued within the community zones, and the issuing of soft titles without permission from MoE is illegal, the MFIs accept soft title documentation. Without a hard title, there is a limit on the size of loans the MFIs are willing to provide, which some respondents put at \$10,000. The village chiefs recognise the legal grey area in which they operate, but stress that villagers demand access to loans and will be unhappy if they don’t facilitate soft titles. They describe this as an “essential service” to the community. With land being used as collateral, there is the risk that land will be lost if loans are not repaid, but we did not record any reports of forced land sales or repossession of collateralised land. However, there are cases where people have sold land pre-emptively to assist them in repaying a loan. During one interview, the Sambour village chief claimed that *“a few days ago, a lady came looking to find a buyer for her land because she needed money to repay a loan. If I didn’t help her, it would have been a disaster.”*, but he also claimed that just 1-2% of borrowers have faced issues with repayment.

The possibility of growing cassava, increased financialization of agriculture, scarcity of land, and the use of land to access loans, has attracted new forms of business activity, migration, and investment into the area, driving large increases in the price of land. Twenty years ago, a hectare of land could be bought for \$100. We recorded land transactions since 2015 worth close to \$1,000 per hectare, and informants report that a hectare of fertile chamkar land can now fetch two or three thousand dollars (Figure 3). While capital enables some farmers to clear and cultivate more land than before, the increased price and scarcity of land also puts access to new land out of reach for many families. In the past, many families bought lands in order to provide for their children, but increasingly the next generation is unable to access sufficient land because their parents are unable to afford purchasing land from others.

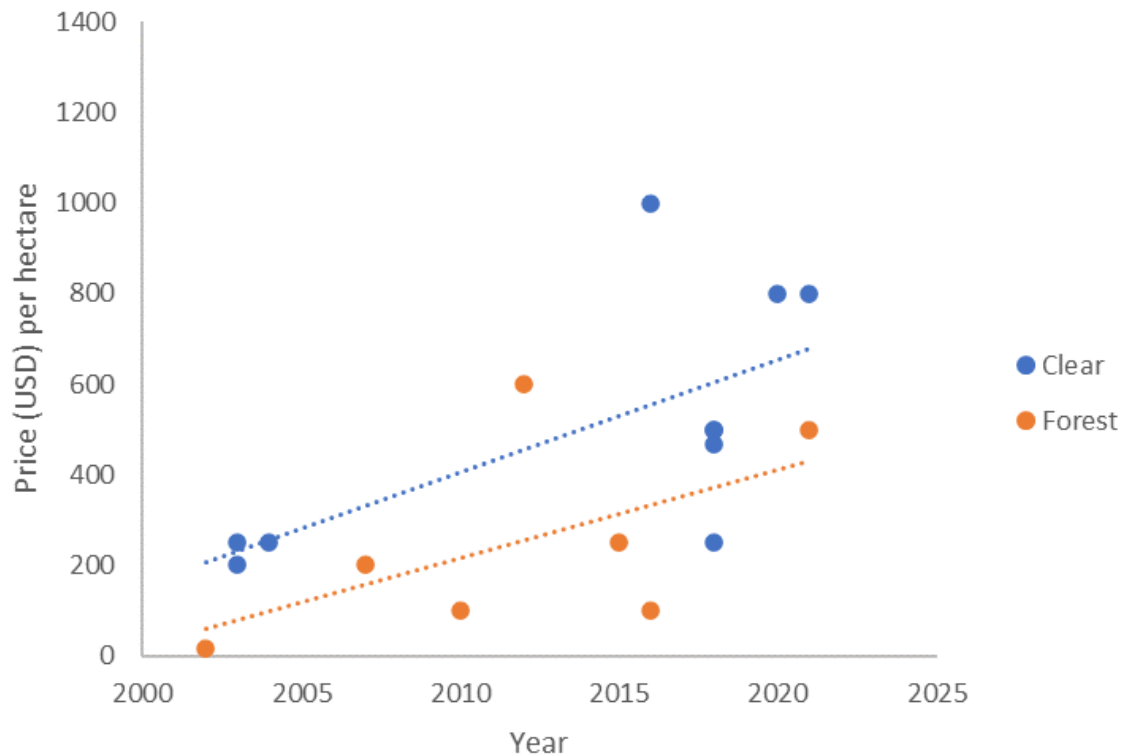


Figure 3: Reported land transactions show an increase in land prices in the last two decades, with cleared land receiving higher prices than forest.

The increased price of land does not seem to be incentivising families to sell off their lands. Instead, it appears that respondents are more motivated to hold onto land. For example, one family sold 5 hectares over ten years ago to pay for a child’s education in Phnom Penh. They received just \$200 per hectare and borrowed further money from Vision Fund. At the time, this seemed like a wise investment, but they now feel embarrassed given subsequent increases in the price of land. Land-poor families see the increasing scarcity of land and recognise that land is their only means of subsistence, while families with more land hope to capitalise on their land as a source of future income from agricultural production.

