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Inside and outside the maps: mutual accommodation and forest destruction in Cambodia

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ABSTRACT

This article focuses on how climate change mitigation policies and economic land and mining concessions in Prey Lang, Cambodia, accommodate and facilitate each other physically, discursively and economically. Maps and project descriptions reveal that climate-related policies and extraction coexist in the same landscape, even the same projects. Knowledge co-produced by the authors and affected individuals suggests that climate change mitigation initiatives are not only intimately linked to economic intensification in Prey Lang, but they also contribute to conflict and dispossession. We argue that by attending to the cumulative effects of multiple projects in the same landscape and co-producing knowledge with affected communities, researchers can contribute to more socially just environmental policies.

RÉSUMÉ

Cet article porte sur les politiques d'atténuation du changement climatique et les concessions économiques foncières et minières à Prey Lang, au Cambodge, et comment celles-ci s'accroissent et se favorisent mutuellement, et cela, physiquement, discursivement et économiquement. Les cartes et les descriptions de projets révèlent que les politiques liées au climat et à l'extraction coexistent dans le même paysage et dans les mêmes projets. La coproduction de savoir entre les auteurs et les individus touchés suggère que les initiatives d'atténuation du changement climatique ne sont pas uniquement liées à l'intensification économique à Prey Lang, mais contribuent aussi aux conflits et à la dépossession. L'analyse des effets cumulatifs de multiples projets dans un même paysage peut contribuer à des politiques environnementales plus justes sur le plan social au Cambodge.

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Introduction

Cambodia is consistently ranked among the “most vulnerable” nations to the coming effects of climate change (Kreft et al. 2014). In addition to being most vulnerable, Cambodia is ranked among the “least developed” nations on the planet (Hirsch and Mandal 2015). These two narratives give rise to climate change mitigation (CCM) policies and

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policies instigating large-scale land acquisitions to increase economic production. Land-based climate change policies and land conversion for economic production often share the same landscapes, and both initiatives affect the lives and livelihoods of people living in these spaces. There has been insufficient critical reflection, however, on the cumulative and interactive effects of multiple projects within the same landscape or region (Hunsberger et al. 2017). This study demonstrates the application of just such a landscape approach to data analysis that also, following Hunsberger et al., relies on the co-production of knowledge with affected communities. It is thus positioned to see conflicts in their multiplicity and use that understanding to contribute to national policies and promote more socially just solutions.

Since Cambodia's opening to the global market in the early 1990s, after 20 years of civil war and instability, aggressive economic policies produced strong GDP performance of 7–10 per cent growth each year since 2000. The forests, mountains, rivers and fields of Cambodia feed this growth, as do the bodies of the dispossessed and the newly poor. None of this is new and it could describe transformations to the economic, physical and social landscape of any postcolonial country since the early days of colonial extraction (Pritchard, Wolf, and Wolford 2016; Ekins 2002; Solórzano et al. 1991). What is new and interesting is the spectacular “economy of appearances” (Tsing 2001) now visible in this era of global markets.

As industrialised production and consumption stand accused of altering the chemical balance of the planet's atmosphere to such a degree that no living thing will be exempt from the effects (IPCC 2007), something remarkable happens. The narrative of underdevelopment that has kept investment funds flowing toward projects of economic intensification is now forced to repackage itself in newly “climate vulnerable”, “developing” nations through strategies to mitigate and adapt to the coming effects of the very same economic activity (Kutter and Westby 2014; RGC 2013). Yet, the repackaging barely alters development initiatives. The strategies for CMM and adaptation are neither curbing nor changing the drivers or effects of climate change, but are instead opening a path through which investment money can flow and economic development can continue (Ingalls and Dwyer 2016; Aggarwal 2014).

Anna Tsing's economy of appearances describes how speculative gold brokers in Indonesia created a market and enticed investors to buy gold that did not exist. In this account, performance was central and it refers to both economic and dramatic performance. Tsing notes, “the self-conscious making of a spectacle is a necessary aid to gathering investment funds” (2001, 158). Since Tsing's provocative description, others have noted economies of appearances in the “spectacular productions” of biodiversity conservation in Tanzania (Igoe 2010, 376), the “phantom production” of biofuels in Madagascar (Neimark, Mahanty, and Dressler 2016, 255–257) and the display of high fashion by Brazilian urbanites performing “modernity” with their bodies and their purchasing power (Guano 2002, 191). All these invoke the “world-making” capacity of mediated forms in which multiple actors, not always with mutual intention or collaboration, create videos, documents, studies, products and statistics that direct the attention, intention and activities of individuals watching and participating in the spectacle.

The economy of appearances is also an economy of disappearances, however, and through it certain things are made invisible. The invisible can be affected communities or offending corporations (Igoe 2010, 385) and this obfuscation is achieved through the

“conjuring of scale” (Tsing 2005, 68). In the Prey Lang landscape of central Cambodia, for example, a conservation organisation produces monthly full-colour snapshots of endangered species or particular livelihood enhancements to show the successes of their project. What they never show are the sawmills inside the Economic Land Concessions (ELCs) and Mining Concessions (MCs), the commercial rubber plantations on land that used to be forest, the furniture builders in every village or the parade of trucks and tractors that haul wood each day from the recently protected area.¹ It is exactly this conjuring of scale, showing only selective bits of a much broader field, that we disrupt by taking a landscape perspective and co-producing knowledge with affected communities.

Using this method, we also expose ideas that shore up these appearances when we make the disappeared visible. Cambodian government officials speak of job creation and “reducing rural poverty” (Neef, Touch, and Chiengthong 2013, 1094), and sugar and rubber company managers really seem to believe they are bringing good things to the people: “I don’t know why they are so upset. Before we came here there was nothing, now look. We bring them so much and they just complain that it’s not enough” (interview, Manager Chhun Hong Rubber, November 2015). In these statements, the transformation of biodiverse forest landscapes or the dismantling of certain livelihoods is not only fully justified, but inherently good.

In *Society of the Spectacle*, Guy Debord posits a life in which an individual cannot recognise her own desires in the face of the dominant images of need to which she is daily exposed (2002 [1967], 10). Well-paid government ministers and project managers fully adopt a certain image of need – a need for conservation, or for jobs – and are an integral part of a distraction that separates the subject from what is being stolen from her (44). In Debord’s vision, this is the theft of action, of conscious and intentional activity. In our story, the theft of land, forest and water goes hand in hand with the theft of intentional action.

As described below, Prey Lang is a landscape in which the spectacle of conservation is performed through a Community Forest (CF) and protected area initiative, a reforestation project and a REDD+ project.² Economic growth is already performing here, with 45 (PLCN 2014, 8) ELCs and MCs and a growing number of Social Land Concessions (SLCs) that supply jobs and alleviate poverty on over 500,000 hectares of previously forested land (Forest Trends 2015). Our findings suggest that, while CCM and large-scale land acquisitions may seem to have contradictory objectives, they in fact reinforce and facilitate each other physically, discursively and economically at the landscape level. Their convergence ignites conflicts along paths well-trodden by global and national economic development and anti-poor land initiatives (Margulis, McKeon, and Borrás 2013; Springer 2013) and creates new forms of cooperation between conservation and development organisations, government officials and private companies as they collectively bend to the primacy of global market production. Economic growth is not to be compromised by climate mitigation activities.

