

Ecological Knowledge and the Making of Plantation Concession Territories in Southern Laos

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Abstract

This paper examines how new forms of ecological knowledge are produced and mobilised through a sustainability-oriented, commercial tree plantation project in Lao PDR. As Gavin Bridge has noted, the establishment of primary resource sector projects are often not simply based upon a discursive emptying and erasure of local social and environmental histories. More nuanced forms of selective re-encoding, and performance can occur, incorporating what Maureen Sioh has called a “reconfiguration and imaginative recuperation of the physical landscape.” In this case study, a commercial forestry company in Laos pays close attention to community environmental livelihood practices and local poverty indicators, and to the material remainders of the Second Indochina War embedded in the landscape. I argue that the production and circulation of new ecological knowledge through this project, and the interventions of new knowledge-actors in this area of the former Ho Chi Minh Trail zone of southern Laos, establishes a moral theatre of environmental sustainability and national development. The inscription and dissemination of new ecological and local knowledges can be understood as related to particular development-expert subjectivities in Laos. It is also connected to a competitive strategy employed by this company to gain access to concession land, within the broader context of non-scripted regulation and contested governance in Laos’s plantation sector.

Keywords: ecological knowledge, governance, territory, forestry, performance, sustainability enclave, Laos

INTRODUCTION

The issue of large-scale land acquisitions in Southeast Asia has generated significant scholarly and policy attention in recent years. In Lao PDR (Laos), the social and environmental controversies associated with the state’s policy of turning ‘land into capital’ have now been closely documented. In many cases, companies pursuing large-scale land acquisitions

in Laos have not followed the required legal investment procedures, circumvented regulations on land zoning and forest clearing, and have taken advantage of the limitations in state governance and regulatory capacities. Nevertheless, official approvals and political legitimisation for large-scale land projects has been secured, though legal means, through the personalised support of key officials at times in exchange for commitments to build national infrastructure projects (Kenney-Lazar 2010; Dwyer 2013), or in other cases, through entering into joint venture partnerships with the state. The development of plantation concessions in Laos and across Southeast Asia often involves a rapid conversion of available land and timber rents into capital, and such forms of capital accumulation generally occur through the dispossession of marginalised rural and upland communities who do not hold formal, legal land tenure rights (Hall et al. 2011; Loehr 2012). Land concession development in Laos is however contested

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and often unpredictable, and many approved projects fail to reach full implementation (Schönweger and Messerli, 2015). A political de-legitimation or obstruction of large projects may occur through the regulatory interventions of state institutions, through land-use competition from other concessionaires, through a loss of financing support or political backing, changing commodity prices, or in more limited cases, due to the mobilisation of local communities against dispossession.

In the many scenarios of extractive and locally coercive agribusiness development in Laos, the assemblage and circulation of new forms of ecological knowledge does not play a central role in the initial justification or legitimation of a project. There is little scientific ecological knowledge generated in such projects, and local people's livelihood practices, environmental histories, and forms of knowledge are not documented or foregrounded. There are no environmental and social impact assessments conducted, and these projects do not enter into private certification systems such as through the Forest Stewardship Council, or the International Finance Corporation (IFC) Performance Standards, or Free Prior and Informed Consent (FPIC). The new ecological knowledge that is produced through such projects can remain within the domain of private actors, and unavailable to the broader public.

In Laos, state agencies and development partner agencies have responded to ongoing controversies associated with large plantation concessions and community resource ownership through new policies to strengthen a rule-based legal framework. This has involved a series of unevenly enforced moratoria on new concession approvals, calls for improved investor 'quality' (UNDP and MPI 2012), the issuance of voluntary corporate codes of conduct, and the passing of new legislation and institutional reforms, including a draft National Land Policy, and future revisions to the Land and Forestry Laws. These interventions, however, represent attempts to improve regulation over a stubbornly opaque and politically complex land sector. Recent surveys estimate that 1.1 million ha in Laos have been allocated as land concessions to investors, by different levels of the government, most often with very limited publicly available project documentation (Schönweger et al. 2012).