Families who have sold land more recently have done so when they needed cash for unexpected expenses or felt pressured to pay back loans. For example, three years ago a family in Sambour sold 10ha of land to several other families, earning just \$1,000 to fund emergency medical costs. Although they considered the sale necessary at the time, urgency

meant they sold at a very low price, which they subsequently regretted, and later they had to borrow to pay further costs. Now they do not have enough land to provide for their daughter, who is renting land from others. Another family stated that they are aware of the high prices they could get for their land, and that they would consider it if they had difficulty repaying loans.

3.2 Social differentiation in the Community Zone

As land prices increase, they remain relatively low compared to areas outside the protected area. This makes the CZ a lucrative place for outsiders looking to access land. Despite this, it is notable that we did not meet a single migrant household settling in either of the two villages after 2010 that was able to purchase or access land without prior familial connections (however, see section 3.2.1 on organised migration into Prey Kol, where migrants were able to access cheaper land). This reflects the reluctance of CZ residents to part with their land unless it is necessary for themselves or to assist relatives. Indeed, most migrants who have come to the villages since 2016 are living in Prey Veng and are landless. They have come because it was impossible for them to live in their home regions without work or access to land. Many were already coming to the area to work as labourers on villager's chamkar lands, camping out in the fields. A steadily expanding group of such families now live on a small strip of land, provided by a relative of the village chief, on the edge of Prey Veng village. The encampment where they live is disparagingly referred to by villagers as 'plastic town', because of the cheap plastic materials used to construct homes and to protect against the rain (Plate 3).



Plate 3: Homes belonging to landless migrants in Prey Veng

In one extreme case, a family with young children has come to pay off a \$20,000 debt. They had borrowed from a leading MFI in their home province, in order to buy land and begin their own farm. When bad weather threatened their crop, they realised they were falling behind on repayments. Rather than wait another year for a better yield and falling even further behind on repayments, they came to the PA to labour for others. After a year, they heard about opportunities to work for farmers in Prey Veng and were given space to build their hut. They continue to labour on other's fields, earning about \$150 per month, and have three years of repayments outstanding. Currently, they are required to pay about \$50 monthly as interest, and a principal repayment of \$625 every six months. If they fail to repay, her sister's home will be repossessed. When describing her situation to us, the lady began crying, saying *"I never thought I would reach middle age and not have found happiness yet"*. Worryingly, upon a later visit we learned that they had decided to take on a further loan, hoping to cultivate cassava on rented lands in order to pay off their debts. This was done through a borrowing group with the support of the village chief.

These stories of migration suggest that ordinary migrants are not generating demand for land on the market, because land prices are already out of their reach. Instead, they are seen as a source of labour for hire, enabling villagers with land and financial capital to expand their cassava production. This is a core part of the financialization of agriculture and encourages many landowners to hold onto their lands. Villagers with land but without capital can also rent out their lands to ensure they are being cultivated and thus secured against other claims, until they can be brought under their own production. These relations of wage labour and tenancy are often woven together with narratives around concern and responsibility to help others. For example, the villager who provided the land for migrant households to reside did so out of "pity", and lets the families work their rice fields, taking only a portion of the yield as payment. When they need additional labour, there is also an expectation that this will be provided. On their part, the inhabitants of plastic town expressed their gratitude for the opportunity to build their homes and rebuild their lives. Nevertheless, these are relationships marked by dependency, which illustrate the increasingly unequal relations around land in the community zone.

3.2.1 Prey Kol

The actors driving the biggest increases of land prices and generating the biggest changes in community zone land use, are not villagers renting out 10 to 20 hectares. They are investors and well-connected individuals situated outside of the villages who have used their resources, power, and networks to exploit weak governance and force the alienation of community lands. The most spectacular case of deforestation in the community zone is at a place called Prey Kol, to the west of Sambour village. This was an upland area, where several Sambour families had chamkar lands and rice fields at Veal Ch'aou Ko, on the north side of Prey Kol. After the introduction of cassava, this area became of increasing interest to families from Sambour due to its rich red soil, and several families expanded their lands here or purchased land from other families. However, around 2011, two well-connected and active military officers came to the area and began to organise a new settlement. Their precise rank and origin were not entirely clear. They divided the forests into 4 hectare parcels of land for farming (called one 'lo'), and smaller plots for houses forming a village, which they allocated to incoming families for a small fee (\$100-200, depending on the family). Poorer families were able to pay the fee by providing labour to the soldiers. Many incoming families were connected to the soldiers through the military or police forces, but others were working as labourers in the area and happened upon this new settlement. Some

came from Phnom Penh. Almost all of them were landless or struggled to access sufficient land in their home regions.