Additionally, we find that Carbon Conservation initiatives in the Prey Lang landscape do not currently conserve forests, but rather succumb to the extractive intentions of ELCs, MCs and SLCs. These initiatives are not simply institutionally weak in the face of economic extraction; we find that they are actually driving economic intensification and land conversion in three ways: by providing weakly protected areas right next to areas designated for production and conversion, by encouraging people into market-based

economies and by ignoring large-scale forest clearing inside or adjacent to their project areas. A landscape approach informed by locally affected people permits a better understanding of conflicts and stakeholders at multiple scales and, we argue, can open new pathways for socially just solutions and effective environmental policies in Cambodia.³

Methods

The authors are part of a project⁴ research team that combines academic and advocacy skills. Thuon works for an advocacy non-governmental organisation (NGO) in Phnom Penh, holds an MA and is pursuing a PhD. Work is a postdoctoral research fellow on the project. The empirical research for this article was conducted by the authors between January 2015 and May 2016 and combines participant observation with formal and informal interviews, group discussions and secondary literature reviews. All interviews were conducted in Khmer (Work is fluent in Khmer and Thuon is native Cambodian). We conducted 35 group discussions and 20 interviews with affected communities and local activists, 10 interviews of local-level government officials, seven interviews with national-level government officials, two interviews with company representatives and 22 interviews with relevant NGO representatives. We assisted grassroots researchers in their own research projects and participated in forest patrols, spending four nights and five days in the forest on three separate occasions. In addition, our team attended meetings at the provincial and national level related to forestry, conservation, REDD+ and Community Forests and, through long-term participant observation, has been part of numerous informal conversations among the stakeholders in the Prey Lang landscape.

Our methodological approach has three components: a landscape perspective, co-production of knowledge by academic researchers and affected communities and support for actions for change. As the framework article for this special issue notes, a landscape is a place in which “physical and socio-cultural elements occur in localised, spatially specific combinations and where human actors dynamically interact” (Hunsberger et al. 2017, 10). While ecologically and socially fluid, it also holds continuities. “A landscape is thus a space larger than a farm but smaller than a region, in which physical, ecological and human dimensions co-exist as a product of socio-ecological and cultural co-evolution” (Hunsberger et al. 2017, 10). In Prey Lang, the landscape ends at the locally conceived boundaries of the forest; a boundary understood through the co-production of knowledge with affected communities, visible in Figures A1 and A2 in the Online Appendix.

The co-production of knowledge by academic researchers and locally affected people was facilitated through research skills training with the Prey Lang Community Network (PLCN), a group of local activists patrolling the Prey Lang forest and combatting forest crimes since 2002 (Parnell 2015). Our team accompanied local researchers on the patrols and visited affected villages. We also draw on data collected by local activists independently from our project’s research objectives; this added key insights to our analysis, especially in relation to Community Forests and forest destruction in Prey Lang. One limitation of the study currently is the small number of national-level government officials and company representatives interviewed. Despite this underrepresentation, the data we can marshal from multiple scales allows us to substantiate claims about the economy of appearances and disappearances we describe in the Prey Lang landscape.

The third component of our method, supporting action for change, entails bringing what we learn from affected communities to office-bound stakeholders. Right now, this means contributing to new environmental policy documents, publishing and disseminating case study reports to relevant stakeholders among the donors, NGOs and ministries, and publishing peer-reviewed academic papers. We also try to make spaces in which fractured community groups share their concerns. To help address the conflicts between PLCN and Community Forest committees described below, we had our trained grassroots researchers accompany us to interviews and evaluate Community Forests in their areas. The result was an opening to discuss shared concerns and to think together about possible solutions. We expect these conversations to continue.

The following sections will discuss the Prey Lang landscape and the economies of appearances and disappearances that arise where multiple projects interact in the same landscape. We will begin with a selective historical overview of salient events.

Historical, national and international perspectives

We offer here a selective overview of Cambodia's current national extraction environment, which took shape over the past 30 years, and the historical and contemporary legacies now etched in the landscape that are still shaping events. In 2000–2012, the Royal Government of Cambodia (RGC) issued hundreds of ELCs/MCs, with the highest number awarded in 2011. Most recent estimates suggest that almost 4.5 million hectares of land were awarded to concessionaires, accounting for about 25 per cent of Cambodian territory (Messerli et al. 2015, 141). Not all of this land has been converted to plantations, and in 2014 the RGC reclassified more than 600,000 hectares country-wide from ELCs and forest concessions, returning it to state land (MLMUPC 2014, 1). Figure A3 (Online Appendix) shows the extent of cleared areas (in red) in Prey Lang ELC in 2014; mature rubber plantations are not red. Clearing has continued and we estimate that today the awarded concessions are about 40 per cent cleared.

ELCs/MCs were instituted to control the aggressive logging concessions and more effectively capture revenues from their timber mining activities. Taxable logging concessions began as early as 1993, one of the first development initiatives recommended by the World Bank (World Bank, UNDP, and FAO 1996; Carmichael and Nara 2002). These concessions were intended to rein in the un-taxed forest extraction held over from the timber-financed civil war (Le Billon 2000; Davis 2005). By the year 2000, 30 forestry concession zones covering about 6.5 million hectares (McKenney et al. 2004, cited in Neef, Touch, and Chiengthong 2013) had been awarded to Cambodian military and government or business elites as well as to Thai, Malaysian and Singaporean companies (Le Billon 2002). The privileging of well-connected Cambodian elites that defined forest concession awards continued into the ELC/MC initiatives, and tycoons who made their fortunes in the early timber concessions converted their holdings (GW 2007). Up until ELC cessation in 2012, the Ministry of Environment issued ELCs in over 13 per cent of National Parks and Protected Areas, and the Ministry of Agriculture, Forestry and Fisheries (MAFF) prioritised densely forested areas for ELC awards (Forest Trends 2015).

Both forestry concessions and ELC make space for CCM policies, but the latter contributes more greenhouse gasses to the atmosphere by clear-cutting, burning and tilling the soil. It gives rise to localised climate change effects (like drought and flooding) and

replaces the natural forest with monocrop plantations. ELC crops were influenced by global commodity prices and the ELCs in Prey Lang grow rubber and sugar cane,⁵ with the exception of one “forest restoration” concession that grows acacia trees (more on this below). Despite the claims of producing commodities for the global market, timber mining continues to be one of the main activities of concessionaires across the country, driving deforestation (Milne 2015). In a radio interview, the Ministry of Environment (MoE) chief of cabinet at the time claimed that concessions would “improve job opportunities for local people” and that one of their main purposes was to “shift people from traditional ways of living, including hunting in the forests, to salaried labor on plantations” (Aun 2015).

The social and ecological effects of these policies are dramatic. For displaced and dispossessed families, neither wage labour nor small-scale market production provides enough monetary benefit to offset the loss of forest and farmlands. This fact, along with in-migration, drives further deforestation for small-holder market crop conversion (Bidulph 2016) and the development-affected families in our research sites are poorer now than they were before the ELCs (Jiao, Smith-Hall, and Theilade 2015; Keating 2013; Neef, Touch, and Chiengthong 2013). Continued illegal logging further degrades forest resources (Castella et al. 2013), and often militarised clashes between dispossessed communities and companies have become the norm (Touch and Neef 2015; Peeters 2015).

The government halted new ELCs on 7 May 2012, amid increasing criticism and an impending election. It also launched the “leopard skin policy”, stating that land already occupied by families would be acknowledged and excised from ELC zones (ADHOC 2014; Milne 2013). Additionally, MoE cancelled 23 of its 113 ELCs, totalling 90,682 hectares (ha), and MAFF cancelled or reduced 71 ELCs covering a total area of 656,380 ha as of 21 January 2015 (Grimsditch and Schoenberger 2015, 85; Oldenburg and Neef 2014, 19). This gives the appearance of slowing economic expansion and forest loss while Cambodia still has significant (although greatly reduced) forest cover. At the same time, both national and regional officials were empowered to issue social land concessions, designed to provide land for the landless (Neef, Touch, and Chiengthong 2013), and in the pre-election atmosphere a large number of SLCs were awarded (Titthara 2014). The SLCs create their own dense economy of appearances that we cannot fully explore in this article, but will touch on below.