In addition to the challenges of establishing and enforcing a legal framework, due to the spatially extensive nature of customary community land tenure and resource use in rural Laos, even the small number of fully legally compliant, 'best-practice' land concession projects are required to engage in what might be called forms of 'sustainable dispossession.' By this, I refer to attempts to offset the negative social-economic effects of resource enclosures on local farmers and communities, through a spatial intensification of livelihood activities achieved through new land-use regulations, new rural extension programmes, and provision of new agricultural technologies. In a smaller number of sustainability-oriented resource projects in Laos—relating to what Whittington (2012) has referred to as *sustainability enclaves*—it becomes particularly interesting to consider how new ecological knowledges are produced and enlisted into the logics,

justifications, and imperatives of large-scale land acquisitions for commercial resource development.

My focus in this paper is a sustainable commercial pulpwood forestry project led by a major multinational forestry company, currently being implemented in a concession zone located along the former 'Ho Chi Minh Trail' (HCMT) zone of southeastern Laos. I will examine the role that ecological knowledge (both expert-scientific knowledge, and knowledge of local ecologies, communities, and environmental histories that is generated and circulated by different actors), and corporate performances of sustainability have played in the relative success of the project to date, and the generally positive reputation of this project in the perception of many observers.

Through their knowledge production practices, media images, and performances, the case study plantation company pays close attention to the damaging outcomes of the Second Indochina War (1961–1975) in southern Laos, for local communities and landscapes. The project developer has completed a full suite of biodiversity and social-environmental impact assessment studies, implemented a participatory land-use planning system, made credible commitments to securing international sustainable forest management certification, and has produced a significant amount of ethnographic and baseline livelihood data on the upland communities living within the project area. Much of this information is publicly accessible, and the firm has made significant efforts to promote public transparency. The project has also facilitated the visits of provincial and national Lao politicians to the remote project site, it has established linkages with international university programmes, and facilitated the field visits of visiting scholars and researchers (including myself).

This scope and extent of ecological knowledge production and circulation is not often evident in the practices and 'image repertoires' (Whittington 2008) of other large resource companies operating in Laos, where a more typical strategy is to more stringently control or suppress the production and circulation of knowledge concerning social and environmental impacts. As interpreted below, there are some direct and practical reasons for the project's attention to the environmental history and livelihood conditions of the area (there are war-era unexploded bombs littering the concession area). However, I assert there are also additional rationalities at work in this firm's skilful production and dissemination of new ecological knowledge, which relate to the company's efforts to establish an enhanced social and political 'license to operate' within Laos. I interpret this corporate production and dissemination of new knowledge of landscapes and local populations, and its crafting into a 'moral theatre' (Sioh 2010) of national rural development, as a competitive strategy, to secure large-scale access to (inexpensive) concession land, and establish broad political backing and legitimacy, within a context of non-scripted regulation, patronage, and illiberal governance in Laos's plantation sector. While the production of ecological knowledge is important for the company's access to international certification systems, and potentially to financing support from multilateral institutions, this paper focuses on

the role of ecological knowledge in the company's efforts to build domestic political legitimacy, in a context of growing contestation over land in southern Laos.

In developing this argument, I draw upon three key literatures: ecological knowledge and science and technology studies; the production of socio-natures and the making of terrain and territory; and resource commodification as performance and spectacle. I approach 'ecological knowledge' as a multifaceted concept, but my specific interest is on how new knowledge of local communities, ecologies, and landscape histories, is produced by non-local, private sector actors, and circulated beyond project localities in rural Laos, in a way that facilitates corporate 'action at a distance' (Held et al. 1999), and ultimately the enclosure and acquisition of new concession territories. Next, I outline these concepts in more detail, before turning to their application in the case study context of southeastern Laos.