Sensing trouble, some Sambour villagers relocated to this area in order to focus on cassava production and keep their lands secure, but the soldiers began to carve up land that was already claimed, promising it to incoming families. Many Sambour families felt their only option was to sell the land they claimed and earn some compensation, rather than face losing it for nothing. One family recalled that the soldiers came in 2011 and prevented them from accessing their chamkar, threatening them with weapons. According to this respondent, approximately 60 families were affected. The Sambour village chief claims that the two soldiers misled him about their intentions, and that they were powerless to prevent the loss of the Prey Kol area:

“We used to take care of the forests at Prey Kol, but after 2011 it became chaos, and all the land was taken. I don’t know what to say about it. Now there’s no more land and we can’t access more land. [...] It’s a headache. [...] Some people sold their land because they knew it was being taken anyway. Some people did protest but then they lost their land anyway.” (Sambour Village Chief).

The village chief felt that he had no choice but to help these families by facilitating the transactions. For example, we met a group of four related families farming cassava close to Prey Kol. They had come from Siem Reap in 2013 and bought 30 hectares of land from Sambour families using their collective savings. This transaction was done directly with the original landowners, without the soldiers’ involvement. One brother bought 5 hectares, while another bought 10 hectares, each depending on their means. They paid \$500 per hectare, and local authorities came to measure the land and sign the sale documents. They stated that land in Siem Reap is too expensive, so they came to farm in the study area during the cassava season and then go back to Siem Reap to find wage labour.

Despite the village chief’s fatalism, several Sambour families have been successful at defending their land claims, also with his support. In 2011, some of these affected families took their claim to the provincial hall and had their lands returned to them after one year. A further six families were unsuccessful and have become embroiled in lengthy legal conflict which has escalated to the courts in Phnom Penh, leaving them unable to access their land. One farmer, whose case has received media attention, was deprived of all his rice fields which have now been developed into the core of the new village (Plate 4). He currently depends on rented lands to support his family. The thirteen migrant families who occupy his former lands support their own claims using documentation and other evidence showing that they paid for and were given the lands with permission from the commune.

Migration into Prey Kol peaked in 2017 and has now largely ceased, and the land market has largely stabilised, with all the available land already claimed. Families arriving since approximately 2015 have had to purchase land from others, and many have used MFI loans to do so – especially from the former Vision Fund. Prey Kol now consists of around 155 households, who collectively use about 1,200 hectares of land, the vast majority of which was forest just ten years ago. Although there was a long period of ambiguity about the settlement’s status, the provincial government eventually intervened and pushed the PDoE to accept the settlement’s existence, and it is now incorporated as a sub-village of Sambour. This means that commune and village authorities can provide soft titles and facilitate credit access.

Agriculture in Prey Kol is almost entirely focused on commodity production, particularly of cassava, and is largely financialised. Approximately 60% of the households we interviewed had outstanding debts. In Sambour, the perception is that Prey Kol is a more prosperous community with better material standards of living, which engenders feelings of envy and ambition. However, many Prey Kol farmers are precarious and more highly indebted than in Sambour. According to reports we collected, the median size of loans held is \$3,000, which is three times greater than in Sambour or Prey Veng. Unlike in Sambour, a large number of Prey Kol residents also migrate seasonally to Thailand to seek waged labour or provide labour for wealthier households in the village itself.



Plate 4: One of three roundabouts in Prey Kol village

3.2.2 Large-scale investment near Prey Veng

Another outside actor generating similar dilemmas for CZ residents is active in an area of chamkar to the northwest of Prey Veng village. Here, a wealthy investor, living abroad but with family ties to influential villagers, is buying land from farmers. Informants suggest that these land sales are all voluntary, and that the investor is willing to buy any piece of land a farmer wishes to sell for a good price, if it is situated in the higher ground suitable for chamkar to the north of the village. We were not able to conduct any interviews with households who have sold land to this individual, but we suspect sales will be motivated by the need to pay important expenses, as in other cases.

By integrating these plots of land, totalling up to 100 hectares by some accounts (although the configuration is patchy in some areas and interspersed with plots belonging to other farmers), this individual is developing large-scale plantations of multiple chamkar crops, including cashew, coconut, banana, and cassava. A small settlement is emerging comprising around 25 families related to the investor, which provides a willing labour force. The investor is also providing extensive patronage within Prey Veng village, such as financing opportunities for young men to study as monks, and there are plans to build a pagoda within the village. Many families, particularly those with familial connections, thus see this individual as a potential catalyst for prosperity in the community. However, other families understand the intentions and plans of the investor less clearly and are concerned that they may lose access to nearby lands in the future. They also question why environment officials allow extensive machinery and equipment, including multiple tractors to operate on the investor's land, while their own use is often penalised and requires payments.