Between 2000 and 2012, Cambodia lost over 7 per cent of its forest cover, 70 per cent of which was in dense areas (Hansen et al. 2013). International attention to the role of remaining global forest stocks in mitigating the increases of carbon emissions has spawned numerous initiatives for making the non-conversion of forests as profitable as their conversion (Corbera 2012). Such initiatives fuel the development of carbon capture programmes, an objective in Cambodia’s 2014–2023 Climate Change Strategic Plan (RGC 2013). In anticipation of REDD+, branches of the MoE are currently building their capacity to administer these carbon capture concessions with the support of international donors (Khun 2012; FAO, UNDP and UNEP 2010).

The first REDD+ pilot project in Cambodia was based in Community Forests (zones of legally recognised community-held forest) in Oddar Meanchey and many were hopeful that it could slow the region’s rapid deforestation and benefit local livelihoods (Poffenberger 2009, 287–288); it did neither (Pasgaard and Chea 2013). The other active project, in the Siema Protected Area, has suffered similar challenges. Both projects continue, but the

inability to halt illegal logging, establish strong community management and market the carbon continue to plague them. The sale of environmental services in Cambodia started as early as 2004 (Milne and Chervier 2014), and the roll-out of REDD+ initiatives that started in 2008 with the Oddar Meanchey project continues today at a slow but steady pace. The Prey Lang landscape has one newly implemented REDD+ project, discussed below, and another supported by Japan is under negotiation. These carbon capture initiatives move into already well-populated economic extraction arenas in Cambodia and this complex intersection of conservation, carbon capture, Community Forest, ELC/MC and SLC informs our investigation in Prey Lang.

The Prey Lang landscape

The Prey Lang landscape is a massive forest, one of the largest contiguous lowland forests remaining in Southeast Asia, and is home to numerous species. Its size is variously reported, from 300,000 to 600,000 ha. The difference between these figures relates to the motives of map makers, but it also reflects regional changes in forest cover since Cambodia opened to the global market in 2000. Figures A1 and A2 (Online Appendix) show the 600,000-ha area relative to the rest of the country and in close-up, respectively. The forest is at the juncture of four provinces: Preah Vihear, Steung Treng, Kampong Thom and Kratie. Prey Lang lies between the Mekong River and the Tonle Sap Lake in eastern Cambodia and is a watershed for these vital rivers.

The dramatic halt to economic development due to Cambodia's war in 1970–1999 played an important role in forest preservation. Prey Lang was full of warring factions until the 1991 Peace Accords. Figure A4 (Online Appendix) shows forest cover in 1989, when the only development visible is long-present rice fields on the forest's western edges (in orange). The large forest west of the Sen River (river bed in orange) is the Beung Per Wildlife Sanctuary. To the north-west is Prey Preah Roka, which connects Kulen and Preah Vihear forests to southern Laos. In contrast, Figure A5 (Online Appendix) shows the reduction in forest cover by 2014.

This region was until April 2016 designated as part of the Permanent Forest Estate and considered a “production forest”, which means it is available for economic exploitation. As such it fell under the Forest Administration branch (FA) of MAFF (Lambrick et al. 2014, 373). Both Khmer and indigenous Kuy people inhabited the area for generations, and the ancient temples and metal forging kilns of the Kuy dot the landscape (Keating 2013; Swift 2013). Our research reveals that both physical and social landscapes are being dramatically transformed as traces of the ancient sites and places for the next generation of swidden farmers are demolished by extractive concessions and the forest succumbs to freelance logging.⁶

ELCs/MCs and Carbon Conservation

In this section we look specifically at three types of concessions inside the Prey Lang landscape: ELCs, MCs and Carbon Conservation.⁷ These multiple concessions capture resources above and below ground and keep gaseous carbon resources solid, in a mosaic of intersection and overlap.

ELCs and MCs

Figure A6 (Online Appendix) shows the proliferation of extractive economic concessions over the Prey Lang landscape. The forest is the dark green area, the ELCs issued by MAFF are marked in red and the MCs issued by the Ministry of Mines and Energy are blue. MC data are particularly difficult to access and we cannot confirm all the companies depicted. More concessions are pictured here than are visible on the ground. Citizen researchers describe mining operations that change names frequently, stop and start operations without consultation with communities and form and break alliances between companies in the landscape. This detail exemplifies the power of our method, in which citizens supply important contextualisation for “official” data. Our academic and advocacy partners also supply information to grassroots communities about the projects and companies awarded rights to their landscape. Citizen researchers use this information to monitor the area for company activity and avert conflicts before they begin by presenting evidence-based land claims to authorities.

The impact of ELCs on local communities in the Prey Lang landscape has been profound. Companies cleared village lands with impunity both before and after the “leopard skin policy”. Data we collected with citizen researchers revealed no village that provided free, prior informed consent to the company and we are unable to find documents of environmental impact assessments from any ELC in the area. Local people report that companies destroyed rice fields, plantation lands, spirit forests, graveyards, ancient temples, ancient iron smelting kilns and all nearby forest resources that communities previously used for food, medicine and other forest products (data aggregated from field research documents from 2015–2016). Reliance on forest production in the Prey Lang landscape before the ELCs was nearly 100 per cent (Michaud 2013), but the damage goes beyond simple economics. The destruction of ancient sites claimed by the Kuy indigenous communities, as well as spirit forests and graveyards, has uprooted entire traditions and practices of daily life.

Carbon Conservation and REDD+

Conservation and REDD+ initiatives also claim resources in the Prey Lang landscape. The first REDD+ initiative in Prey Lang was signed into agreement in July 2015. The new Korea–Cambodia Tumring REDD+ (T-REDD) incorporates 14 Community Forests as well as state-owned permanent forest estate in an 111,298-ha area. The 14 Community Forest communities receive special treatment and funding from the project, which aims to expand community-based authority beyond the Community Forest boundaries into state-owned land. This project is Cambodia’s first state-managed REDD+ project and is administered by the FA in cooperation with the Korean Forest Service. The proposed REDD+ project with Japan, while still in negotiation, has limited the size of the T-REDD.

A protected area initiative has been underway in Prey Lang since 2011.⁸ Conceived and promoted by a prominent international NGO working in the Prey Lang landscape, it needed to be ratified with a sub-decree from MAFF. Local residents were happy to have government interest in protecting the area from destruction by forest concessions, ELCs and the freelance logging they encourage. Yet, they were not at all satisfied with the way the initiative was instituted. The written portion of the sub-decree clearly states two things: first, that local communities are “protected and recognised for their rights to traditional usufruct”, and, second, that many traditional usufruct activities are

prohibited⁹ (RGC 2011, articles 5 and 6, respectively). The appearance and disappearance of local usufruct rights in the sub-decree dramatically affects the livelihoods of families using common forest resources to reproduce their societies.

The protected area strategy suggested a buffer zone of Community Forests (CF) around the “core zone” of the protected area, from which local residents could continue to sustain their livelihoods in specially designated areas of community management. In this scenario, residents would protect and use the forest products inside the Community Forests¹⁰ and the FA would protect the core zone. Local community members, especially the PLCN, strongly objected (FGD,¹¹ PLCN Kratie, February 2015). Not only was their access to common forest resources being forcefully curtailed by the protected area sub-decree, but those same resources were also put under the administrative control of local authorities, who were also for-profit frontier capitalists. Many FA, police, military and local government officials are involved in both protecting ELC interests and illegal logging. Increased poverty and increased illegal logging among previously market-independent communities has been pronounced. One local report recounts the following: “We never needed the money for food. We collected resin to sell and buy other things [...] Now the fish and the forests are gone and we are forced to sell the trees instead of the resin. If we don’t sell them, they cut them anyway” (FGD, PLCN Steung Treng, March 2016).