APPROACHES TO ECOLOGICAL KNOWLEDGE

Examining the differential production and circulation of ecological knowledge in political ecology research can be useful for more closely identifying the rationalities and power logics that underpin environmental practices. Powerful knowledge systems privilege certain ways of knowing and governing nature, and marginalise other epistemologies; in this way social-political orders and the natural world can be conceived as co-produced (Jasanoff 2004). In this effort I am less interested in examining the relationship between local-indigenous ecological knowledge and scientific knowledge, although this is an important one. Rather, I focus on the role of new knowledge actors, institutional arrangements, and environmental practices emerging in Lao resource governance, how both expert knowledge and local ecological knowledge are produced, circulated, and contested, and their effects on different social groups (Braun 2002). Secondly, I inquire how these new regimes of ecological knowledge and power are instrumentally applied in producing and governing capitalist nature, and how these knowledges are used in the making of new sustainable concession territories in Laos. Here I draw on geographers such as Stuart Elden, who conceives of 'territory', not as a pre-existing object, but of territory as produced through political-economic, political-strategic, legal, and technical practices, that ultimately enable a "...calculative grasp of the material world" (2010: 11). As Elden (2013: 10) forwards: "Territory is a political technology: it comprises techniques for measuring land and techniques for controlling terrain." Territory and terrain can thus be conceived as created through methods of calculation and measurement, and as a hybrid of both physical landform and the product of politics and technology. Territory is an active agent in social activity, which can be critically analysed through genealogical methods (Peluso and Vandergeest 2001; Elden 2010, 2013; Dwyer 2014a). Drawing upon these tools and approaches, I examine the historical calculations and techniques of territory-making in southeastern Laos, from the Cold War military terrain as part

of the Ho Chi Minh Trail, to a zone of socialist state building and resource extraction, to a contemporary enclave site for sustainable global agribusiness investment.

The third concept I develop relates to the making of commodified nature and landscapes. Here I draw in particular upon Gavin Bridge (2001) to argue that it is often not simply a discursive emptying, forgetting, or erasure of local socio-histories that can occur in the making of new extractive commodity production zones (see also Braun 2002; Peluso 2009). Rather, a more nuanced form of selective erasure, re-encoding, and performance/spectacle can occur, whereby ecological knowledge is enlisted into what Maureen Sioh (2010: 468) has called a "...reconfiguration and imaginative recuperation of the physical landscape." Incorporating insights from these and other ethnographic studies in southeastern Laos (Daviau 2004, 2011; Daviau and Vilaivong 2006; Chamberlain 2008; Pholsena 2008, 2012), I show how a particular pulpwood forestry concession project in southern Laos has been transformed into a kind of political and moral theatre (Sioh 2010) of national development, in which sustainability is a political and territorial strategy.

This analysis and discussion is based on local-level community fieldwork and villager interviews conducted in Savannakhet and Salavane provinces of southern Laos in the months of September 2008, June 2010, and May 2012, research interviews with and participant observation of project company staff, interviews with key informants in Vientiane capital, a review of available project documentation and the broader literature on Lao forest-land policy and the history of the Ho Chi Minh Trail in southern Lao PDR. The three concepts introduced above—the production and circulation of ecological knowledge, the making of territory, and discourses and performances of commodification and national development—are applied to better understand the nature of new resource concession territories in the post-conflict landscapes of southern Laos.

KNOWLEDGE AND TERRITORY-MAKING IN THE LAO ANNAMITE RANGE

In the deep backwoods of southeastern Laos near the Vietnam border, if you find yourself driving down a rough cobblestone road, you can be certain that it was constructed by Viet Minh soldiers as an artery of the Ho Chi Minh Trail transportation network (McDonnell 1977). In May 2012, I was a passenger in an over-sized 4-wheel drive company vehicle, bouncing along one of these roads between southern Savannakhet and Salavane provinces. The driver, a former army man and logging truck operator, was working the clutch and grasping the steering wheel with intensity. He was enjoying driving though muddy tracks and across riverbeds, including the wide Xe Lanong river. In another couple weeks the rainy season would be in full swing, and the river too high to cross by even the largest trucks. Out the window, the swidden fields of local farmers extended high up the slopes of the Annamite range on either side of the road. It took us seven bumpy hours to travel the 100 km

between the district centres of Savannakhet and Salavane, at one point requiring the winch cable on the front of the truck to pull us out of a precarious situation.

These are challenging, frontier landscapes for a commercial investor, both in terms of southern Laos' physical and social geography, and the legal regulatory environment. In Laos' forest-land sector, there are often significant divergences between official central state policy, and local implementation (Singh 2012), which can introduce challenges in developing a commercial project. This can be due to constraints on government coordination, infrastructure and logistics, low local state capacities and budgets, unpredictable regulatory changes (such as successive moratoria on plantation development), the prevalence of discretionary decision-making by top officials, as well as the predilection of the central Lao state to formulate ambitious targets to which local officials must try respond. Nevertheless, over the past decade, Laos has attracted the interest of a number of large, multinational forest-plantation firms. And as a result of the last decade of ADB-Greater Mekong Subregion-sponsored road and export infrastructure improvements, the thinly-populated districts of eastern Savannakhet and Salavane provinces are now located well within market distance (100–150 km) of deep water export ports in central coast Vietnam, and thus are highly connectable to the global economy (e.g., Vientiane Times 2013).