3.2.3 Other land users

A final group active in the CZ are farmers living in surrounding areas, such as the market and administrative towns of Srayang and Kuleaen, or the nearby Pyou Chrouk village. Several of these farmers are known to cultivate lands which they have inherited or possessed for decades. In some cases, they were born in the villages but have subsequently migrated outwards. These land users are generally known and recognised by villagers and follow the same processes and rules as others in accessing land. However, other outsiders have engaged in land grabs of land further from the village, generating conflicts with villagers. For example, there is a complex case at Sambour, where a villager advised a landless relative to grab a piece of unclaimed land for her rice production. The relative was careful to leave a buffer of forest between her rice field and the nearby temple ruins. This relative was then approached by two other landless families from Srayang commune and agreed to let them take a portion of the land each, where they now grow cassava and have built homes. However, recently, a third individual from Srayang who is wealthier, has started to erect fencing that cut across this land. The first land user suspects this person intends to sell the lands. The village authorities are aware of what is happening but have not yet intervened except to inform the land users that they don't have a right to the land. This episode shows how complex and chaotic governance of land can be, and how carefully village authorities act to avoid upsetting potentially well-connected outsiders, as well as to avoid harming marginal families.

Finally, land use outside the CZ also influences the perceptions of residents. There are reports, which we were not able to verify independently, of land grabs taking place within the core zone of the PA, north of Prey Veng. These grabs took place at Veal Veng – a large area of natural grassland. Because of the open nature of this landscape, a group of villagers (perhaps numbering 42 families) had hoped to be able to request access to this land from the district and PA authorities. According to reports, they organised a site visit with the village chief, but when they arrived, they found the land had already been taken by what they believe to be a wealthy individual. This concerns villagers, many of whom wish to expand their landholdings and feel they cannot do so inside the community zone. They feel they have to take land in the protected forests before others do, at the same time this is very risky because of enforcement from PDoE officials, and so it needs to be done collectively and with the support of commune or district authorities. Persuading these authorities to back such claims is an ongoing and politically fraught process.

3.3 Synthesis: Current community zone management

The community zone now comprises four settlements, three of which are officially recognised. Two of these settlements, Prey Veng and Prey Kol, are formally recognised as sub-villages of Sambour. The Sambour village chief is therefore the only official village chief, however there are ‘group’ chiefs acting as de facto village chiefs in Prey Veng and Prey Kol. The fourth, unrecognised settlement is the small collection of houses on lands belonging to the investor near Prey Veng. A further settlement, Tel village, situated in a separate community zone to the northwest is technically also a sub-village of Sambour.

Land in the CZ is managed in a hybrid system, combining elements of customary or informal modes of access with increasingly formalised processes dependent on state authorities (Table 2). Informal methods of access being currently used include expansion into lands behind the kbal following customary rules, division of land amongst offspring, and purchase of land between villagers. Formal modes of access are similar but involve documentation and approval from the village chiefs and commune chiefs, especially through the provision of soft titles. To provide a soft title, the village chief may visit the plot of land, or summon owners of adjacent plots to seek their consent. These documents provide land buyers and owners with some degree of security and are accepted as collateral by lenders. However, since they are recognised and enforced only by village and commune authorities, they could be described as quasi-formal, albeit also illegal according to the land law.

Table 2: A summary comparison of changes in the land system since 1999

Property	Past system	Current system
Availability of land	Open-access forest	Most land claimed
Modes of access	Taking forest land, expansions, inheritance, grants	Purchasing, expansion, inheritance
Rights to expand land	Customary ‘kbal’ system	‘Kbal’ rights recognised but less secure because of MoE
Security of land claims	Recognition by neighbours and relatives	Recognition by village & commune authorities, ‘soft’ titles
Temporary access	Subsistence allowance, payment of produce	Annual rentals
Land use	Fallow and mixed-use lands for subsistence	Commodity production, limited by capital
Agricultural production	Labour-intensive ‘browah dae’	Capital intensive, chemicals, mechanisation

The mixture of formal and informal modes of access varies across the villages. Informal modes of access are still dominant in Prey Veng and Sambour village, where recognition of lands by neighbours or informally by the village chief, is usually considered sufficient to ensure the security of land. Soft titles are usually sought only as a means to access credit, or to facilitate sales with outside buyers who do not have access to social capital in the village. These documents therefore are used to legitimise claims to land that was originally accessed through informal methods. In Prey Kol, formalisation is more advanced and most of the land is soft titled. Prey Kol residents do not have customary rights to access further land, as this is not supported by the village chief or condoned by environment authorities.