The economy of appearances and disappearances

Along with the forest, the forest economies of shifting cultivators are rapidly disappearing in Cambodia. Using maps, shapefiles, and primary source data, we show in this section how ELCs, MCs, SLCs and Carbon Conservation initiatives mutually shape each other at the landscape level. Through wilful ignorance, intimate accommodation and structural complicity, Carbon Conservation initiatives are not only accommodating but also facilitating and actually driving market-based economies of extraction and accumulation.

The proposed conservation area

The conservation initiatives relegate people to the Community Forest, expecting conservation of the larger forest by government officials in the FA. The PLCN claimed the rights and authority to patrol outside the Community Forest, for which they received two international awards and antagonism from the FA. The Protected Area negotiations involved promises and discussions between the FA, local community representatives, NGOs and the conservation organisation. The FA was regularly pressured by all stakeholders to ratify the sub-decree (NGOF 2015); with each request MAFF shrank the protected area (Figures A7–A9, Online Appendix). The MoE recently took control of the forest through a protected area sub-decree that captures 431,683 ha (Figure A10, Online Appendix).

Figures A7–A9 represent successive generations of proposed maps (2011, 2014, 2016) for the Protected Area sub-decree. We want to highlight two important features with these maps. First, the conservation boundary intimately traces the boundaries of the ELCs, at once drawing them out of any area to be conserved and allowing extraction and conservation to share a boundary, with no buffer zone. Second, the northern MCs are partially drawn out of the 2011 conservation map and are fully drawn out of the final version. It is important to note that not all of the ELCs cleared are converted into plantations and

that mining operations in the area are in the early stages. Cancelling or shrinking these future forest conversions, however, was not part of the negotiations described to the researchers by the conservation organisation project director or community representatives.

FA unwillingness to sign the Protected Area sub-decree, and the multiple generations of acceptable boundaries they presented to the community and the conservation organisation, demonstrates the power of MAFF as the purveyors of natural resources into flows of global production. It further shows how Carbon Conservation initiatives must bend, morph, and accommodate ELCs and MCs. At each new mapping of the protected area, the conservation organisation's project director winced, but the project maintained its close relationship with the FA. The director commented, "we gotta [sic] get that sub-decree signed [...] we have invested 20 million dollars to conserve Mondulkiri and Prey Lang. Right now we have nothing" (interview with project director, 7 July 2015). With each new map, the conservation organisation's original vision of a core zone surrounded and protected by a buffer of Community Forests was forced to adjust to reflect the situation on the ground. Not only was the protected area disappearing on the map, the whole area was being aggressively logged. Additionally, 20 Community Forests established through the programme were completely deforested; six by ELCs, seven by migrants and elite capture and seven by Community Forest communities trying to capture some value from the forest for themselves. All Community Forests around Prey Lang are at risk and most are separated from the core zone by ELCs, MCs and SLCs.

The accommodation goes beyond mapping, however, and is deeper than government ministries manipulating donor organisations. The project director's close relationship with MAFF and FA, necessary to ensure that the project goals were achieved, demonstrated both wilful ignorance and intimate accommodation. For example, at a provincial-level meeting on strengthening forest law, paid for by the conversation organisation, FA and MAFF officials presented evidence implying that swidden cultivation, charcoal production and for-profit illegal logging by villagers were the main drivers of deforestation in Prey Lang. "We have solved all problems with ELCs and are working tirelessly to stop forest crimes", one FA official responded to villager questions about ELC clearing and logging. When PLCN members pressed the organisers about SLCs, corruption and bribes, the response was an unveiled threat: "Do you want to find yourself in a dangerous situation?", the official asked. At the end of the meeting, the deputy director, who was separated from his translator during the meeting, declared how happy the organisation was to be working with this group, "so dedicated to protecting Prey Lang" (meeting notes, Kampong Thom, October 2015). This was wilful ignorance.

On another occasion, the project director repeated a promise made by the head of the FA, who said that if he knew where the sawmills were in Prey Lang, he would close them down. Our research team gathered data on the ELC and SLC sawmills as well as small-scale saws making furniture for the Phnom Penh market. We used information from grassroots researchers, from other reports documenting ELC involvement in illegal logging and satellite imagery of sawmills and of heavy deforestation outside concession boundaries and along timber transport routes. We received an immediate response that the sawmill at the SLC site was long closed, but saw no other action on our report. One month later, using drone photography, we documented a fully operational sawmill (Figure A11, Online Appendix) inside the SLC, with saws, logs, trucks and two big

roads, one into the deep forest and one that cuts through a REDD+ Community Forest at the back of the concession (Figures A12, A13, Online Appendix). On 6 March 2016, we sent another report to the project director with these photos and other information about corruption and bribes in forest law enforcement. It was acknowledged as disturbing, but the SLC remains fully operational, as do the conservation organisation's close relations with all government officials involved. The only "Project Snapshots" about Prey Lang issued by the organisation during this period highlighted a traditional music performance called "The Beauty of Cambodia's Forests".¹² This was intimate accommodation.

Importantly, the livelihood enhancement strategies of this carbon conservation project, indeed of most conservation and development projects, involve promoting deeper engagement with market-based activities among previously forest-sufficient communities. This organisation promotes chicken raising and cashew and cassava production, in addition to selling non-timber forest products and eco-tourism initiatives. Small-scale forest clearings for plantation crops are an important driver of continued encroachment in the Prey Lang forest (FGD PLCN Kratie and Steung Treng, March 2016). This is structural complicity.

Korea–Cambodia REDD+

Structural complicity is also at the foundation of the REDD+ project, through which carbon emissions continue in one place in exchange for maintenance of forests in another place. In an unintended irony, the first REDD+ project in Prey Lang is mapped (Figure A10, Online Appendix) in a close embrace of the first ELC awarded in 2001 (see GW 2007, 19–59, for a detailed discussion). According to its press flyer, the T-REDD project will "enhance current forest protection activities, provide alternative economic opportunities to surrounding communities, and reduce development that causes deforestation" (WW 2015). The REDD+ boundary conforms exactly to the edge of the proposed Protected Area and encircles the Tumring Rubber plant. This intimacy is more than geographical: it is structural, because REDD+ is designed to offset extraction and consumption.

This act of "mapping in" was first accomplished through the Community Forests of successive conservation initiatives, which were then surrounded by the T-REDD project. Establishing Community Forests did preserve some forests, but it mostly opened other forested land to conversion. Many Community Forests stand like forest islands cut off from the big forest by the ELCs, SLCs and local-level agricultural conversions. Community Forest committees lament this loss and worry that "no one is protecting the big forest; [the Community Forest] may be all that's left" (FGD, PLCN, March 2016). Even land mapped into the initial T-REDD disappeared when it was awarded to an SLC (that depicted in the drone photos, Figures A11–A13). Like the abovementioned Protected Area with ELCs and large sawmills against its boundary, the REDD+ project has a sawmill in its centre and both Carbon Conservation projects continue as if the company is not there. One FA official remarked, "we don't want to offend them [officials who granted the SLC] and don't want to cause them to stop the REDD+ program" (interview FA, 17 December 2015).