These landscapes of southeastern Laos are also the product of intensive conflict and military intervention, and here I further sketch out the implications of this history of knowledge production and territorialisation. This discussion is divided into three broad phases—1) the Second Indochina War years (1954–1975); 2) the first generation of post-war development in the new socialist Lao People's Democratic Republic (1975–2000); and 3) the last decade of economic liberalisation, regional integration, and foreign capital investment in Lao PDR (2000–present). Such political, military, and environmental histories crucially inform present-day policies, strategies, and technologies of state making, territorialisation, and ecological knowledge production.

The Ho Chi Minh Trail as military terrain

Recent investments in mining, plantations, and hydropower are not the first time that southeastern Laos has been incorporated into global networks and intensive efforts at state-making and territorial production. The town of Xepon (Sepone), located along Laos Route 9 near the Vietnam border, was originally the site for a small French colonial garrison outpost. Beginning circa 1958, the North Vietnamese military established the Ho Chi Minh Trail transportation network to South Vietnam, marking a major transformation of these sites and locations, from the periphery of French Indochina, to the frontlines of Cold War geopolitical conflict (High 2008; Pholsena 2008).

As Daviau (2004: 23) notes, the upland communities of Laos' eastern Savannakhet province had the misfortune to be not only located along the north-south supply routes of the People's Army of Vietnam (PAVN), but also to be located along

the 17th parallel, the dividing marker between North and South Vietnam. From circa 1960–1973 these districts were sites for an aerial interdiction campaign against the HCMT by the US Air Force (Nalty 2005; van Staaveren 2005) and intensive ground operations, culminating in Operation Lam Son 719 at Xepon in 1971 (Nguyen 1979; Prados 1999; Sander 2014). Wartime military interventions played a significant role in producing ecologically degraded, and sometimes dangerous 'frontier' spaces of eastern Savannakhet and Salavane provinces, that now serves to make these forest-lands more amenable for conversion to industrial plantations.

In considering the post-colonial and post-conflict Lao state and production of territory in southeastern Laos, Elden's (2009) insight into the etymological roots and historical connections between the concepts of *territory* and *terror* are suggestive. In the Annamite Range in southern Laos, between the bombing, defoliation, and ground invasion campaigns of the Indochina conflict, and extensive movements of people and materiel along the HCMT network, the landscapes and social systems in this region were significantly transformed. The Ho Chi Minh Trail in Laos was, in a quite direct sense, 'produced' as a contemporary upland ecological space through geopolitical conflict and military strategy. Through their efforts to exert strategic control over material terrain and local populations, military planners and combatants on both sides of the Indochina conflict played a key role in remaking these spaces and territories. Both the PAVN and the Pathet Lao (through creating the HCMT network under a mountainous and tropical forest canopy), and the US military and the Army of the People's Republic of Vietnam (ARVN) (through carpet bombing, defoliation, and ground invasion campaigns) intervened through particular dimensions of terrain (Gordillo 2015), and understandings and knowledge of local ecologies and landscapes. The harmful legacy of that conflict, particularly in the form of extensive unexploded ordinance (UXO), remains embedded within the forests and upland farmers fields today.

Contemporary private sector resource concessions in the uplands of southeastern Laos are embedded within, and overlaid upon, this environmental and social history of military violence. The co-production of landscape, military conflict and society has many practical implications for present day state-making and rural development efforts (Pholsena 2013), for how land is zoned, and how claims to resources are being organised and legitimated (see also Vandergeest and Peluso 2011; Dwyer 2014a). As described further, state attempts to produce 'calculable spaces' (Elden 2009, 2013: 10) in southeastern Laos continued during the post-war period in the new People's Democratic Republic.