Despite the central role afforded to the MoE under the PA law, environment authorities are not often involved in regulating access to land, and residents do not generally seek approval or recognition from PDoE to support their claims to land. The village chief and commune chiefs also rarely consult with the PDoE before providing soft titles. This is deliberate, because PDoE does not approve of land sales in the CZ. One village chief told us: *“Now, buyer and seller make their own documents, because the environment [PDoE] doesn’t allow selling”*. Villagers are able to modestly expand their landholdings following the customary rules and have these new lands formalised. Nevertheless, enforcement by the PDoE does prevent grabs of forests distant from the kbal. Rangers also prevent tractors and large equipment from entering the forest, thereby preventing large-scale expansion of lands, so most expansion of land following customary rules is small-scale and done using less efficient equipment. However, these rules are enforced unequally and those with sufficient connections or resources are able to circumvent them. For example, in Prey Veng, one respondent put the daily rate for tractor access at \$25. This respondent had purchased a plot of land situated past the ranger station and was therefore unable to make use of this land. However, the rules are applied unevenly. Respondents suggested that some rangers are more likely to accept such arrangements, while others apply the rules strictly. While the costs of tractor access also depend on the individuals’ connection. For example, a better-connected informant suggested they could simply offer the rangers food and drink. The large investor also has two tractors stationed permanently on her land, but it is unclear what arrangements have been made.

The PDoE has played a role in systematic land registration efforts, and many respondents reported that their land had been mapped or marked by rangers. Previously, this was done repeatedly for the participatory land use planning process, which identifies lands approved and deemed compliant by the PDoE. However, in practice this process has only been relevant for families participating in IBIS Rice because compliance with these land use plans is a condition for participation. Most other households do not refer to the land use plans as a source of security. In the last year or two the PDoE has again conducted a land registration as a part of Order 06, which will excise land from the PA and provide hard title to families who are poor or who have used the land for a long period (Hun, 2019). Most respondents could not clearly explain the purpose of these land measurements but do expect to get a hard title as a result. It is unclear how the measurements have been carried out. For example, whether they included only the kbal or also forested lands subject to customary claims. Preliminary data shared by PDoE showed that most of the land identified under this order falls within the community zone.

3.4 Stakeholder perspectives

3.4.1 Department of Environment

Protected area officials we interviewed held a strict interpretation of the 2008 PA law and see the CZ as a way to help resident families follow the law. They consider all land within the PA, including within the CZ to be state land. According to these officials, the provisions in the PA law (Box 1) mean that land in the CZ can only be used for subsistence (not for business development, for instance) by long-time residents with their permission. This means that these lands cannot currently have received any titles, including soft titles, with the exception of those being excised under Order 06. Local authorities providing soft titles are thus breaking the law. This also means that land in the CZ should not be bought, sold, or transferred. PA officials do not recognise customary claims as valid. However, typically they will approve use and expansion of customary lands by families who need it to support themselves. To verify this need, they defer to the judgement of the village chiefs. For PA officials, the challenge of CZ management is a lack of resources and rangers to enforce these rules, and a lack of cooperation with local authorities, who they accuse of corruption.

NB: subsequent to this research being carried out, WCS has initiated a process of engaging with the PDoE on CZ management. During these discussions, officials signalled their willingness to understand the changing nature of land use in the CZ and acknowledged that the rules and processes should be adapted.

3.4.2 Department of Land Management, Urban Planning and Construction

Officials at the department, with whom we spoke, had a good understanding of the protected area law, and were able to describe the four zones clearly. They agree with PDoE that land in the CZ is only for subsistence by long-term users, and that migrants and others should not be able to access land in the CZ. The purpose of the CZ is to eventually facilitate provision of hard titles to these long-term users. However, this has not yet taken place. The ongoing provision of soft titles by local authorities is not something they condone, and is illegal, although they recognise that there is considerable demand for this from residents and that local authorities need to respond to this.

The department is currently working together with the PDoE to arrange the hard titles in the CZ, in the context of a provincial working group chaired by the provincial administration, but it is the PDoE that determines eligibility. They expect that provision of lands in the CZ will follow subsistence needs and will therefore be modest, depending on the size of the household, without need for an upper limit. However, they recognise that once hard titles have been issued – families will be legally free to buy and sell their lands to anyone, although they would like to discourage this. After hard titling has been completed, new families or migrants wishing to seek access to land inside the CZs would need to receive through a Social Land Concession process, under Order 001, but the principles for this have not yet been established. The department could also cooperate with local authorities to keep lands in reserve for future use, for example by titling it to a community representative or the commune chief.

3.4.3 Local authorities

To understand the perspectives of local authorities we interviewed the village chiefs, but we expect their views to be largely representative of commune authorities as well. They

understand the CZ as an area that has been carved out of the PA for economic and agricultural development. They argue that the community zone needs to function as a free land market in order to facilitate this development, and that all the land in the community zone could eventually come under cultivation and private title. Although they are not clear on where the boundaries of the zone lie, they believe that most land in the zone is already subject to claims. They see access to credit and continued in-migration as essential components of development and are therefore eager to continue providing soft titles and facilitating land sales. They do not want the PDoE to become more involved in CZ management. They note that past attempts at holding land in common, such as reserving land for young families, have failed as outsiders have grabbed those lands.