Forest restoration fictions

To conclude our discussion of the economy of appearances and disappearances in the Prey Lang landscape, we introduce a case in which the constructed appearance of a land

concession deliberately obscures the intention of the project. The concession (Figure A10, Online Appendix, outlined right in turquoise) is a 34,007-ha “forest restoration” project run by a Korean subsidiary of the Hanwha chaebol.¹³ This is not an ELC but a public-private partnership, designated by a ministry *Prakas*¹⁴ to “restore the forest [...] to stop forest clearance, to stop slash and burn activities, and to stop the illegal claims of the trees [...] through reforestation and biodiversity conservation and to reduce the utilisation of natural forest by increasing the productivity of artificial forests” (RGC 2010b, article 2). Under the initial 2010 sub-decree, the company is to pay USD89 million over 25 years to the FA to secure partnership in this land described as “degraded forest” (RGC 2010a, 1). References in the MAFF *Prakas* to clean development or “other mechanisms that contribute to the reductions of greenhouse gas emissions and climate change mitigation” (MAFF 2010b, article 2) further enhance the concession’s appearance as an environmental protection activity.

On the ground, this company is engaged in clear-cutting and aggressive deforestation, monocrop tree plantation and the destruction of community land holdings and Community Forests (Scheidel and Work 2016). Both satellite data and our on-site research show a forested landscape, not primary forest but not the degraded forest lands described in the ministry documents. The company was awarded land in Beung Chas and Kampong Cham communes in Kratie province and in Siembok commune in Steung Treng province. The first land consumed by the company was community rice, plantation and nearby forest land in Kratie, driving some to clear new land deeper in the forest (FGD, PLCN Kratie, March 2016). The company promised local officials they would build roads and schools for the community, none of which were begun at the time of this writing (interview, commune chief, 9 February 2016). The jobs provided by the company were reportedly unstable and salary payments were inconsistent (FGD PLCN, Kratie, December 2015); since February 2016 company jobs decreased from nearly 800 to only tree planters (FN, Kratie, 6 August 2016). The most recent and most devastating effect of company activities has been on the streams in the area. For as long as residents can remember, these streams used to flow well into the dry season. After the company cleared the forest, they dry up when the rains stop (field research PLCN, March 2016).

In September 2015, the managers from this company were invited to join the technical working group on forestry reform (TWG-FR 2015), which has in it representatives from relevant line ministries, donors and international NGOs involved in forestry activities. When our team presented this group with the above information in May 2016, they were collectively surprised. Nonetheless, the offending company remains a member of the technical working group and at the time of writing has mapped land to clear in Steung Treng.

Conclusion: inside and outside the maps

Examining large-scale land acquisitions and climate change mitigation policies in the Prey Lang landscape shows more than the destroyed forest and transformed lives at the bottom of each form of capture. The landscape provides a particular view of an economy of appearances in which Carbon Conservation projects butt up against SLCs, ELCs and MCs and can reframe an industrial tree plantation as forest restoration. In this landscape, governance tools that draw boundaries around protected

areas reveal a mosaic of interlinked administrative regions that show how these seemingly contrary activities are not only similar in character (Rocheleau 2015; Holmes 2014; Kelly 2011; Corbera 2012) but are also actually facilitating each other in their shared economy.

The Protected Area is physically mapped around ELCs, excising them from recognised forest areas while small Community Forest boundaries restrict the forest commons to discrete plots cut off by ELCs from the protected forest. This configuration creates simultaneously erupting landscapes of conflict. Local residents are confronted by companies literally destroying their native landscape, by Carbon Conservation initiatives that restrict their access to what remains and by policies that split community solidarity and support corrupt government activities. The Carbon Conservation initiatives in this landscape mark at once a boundary and a frontier and, by so doing, present the appearance of conservation while facilitating destruction.

With this article we show how the benevolent façade of both development and CCM initiatives is cracking and the entitled are struggling to keep up appearances, something long-evident to citizen researchers, who state that “all this development is ruining our lives” (personal communication, Mr Som No, July 2015). Persons previously able to support themselves and reproduce their society with marginal market engagement are being encouraged toward market dependence.

A large number of individuals, governments, corporations and organisations are involved in transforming the livelihoods of people living at the edge of Prey Lang forest. We do not name all of the organisations or the individual players involved in the processes we document here. This is purposeful. There are multiple actors creating the economy of appearances in which the forest continues to shrink, and yet the development and conservation of Prey Lang is sustainably achieved. This is not unique to Prey Lang (see Milne 2015; Pasgaard and Chea 2013). Case studies from elsewhere in Cambodia and around the world recount these economies of appearances involving multiple actors (see Rocheleau 2015 in Chili; Holmes 2014 in Chiapas; Solórzano et al. 1991 in Costa Rica). We argue that a focus on placing blame, on determining who did what to whom, obscures the larger structures inside of which these individual agents work and perpetuates the fiction that forests and communities are being destroyed because a few bad apples do not follow the rules. This does not mean that academic activists should stop calling individual companies, banks and governments to task for their human rights abuses. We do suggest, however, that greater attention be paid to the structural contradictions inherent in Carbon Conservation initiatives, such as forest restoration and REDD+, which neither curb nor change the drivers of climate change.

Individual agents are currently writing many of the same broken structures into new environmental laws being drafted in Cambodia in efforts to promote economic development and mitigate its consequences at the same time. This process is rife with conflict and with its own economies of appearances and disappearances, but could alter the role of citizens in environmental protection. Our research approach positions us to bring the knowledge and interests of grassroots stakeholders into the drafting process. In this way citizens can position themselves to engage policy makers and be part of enacting policies in ways that may be more socially just and inclusive.

Notes

1. On 28 April 2016 Prey Lang was signed into Protected Area status along with five other forest areas. Negotiations are still underway and the full impact of this move remains uncertain. The current changes do not alter our story, but will add to it in the coming year.
2. The acronyms REDD and REDD+ refer to the “Reducing Emissions from Deforestation and Degradation” mechanism under the United Nations Framework Convention on Climate Change (UNFCCC).
3. The Ministry of Environment (MoE) is scheduled to draft two important legislations by 31 December 2016: an environmental code for all line ministries and all land and water development, and a co-management initiative to increase authority and responsibility of local citizens in forest protection. These initiatives ignite both hope and skepticism among stakeholders in Prey Lang.
4. The Mosaic project is one of seven projects funded through the CoCooN consortium (Conflict and Cooperation over Natural Resources in Developing Countries). See Hunsberger et al. (2017).
5. Sugar cane is a flex crop that feeds into the global production of ethanol, an important climate change mitigation policy that we do not discuss in this article.
6. Although logging by local residents is technically illegal, because they are paid by company middlemen and are known to local authorities and to all other villagers, it is more accurate to call their work “freelance” rather than illegal logging.
7. We use the term Carbon Conservation to capture REDD+, reforestation and conservation initiatives in Prey Lang. We treat each separately as well, but they are intertwined in this landscape and exert similar pressure upon citizens.
8. Recently nullified by MoE, see note 3.
9. Prohibited activities include: processing non-timber forest products in handicraft bases; using kilns; prospecting minerals; taking lime, coal or salty soil; clearing natural forested land for agricultural crops (swidden cultivation); collection of timber and non-timber forestry products; and hunting activities that affect forest and all kinds of wildlife.
10. These CFs ranged in size from 550 to 3,000 ha; most CFs are 1,200–1,500 ha.
11. Here and throughout: FGD, focus group discussion.
12. https://www.flickr.com/photos/usaid_cambodia/25623043924
13. A chaebol is a family-operated, government-supported business particular to Korea. These are very large and powerful companies; the best known is Samsung. Hanwha makes munitions and other defence products (as depicted on the webpage listed with the Cambodia Yellow Pages and Chamber of Commerce: <http://www.hanwhacorp.co.kr/eng/index.jsp>. Its new website has a greener, child-friendly appearance: <http://www.hanwha.com/en.html>).
14. In the Cambodian legal structure, a *Prakas* is a legal instrument issued or enforced at the ministry level.