Producing governable upland space in socialist Lao PDR

Through the post-war period, extending up to the present, forest-lands in many upland areas of Laos have been subject to intensive swidden cultivation, multiple rounds of logging, and a series of state projects including upland resettlement, focal site development land-use zoning, and resource concessions

(Lestrelin 2011; Lestrelin et al. 2012). The Lao state and the Lao People's Revolutionary Party have sought to implement these programmes, including resettlement initiatives, through enlisting the support of different external actors and donors (Baird and Shoemaker 2007). In the immediate post-war period from the late 1970s to the late 1980s, forest and rural sector support was provided by Sweden, the Soviet Union, Vietnam, and a number of other eastern bloc countries. In the post-Cold War period, additional Western development agencies were invited into the country. More recently, regional and multinational companies have been important actors in rural areas, at times taking on quasi-governmental roles in concession enclaves. Contemporary rural development and resource management programmes in Laos can be understood within a longer history of attempts to produce bureaucratic 'calculable space' and governable state territories, although under quite a different framework as compared to the Indochina War, or during Laos' period of high socialism.

Upland zones in the most distant districts of southeastern Laos have been only recently been incorporated into central Lao PDR state governance systems. The limited infrastructural and intervention capacities, and minimal state resources available for the production and circulation of new ecological knowledge in post-war Laos played a key role in this. Indeed through a de facto period of decentralisation extending from 1975 to the turn of the century, institutions at the provincial and local scales of state authority in Laos, as well as Vietnam-linked logging interests, were arguably the primary governance actors in many upland zones.

For the purpose of this analysis, what stands out with respect to land-use planning and village development initiatives during this period of state building in southeastern Laos (1975–2000) are the limits to effective generation and circulation of ecological knowledge. A relative paucity of detailed, digital mapping and surveillance technology (for example, maps of national forest categories, and external and internal village land-use boundaries, GIS systems, computer records of property zones and claims) is important here. To be sure, the reach of the early socialist state institutions in upland zones of southern Laos should not be underestimated (Pholsena 2012). Ambitious state programmes of resettlement, extractive logging, and shifting cultivation stabilisation were designed and rolled out, and these initiatives played a role in reconfiguring the territorial and socio-ecological regime of control during this period. While significant for many citizens, the overall governance achievements of the socialist Lao state remained fragile, especially outside of provincial or district centres. More intensive, finely-tuned, and *locally-incentivised* forms of management and control over upland resources and village populations, particularly as associated with fully commercialised, market-based production and enduring state territorialisation strategies, remained elusive. With the last decade of globalisation and foreign direct investment into Laos' resources sector, both the systems of ecological knowledge production, and projects of state territorialisation, and social ordering, have transitioned into a more intensive phase.

CONTEMPORARY CONCESSION-BASED TERRITORIALISATION IN SOUTHEASTERN LAOS

... commodity-supply zones are emerging in the contemporary period as spaces of incipient social ordering, sites of experimentation in which broader relationships between social actors are being contested (Bridge 2001: 2169).

There are many examples, in Laos and elsewhere in the region, of private developers in alliance with state bureaucracies, discursively 'emptying' local customary-rights lands, framing local environments as underutilised, barren or degraded, and converting these sites into a simplified and devalued *tabula rasa* for commodifying nature and resources (Barney 2008; Barr and Sayer 2012, Baird 2014). New spatial technologies such as remote sensing can play a particular role in discursive processes of social and ecological erasure in a way that renders community landscapes as outside of socio-political context and environmental history (e.g. Robbins 2001; Doolittle 2010). Gavin Bridge (2001), however, also alerts our attention to a more nuanced process—involving a more selective discursive erasure of local socio-ecological histories, and a re-encoding and re-inscription of resource supply zones and local populations in a way that nevertheless reinforces the "hegemony of consumptive economies" (Nalepa and Bauer 2012: 420). In this way, primary commodity supply zones can be conceived as both material and cultural semiotic spaces, which are produced through particular configurations of power-knowledge. I now turn from an analysis of military and post-war interventions in southeastern Laos, to examining a case study plantation concession area as a 'sustainability enclave' (Whittington 2012), and to how upland spaces in Laos are being re-framed and re-organised in relation to the actions of new actors, technologies, and new instrumental logics of knowledge production.