3.5 Community perspectives on key issues in CZ management

In this section, I describe the key issues that need to be recognised and addressed in CZ management and discuss community perspectives on these issues using data from group discussions and with key informants. The 'community' is highly heterogenous in its view on CZ management, dependent on each individual family's means, social relations, needs, and histories. Many people are not aware that the CZ exists and confuse it with the CPA. Those who are aware do not know where the CZ boundaries are, as they have not yet been finalised and disseminated by the PDoE. To be able to speak concretely about lands situated within the CZ, we referred to satellite imagery in our discussions. Nevertheless, there are some shared concerns and expectations. Broadly speaking, community members understand that the community zone has been allocated for agricultural use and community development and have a different vision to the local authorities on what this entails.

3.5.1 Accessing & inheriting sufficient land

A key concern for many families is provision of land for the next generation. Families with financial resources often invest significant amounts in clearing their land or buying land from other families to provide for their children. In the past, this was also a significant motivator for in-migrants who lacked sufficient land in their home regions. Contrary to prevailing cultural norms, it is common for men in the CZ to remain in the village after marriage even if their wives are from outside, because land is cheaper and more easily available than outside the PAs. However, there are an increasing number of families who can no longer provide sufficient land, because they no longer have forested lands under claim, are prevented from accessing claimed lands by PDoE, or they have sold lands in the past. As a result, there are many young families in both villages with access to just one or two hectares of land. A key demand from any CZ management plan will be the provision of land for these young families. There is a widely held consensus that, although true needs depend on family size, five hectares would be a fair amount of land to provide for any family.

Most respondents agree that all the lands around the villages, including the forested lands which make up most of the CZ, are already subject to customary claims by individual households. Although respondents do not yet clearly understand where the CZ boundaries lie, we referred to satellite images during our discussions and respondents were able to identify by name most areas (i.e. hills, forests) within the zone, and confirmed that land there was not available. A trickier question therefore is which lands should be made available for eligible families? The simplest method for accessing land is where a family has sufficient land under customary claim but is being prevented from clearing this by the PDoE. In such

cases, they argue that permission should be given. Similarly, a proposal raised in Sambour was for households with claims to excess land to voluntarily transfer this to those in need. This might reflect the denser social networks enjoyed in the core of Sambour village, and there are doubts about whether this would be an inclusive process, but it is something PDoE could approve.

To involuntarily redistribute claimed lands to other families would be controversial, and politically sensitive. Most respondents are careful not to support such a proposal, as it could mean many of them will lose access to lands they claim. Informants suggest that village authorities would not be powerful enough to enact this on their own. Nevertheless, there might be some support for a redistribution of land if this was supported by higher political levels such as the district. In the past, village authorities have tried to reserve land for needy families, but these lands were eventually grabbed by outsiders. In Sambour, there is still a piece of land to the west of the pagoda, which is unused and which some suggest could be allocated in this way for construction of homes. However, there are disagreements about how this land should be used, with village and commune authorities seemingly having plans to build a new commune hall, police station, and market. Some in Prey Veng argue that they should be able to access lands inside the PA's other zones that they see as at risk of being grabbed by outsiders (see section 3.2.3).

A further question is what the process would be, if available land was identified, for allocating this land and deciding on eligibility. Most participants agree that if a family has additional forest land under customary claim, they should be given permission to divide this up amongst their children. Similarly, land-poor families who receive forested land from others should be given permission by PDoE to make use of it. Almost universally, participants agree that each family needs a minimum of 5ha to live, and that therefore any family with less than this should be eligible to receive additional land. Caveats are that the family should be from this village or have parents in the village. In Prey Veng, where there are multiple landless migrant households, such discussions are more complex, but respondents suggested that if the migrants had entered the village in the 'proper' way and were leading good lives in the village, that they should eventually also eventually become eligible. Participants suggested that these decisions could be made by the existing village governance structures – i.e., at a meeting with the group chiefs and village chiefs, as these are the individuals who best understand who already has land and who does not.

3.5.2 Restricting access to forested land

Processes for formalising access to land are only effective if there are also effective restrictions on land access. Despite the value of land to rural households, there is significant support within the communities for restrictions on land clearing. Some voices, particularly in Sambour, suggest that all 'anarchic' land clearing should be prohibited and prevented, unless it is approved on a needs basis through the processes described in section 3.5.1. This aligns with the views of PDoE officials and reflects a perception that some households are engaged in 'greed' and are using their means to take more land than is fair. Achieving this would require stronger enforcement from the PDoE, which some villagers would find acceptable if it were paired with processes for those in need to access land. A recognised challenge here is that enforcement is already taking place but is uneven and tilted in favour of those with power and wealth. Participants also suggested that a systematic land registration and titling effort, including mapping of claimed forest lands would clarify the situation and make it more apparent when households were using lands that they did not

have a right to. This would also help PA authorities and NGOs to identify the owners of key areas of forest, in order to work with them on conservation.