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Online Appendix

Inside and outside the maps: mutual accommodation and forest destruction in Cambodia

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Figure A1. Cambodia with Prey Lang area outlined (rectangle).

Source: Greater Mekong Subregion (GMS) Atlas of the Environment (2nd Edition). Adapted from the GMS Information portal, http://portal.gms-eoc.org/uploads/map/archives/map/CAM-Overview_1_hires_2.jpg/ with permission from GMS Environment Operations Centre, Bangkok, Thailand.

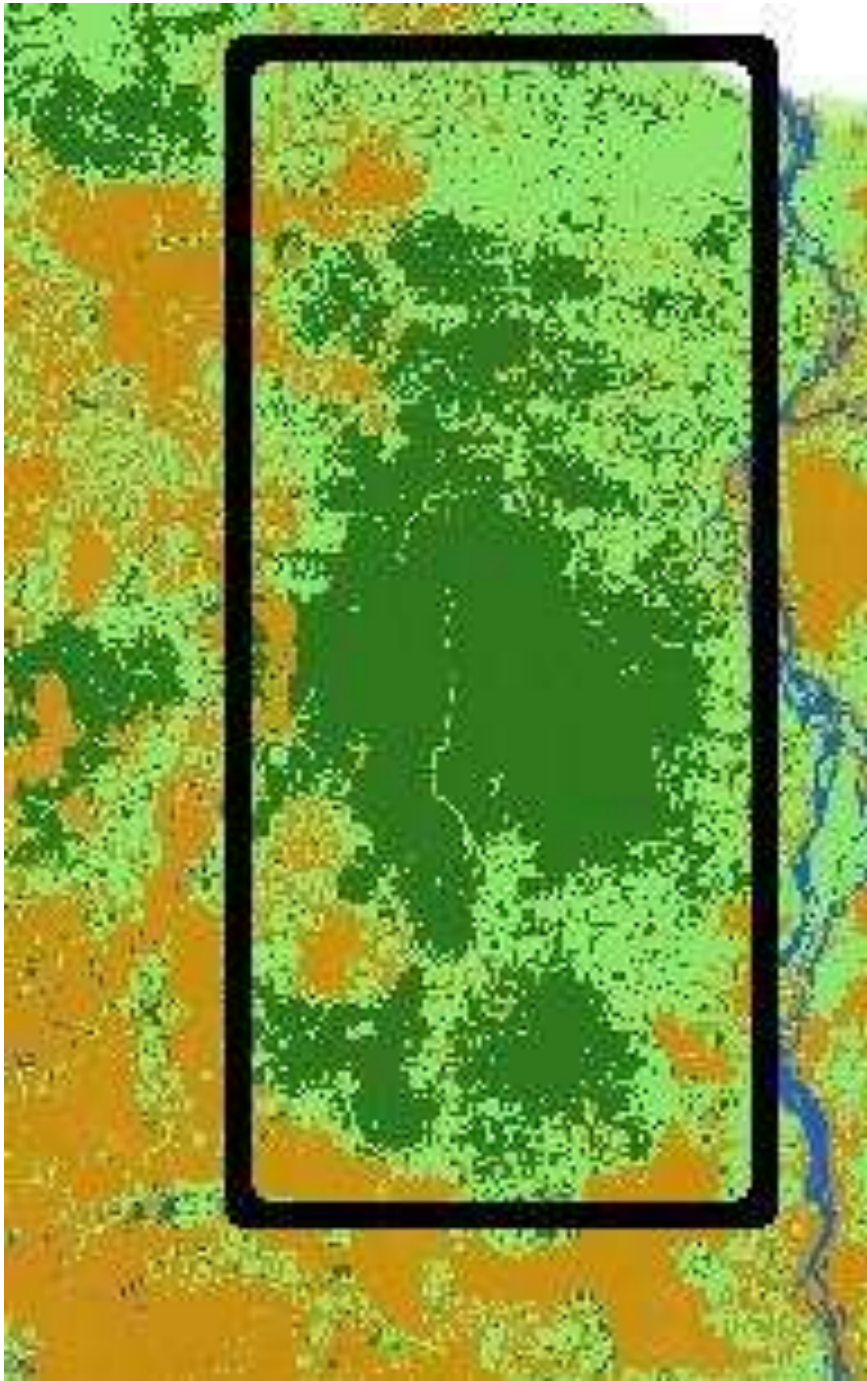


Figure A2. Locally conceived Prey Lang forest boundaries (overlaid on 2014 forest cover map).

Source: Created by the author using “Interactive Forest Cover Maps” (<https://opendevelopmentcambodia.net/map-explorer>) produced by Open Development Cambodia (<https://opendevelopmentcambodia.net/>), licensed under CC-BY-SA (<https://creativecommons.org/licenses/by-sa/3.0/>).



Figure A3. LICADHO deforestation map with PA and ELC.
 Note: PA=Protected Area. ELS= Economic Land Concession.

Source: Created by the author using “Land Concession: Deforestation” map, with permission from Cambodian League for the Promotion and Defense of Human Rights (LICADHO, <https://www.licadho-cambodia.org/>), licensed under CC BY-NC 4.0 (<https://creativecommons.org/licenses/by-nc/4.0/legalcode>).



Figure A4. Prey Lang forest cover 1989.

Source: Created by the author using “Interactive Forest Cover Maps” (<https://opendevelopmentcambodia.net/map-explorer>) produced by Open Development Cambodia (<https://opendevelopmentcambodia.net/>), licensed under CC-BY-SA (<https://creativecommons.org/licenses/by-sa/3.0/>).