New knowledge-actors in the Lao plantation economy

I first met 'Carl' [a pseudonym] in 2005, in a Mekong-side provincial town in southern Laos. I was having dinner with two managers of another plantation company, after visiting their concession site. Carl pulled up in front of the hotel restaurant in a battered 4 by 4 truck; he was dusty and tired from an extended trip down the dirt roads in Laos' backwoods near the Vietnam border, scoping out potential sites suitable for planting commercial trees. A long-term resident of Laos, Carl is a compelling and convincing figure in Lao's forestry scene, whose expert and locally informed knowledge of rural development issues cannot be discounted. Over his years of residency in Laos, Carl has developed valuable knowledge of establishing tree plantation and wood processing operations, an informed understanding of Lao business procedures, and practical experience of working with Lao officials and state bureaucracies. Through his grounded knowledge of the most remote districts in Laos, Carl was convinced he knew where to locate a large-scale plantation project—in the deep southeast of

the country, down the old 'Ho Chi Minh Trail', an area where there was plenty of bamboo and scrub-dominated swidden fallows, low population density, and the soils and rainfall were suitable for fast growing eucalyptus pulpwood trees.

As Carl provocatively asserted in a research interview, 'land-use conflict need not be an issue in Laos' (Interview, August 18, 2005, Vientiane). He well understands civil society criticisms of large-scale commercial plantation schemes, particularly regarding the enclosure and displacement effects that such projects can have for local communities maintaining informal resource management systems based upon swidden agriculture. Carl's answer to this land allocation conundrum is to focus on identifying heavily degraded locations for commercial tree planting, paying close attention to the legal framework, adopting a more transparent and participatory approach to village land-use planning, and more effectively integrating food security and the livelihood requirements of upland villages within the objectives of a commercial plantation enterprise. His company's approach is particularly innovative in that it seeks to resolve the land-use conflicts that bedevil commercial plantation projects, through an integrated eucalyptus-rice agroforestry alley-cropping strategy, that is also aimed at relieving land-use pressure on the existing upland swidden system, potentially boosting its productivity. Carl's ship came in during 2008, when a major forestry firm made their decision to invest in Laos through a proof-of-concept trial plantation project, in the eastern reaches of Savannakhet province where he had made his initial surveys. He now acts as the project manager for this firm—and a type of knowledge broker—guiding the company through the practicalities of how to implement a fully legally compliant, transparent, and environmentally and socially sustainable, tree plantation project in the Lao uplands.

In the unevenly-regulated and non-transparent land sector in Laos, filled with overlapping claims and concessions, production and protection forests, community lands and state lands, and struggles over access to resources (Schönweger et al. 2012), Carl also needs to convince officials at different levels of the state that they should support his project over other, competing plantation initiatives in the same districts. Some of these other projects skirt around the legal regulations, and apparently secure tree planting areas through special arrangements with top officials. Instead, Carl's firm has adopted a slower, more painstaking, bottom-up approach, using a participatory strategy. His company is closely following the new legal framework, engaging and building trust with villagers and local government officers, and promoting the project with various national figures in Laos. This is a task for which Carl is well suited, given his long residency in the country, his specific knowledge of upland Lao communities and their livelihood situations, and his long participation in the Vientiane business community. Through his personal approach to management work, Carl oversees the generation and deployment of new knowledge around the local environment and the local communities, applied in the service of justifying and providing enhanced legitimacy for the continuation and expansion of this commercial investment.

With decades of field experience and a grounded, 'organic knowledge', Carl can be seen as representative of a certain expatriate development subject (Whittington 2008; Dwyer 2014b). Whilst his own personal and ethical motivations for this sustainable forestry project are important (and no doubt genuinely held), his professional subject-position is that of a manager of a large, profit based agribusiness project that requires secure access to thousands of hectares of low-cost plantation land. He plays a key role in brokering knowledge flows between local community sites, government agencies, and this global multinational firm that is seeking to establish productive agri-business assets in Laos, but that is also concerned with maintaining high corporate social responsibility standards. The ultimate aim is to link into legal-sustainable certification systems, and to represent what the United Nations Development Programme in Laos has called 'quality investment.'

Ecological knowledge and a sustainability-oriented pulpwood concession project in Laos

The quality investment project, which serves as the focus of this section, is the pulpwood concession launched in 2008, that Carl is managing in south-eastern Laos. The parent firm, a leading global producer of pulp, paper and packaging, is generally considered as an industry leader in social and environmental sustainability, and is listed on a number of 'green-ethical' financial exchanges. At the time of research, the project was proceeding through a feasibility stage, and a relatively small area (about 1,600 ha, or about 5%) of the proposed company concession lease in Laos had been developed. The company is testing and refining their land zoning and village development programmes as based on the agroforestry model, measuring growth rates and estimating the costing of land and UXO clearance, amongst other inputs. Pending approval from the company's head office, and additional concession leases from the Lao government, the full implementation phase of the project would expand their holdings up to 35,000 ha over the coming years.