In Prey Veng, strict limitations on further expansion received less support. A very salient perception here is that land grabs are occurring throughout the PA, including in the core zone to the north of the village. This makes villagers worried and concerned that they will be left empty-handed if they don't find a way to secure all their claims within the CZ (i.e., by bringing it under cultivation), and potentially grab additional lands outside of it too. Villagers feel that they are already protecting and conserving the forests in the CZ, as they describe the lands they claim as land under their own protection, even if they do intend to use them in future. In both villages there is thus strong support for stronger prevention of grabs by outsiders, within and around the CZ. Participants point to PDoE as the responsible authority, but some would be willing to participate in patrols within the CZ if they were properly supported. They point to their experiences patrolling in the CPA, where they regularly experience a lack of support and follow up from the authorities, such as after forest criminals are arrested.

In both villages, there are concerns that an enforcement-based approach to preventing clearing would harm households in genuine need. Restricting access to land does not address the root drivers of land expansion and land sales. For example, families often sell land to meet emergency medical costs or to finance basic needs such as education. PA authorities and NGOs should therefore identify ways to support families in the CZ, to develop alternative sources of income and security, and to help them increase their income through compliant agricultural activities.

3.5.3 Regulating migration

In both villages, in-migration is seen as a positive thing when migrants come and respect village rules in accessing land. This means that they seek permission from the village chief before settling, and then access land with the consent of existing landowners, such as through purchase. Participants disagree with anarchic migration, such as the influx of families at Prey Kol. While it is unlikely that another such influx will occur within the CZ, unclaimed lands such as those being protected by the community in the CPA, or by the PDoE in the other PA zones, are more vulnerable. This should be prevented in the same way as land grabs, as described in section 3.5.2.

3.5.4 Managing land transactions & finance

Most participants agree that land sales are undesirable, and do not approve of forest land being sold purely to make a profit. They would rather see families holding on to their lands for future generations and for their own long-term prosperity. However, they also acknowledge that land sales can sometimes be the only way for families to survive difficult periods, such as medical emergencies or to make pressing loan repayments. For this reason, there is little support for restricting the ability to sell land in the CZ. Moreover, once land is titled, it will be legally difficult to do so. Instead, some participants (in Sambour) suggest that stronger restrictions on forest clearing (see section 3.5.2) would disincentivise sales and encourage families to be more careful with the land in their possession, because it would restrict their ability to compensate for sold land through clearing. Similarly, accessing credit and loans is seen as an increasingly essential means for improving living conditions and incomes, and restrictions on access would not be supported. However, there is

recognition that debts can become problematic for some families. Support would therefore be welcomed in managing and regulating finance provision, and in meeting emergency expenses.

3.5.5 Community Zone Governance

Participants indicated their preference for CZ management to be carried out by existing authorities applying new processes, rather than the formation of new governing bodies. For example, we suggested the establishment of a new village committee, akin to the CPA committee, to make decisions around land access and enforcement in the CZ. Respondents suggested this would be cumbersome and ineffective, with an unclear legal mandate that could potentially conflict with local authorities. Instead, they envisioned local authorities and PDoE clarifying rules around access to land and improving their coordination on this topic. The community would be able to input through the existing network of group chiefs, which would avoid the “chaos” of organising large village meetings.

However, a key concern is that current rules nominally enforced by these authorities are applied unevenly. Those with money are able to circumvent rules, while poorer families are dependent on the authorities. Literacy levels are also a concern, as many families are unable to prepare the documentation needed to request lands, further deepening their dependence on the village chiefs. In such a case, it is an open question how CZ management can be done more equitably, to encourage buy-in by poorer households, and avoid abuse by powerful individuals.

4. Recommendations

4.1 Community zone management charters

Community zone management charters should be developed by the MoE in collaboration with local authorities and community zone residents, as a basis for collaborative management of the community zones. These should be developed on a village-by-village basis to reflect the varying needs and contexts of each village. Therefore, the community zones could be further divided to reflect the lands used by each village, following a participatory process. The goals of these management charters should not be pre-defined by PDoE but should be negotiated with each community and should be informed by a participatory planning process (see below). Land users in the community zone not resident inside the villages, but whose claims are considered legitimate by residents, should also be included in planning processes, and impacts on other vulnerable users or landless residents also need to be considered and mitigated.

4.2 Participatory planning processes

Following the completion of land-titling under Order 06, a further participatory land use planning process should be conducted to clarify land uses for untitled lands. This would help to identify lands which are claimed by families, which lands contain commonly valued resources, and which forests are priority for conservation goals. This will inform the development of management charters because it will clarify the distribution of landholdings and land claims within the zone, enabling transparent deliberation on future management. It will also enable conservation incentives to be targeted at households claiming valuable forest.