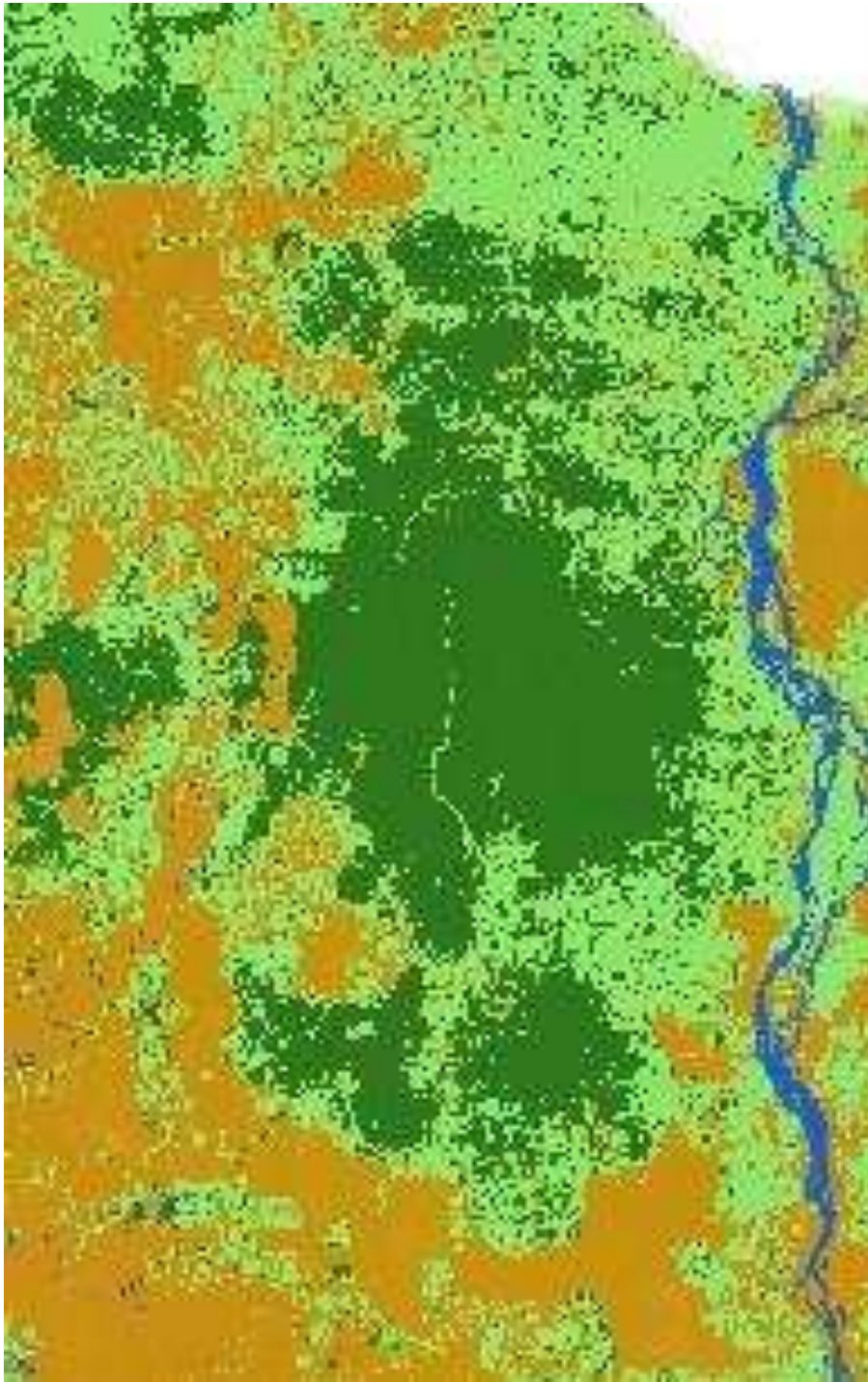


Figure A5. Prey Lang forest cover 2014.

Source: “Interactive Forest Cover Maps” (<https://opendevelopmentcambodia.net/map-explorer>) produced by Open Development Cambodia (<https://opendevelopmentcambodia.net/>), licensed under CC-BY-SA <https://creativecommons.org/licenses/by-sa/3.0/>).

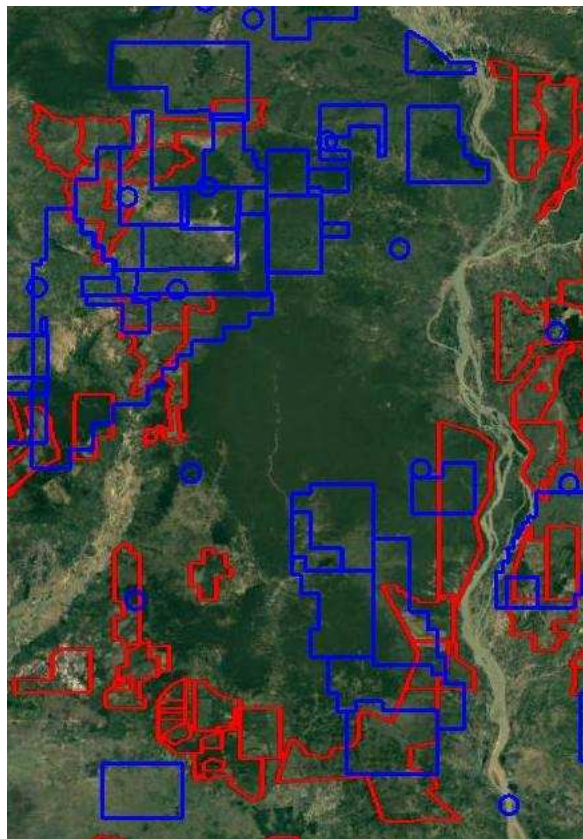


Figure A6. ELCs and MCs in Prey Lang.
 Note: ELC=Economic Land Concession. MC=Mining Concession.

Source: Created by the author using shape files with permission from Cambodian League for the Promotion and Defense of Human Rights (LICADHO; <https://www.licadho-cambodia.org/>) and from Open Development Cambodia (<https://opendevlopmentcambodia.net/>), uploaded into Google Earth and captured with screenshots. Map data: Google, LANDSAT/USGS. ELC shape files” produced by LICADHO, licensed under CC BY-NC 4.0 (<https://creativecommons.org/licenses/by-nc/4.0/legalcode>). “Mining Concession Shape Files” produced by Open Development Cambodia, licensed under CC-BY-SA (<https://creativecommons.org/licenses/by-sa/3.0/>).

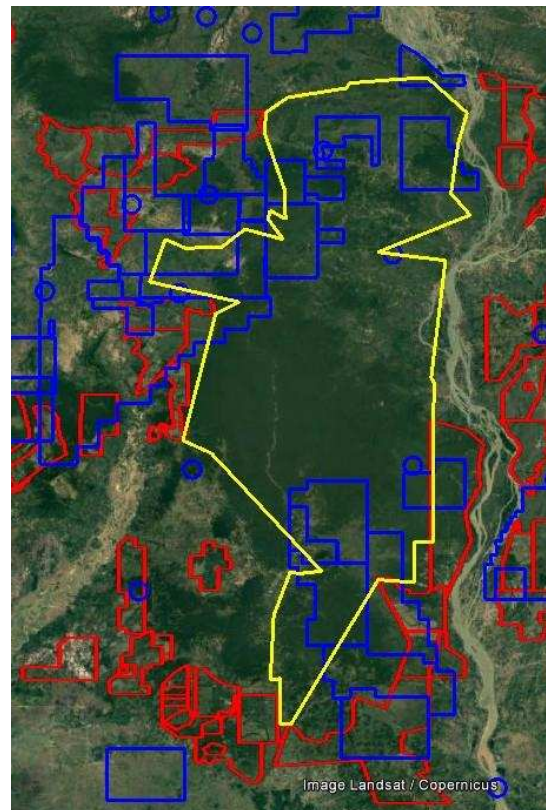


Figure A7. 2011 PA boundary in Prey Lang.
 Note: PA=Protected Area.

Source: Created by the author using shape files with permission from Cambodian League for the Promotion and Defense of Human Rights (LICADHO; <https://www.licadho-cambodia.org/>) and from Open Development Cambodia (<https://opendevlopmentcambodia.net/>), uploaded into Google Earth and captured with screenshots. Map data: Google, LANDSAT/USGS. “ELC shape files” produced by LICADHO, licensed under CC BY-NC 4.0 (<https://creativecommons.org/licenses/by-nc/4.0/legalcode>). “Mining Concession Shape Files” produced by Open Development Cambodia, licensed under CC-BY-SA (<https://creativecommons.org/licenses/by-sa/3.0/>).