4.3 Supporting community zone residents

Management consultations should aim to identify what support and assistance the community require in order to meet their basic needs and to be able to participate in conservation of priority habitats. Support should be provided unconditionally to all residents, but supplementary support could be targeted at landowners claiming ownership of priority habitats. This could include agronomic and business-planning support, such as the development of new conservation-friendly value chains, financial support such as favourable credit options or insurance, provision of medical assistance and access to education. In parallel with a community zone management plan, an investment plan could mobilise the resources needed to provide this support in return.

4.4 Prevent landgrabs outside the community zones

Land grabs in the core and conservation zones of the protected area undermine the incentives for community zone residents to steward their lands. PDoE should redirect enforcement and patrol effort away from the CZ towards these other zones. Reducing in-migration by landless households will also require deeper social safeguards at a national level and regulation of microfinance lending practices. Disused lands, such as disused economic land concessions, could be converted to social land concessions and redistributed to landless families, outside the protected areas.

5. Conclusion

Through an in-depth investigation in one community zone, situated in Kulen Promtep Wildlife Sanctuary, we have described a complex and rapidly changing agrarian landscape, which poses new challenges for protected area management. When the protected areas were established, households were engaged in subsistence agriculture on their ancestral lands limited by access to family labour. The PDoE interpret the establishment of the CZ in this light, as a way of enabling long-term residents to subsist legally within the PA. However, in the last decade, new cash crops such as cassava, access to credit from microfinance, elite-facilitated in-migration, and developing infrastructure have contributed to rapid agricultural changes. Many households are now engaged in medium-scale commodity production for international markets, facilitated and limited largely by their access to capital, which is used to purchase chemical inputs and hire labour and machinery. This has encouraged elites to facilitate land grabs and in-migration, widening social disparities and undermining the abilities of existing communities to engage in long-term management planning. These factors have also expanded the aspirations of many community members beyond subsistence.

The community zone is not being actively managed according to the stated legal goals, and ambiguities in the protected area law have not been effectively or equitably addressed. Current trends will likely lead to greater conversion of forest to agricultural land and increasing inequalities. While the PA law provides a key role in CZ management to the PDoE and MoE, we found that the PDoE plays a marginal role in land use decision-making in reality. Many decisions around land continue to be made informally between villagers, while local authorities up to the commune play a key role in formalising land ownership through soft titling, without consulting the PDoE. In part, this reflects the politically weak position of the PDoE vis a vis local authority, which have on several occasions forced the PDoE to accept large losses of forest inside the PA. However, the PDoE has also undermined its relationship with the communities by enforcing PA rules very strongly against small-scale activities at the same time that these large grabs are unaddressed, creating perceptions of injustice. This undermines the willingness of villagers to participate in conservation of lands within the CZ.

Beyond enforcement, achieving conservation will require interventions and programmes to support the community and address the underlying drivers of forest clearing, or to offer alternatives. Land clearing and land sales, the two activities that are most undesirable from a conservation perspective, are motivated by the desire to achieve a better life. Although there are increasingly wide wealth disparities amongst residents of the CZ, most are motivated to increase their incomes in order to be able to build comfortable homes, educate their children, and provide medical care for their families. A small number of families, increasingly comprised of in-migrants, are subsisting, and using land simply to survive. Currently, the obvious option for most families to achieve their aspirations, at least in the short-term, is to seek capital with which to finance the production of cassava, and to produce rice for their own consumption.

Research from elsewhere in Cambodia has shown that this development pathway is likely to lead to increased inequality and increasing demand for land (Mahanty and Milne, 2016; Diepart and Sem, 2018). Using force (i.e. enforcement) to close the forest frontier is likely to accelerate this social differentiation, impose costs on the poorest, and will be politically challenging given local authorities' support for neoliberal agricultural and land policies.

Instead, national level reforms should be supported which will alleviate the underlying drivers of migration into the protected areas. More equitable distribution of land could be achieved by reallocating disused economic land concessions, many of which have been cancelled in the last decade (Diepart, 2016). Reforms to the financial sector are required to prevent loss of land, as well as greater social protection programmes (Natarajan *et al.*, 2021). In the community zone, conservation authorities should work with residents to create alternative development pathways which meet their needs and aspirations. This could empower residents, many of whom hold marked pro-environmental values, and generate an important constituency for conservation. This could involve the development of new conservation-friendly value chains encompassing different cash crops, using conservation funds such as REDD+ to provide social security, and the provision of new legal mechanisms for communities to manage the community zones.

Such mechanisms could be established through a community zone management 'charter'. The establishment of such management charters, together with the clarity offered by the Order 06 land titling programme now underway, provides a chance for new institutional relations to be established. PDoE is most likely to achieve conservation within the CZ if it works in good faith with the community to agree on a shared vision for the CZ. This will involve honest discussions and consultations, as well as compromise. Most importantly for many residents, there is a need for clear and fair processes for families in need to receive access to sufficient land. If resident families are able to support themselves, enforcement actions against excessive clearing and outside land grabs will find more support in the community, and thus be more likely to succeed.

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