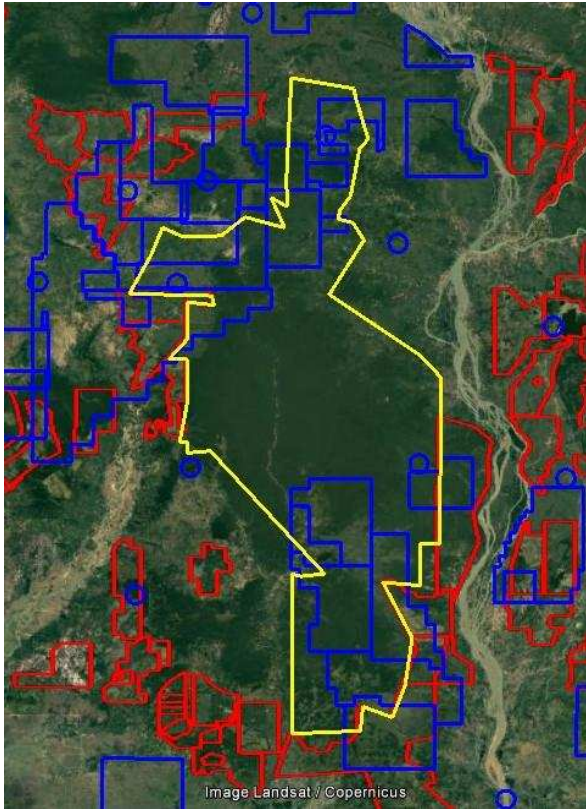


Figure A8. 2014 PA boundary in Prey Lang.
 Note: PA=Protected Area.

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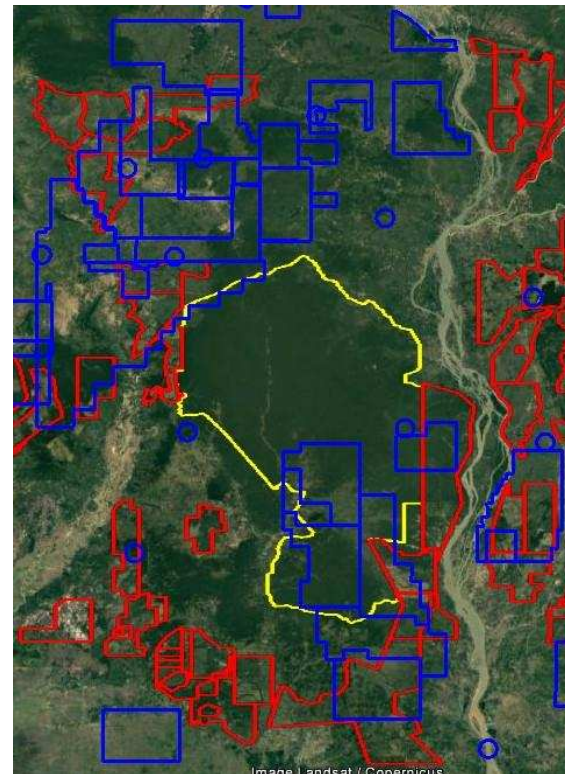


Figure A9. 2016 MAFF PA boundary in Prey Lang.
 Note: MAFF=Cambodia’s Ministry of Agriculture, Forestry and Fisheries;
 PA=Protected Area.

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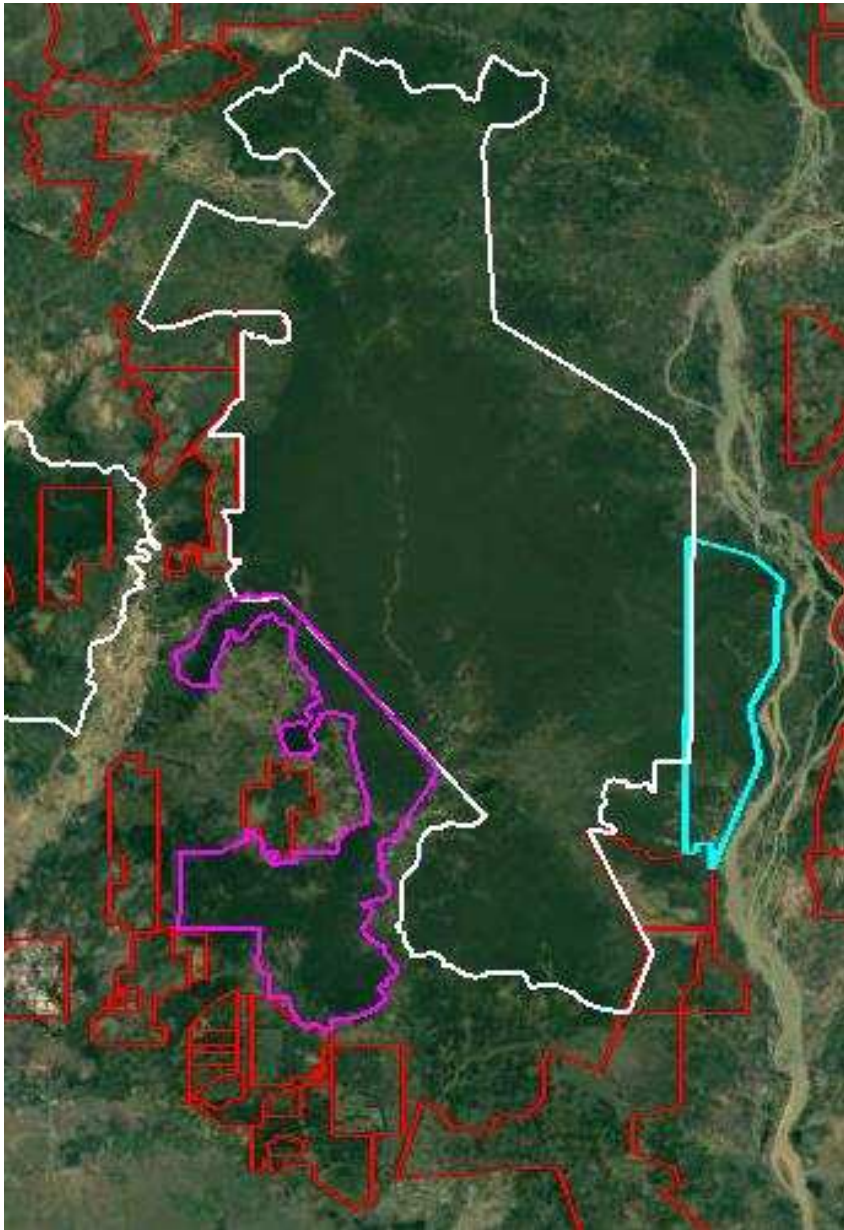


Figure A10. REDD+ project boundary (left side, pink); forest restoration project boundary (right side, turquoise); and Wildlife Sanctuary boundary (white) in Prey Lang.

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Figure A11. Sawmill inside Prey Lang Social Land Concession. Photo by the author (C. Work).



Figure A12. Cleared concession with road into Prey Lang. Photo by the author (C. Work).

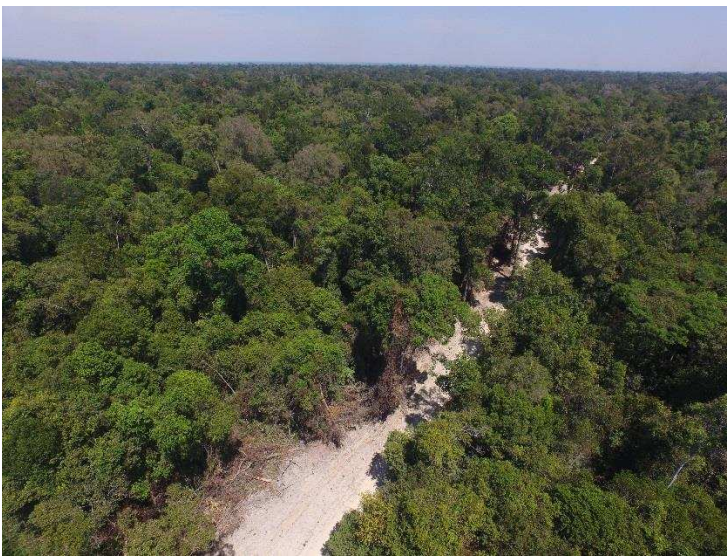


Figure A13. Road cleared through Community Forest to the west of concession. Photo by the author (C. Work).