The company has five upland target districts, located in Savannakhet and Salavane provinces, along the Laos-Vietnam border. Within these districts, up to 350,000 ha of overall 'degraded and under-utilised' forest-land has been identified as potentially suitable for tree plantation development under the state land-use planning framework. These landscapes can also be understood as customary, community-managed forestland spaces, which are foundational for the existing system of livelihood and socio-cultural production for dozens of upland ethnic minority villages. The presence of unexploded ordinance introduces significant practical obstacles for tree plantation development, although the clearance costs are potentially surmountable for a well-capitalised private developer. The fact is that there are rapidly dwindling locations in Southeast Asia, or indeed across the tropical world, where 35,000 ha of land might be located for commercial development. The underlying commercial value of these degraded forest-lands are revealed,

as these territories are enclosed from local communities and developed into high productivity agribusiness assets.

The project is being implemented in one of the most vulnerable locations in Laos in terms of livelihoods and welfare of the local population. These hinterland areas are populated by ethnic minority communities—identifying as Brou and Makhong in eastern Savannakhet province, and as Katang Pakoh, Ta Oy, Nye, and Katu in eastern Salavane. The five districts of Savannakhet and Salavane are included within the 47 poorest districts in Lao PDR. In 2007, average household cash income in the project villages was USD 33 *per annum*. Local villagers are almost completely reliant upon local ecological resources for their livelihoods (Daviau 2004; Daviau and Vilaivong 2006). As indicated in company baseline data and other donor reports, despite extensive village landholdings, food insecurity is severe in these locations of Laos. It is not unreasonable to consider that a well-organised private sector agribusiness venture might provide some much-needed capital investment in these areas, which could boost smallholder cash incomes through new wage labour opportunities, access to technologies and markets, and could help to improve such precarious livelihoods.

In the current feasibility stage, the company is meeting an extensive list of legal and regulatory obligations relating to land concession development. These include land rental payments to local villagers, sub-district and district authorities for leased areas¹, as well as company business and concession licenses, land clearing permissions at district and provincial levels, environmental and social impact assessments, quarterly environmental reports, corporate baseline social studies, and consultations with affected communities. The company aims to secure Forest Stewardship Council (FSC) certification for all of their managed plantations in Laos. It has expressed a commitment to social responsibility, including the boosting of food security, provision of cash income opportunities to communities through wage labour, contributions to health and education, and local business development, and the firm has established regular monitoring, reporting, and transparency procedures.

Legality and sustainability can thus be considered as an important brand marker for this company, and indeed it could be considered as critical for maintaining access to Western capital markets, funding agencies, and consumers. In a 2010 interview with the Lao National Land Management Agency (NLMA), it was indicated that, at the time, this company was one of only two land concessionaires operating in Laos which had met the full legal standards and regulations related to land issues, including all land clearing permissions, payments of all concession lease fees, and completion of all required environmental assessment procedures (Interview, NLMA, Vientiane, June 2010). In terms of meeting national regulatory standards, and adopting international best practice certification systems, this company would seem to be operating under a different model as compared to most other 'extractive' forest-land sector concessionaires in Laos (Global Witness 2013).

A key agricultural innovation forwarded by this company in Laos relates to its spatial alley cropping model for integrating pulpwood trees with upland rice or cash crop production. The company has forecasted that intercropping of eucalyptus trees with upland rice can be conducted for the first two years of a seven year rotation, although after this the canopy begins to crowd in, and other shade tolerant intercropping options would need to be developed between years 3 to 7. The company is also proposing a staggered, 7-year rotational planting approach in each village (as opposed to developing the entire village plantation space in a single year). If closely followed, theoretically this could enable upland rice intercropping in each year. However, it remains to be seen how effectively this complex system would be implemented and function in practice, over multiple rotations on a project-wide scale, and some other industry actors in Laos are sceptical this system would be logistically feasible or profitable on a large scale (Anonymous interview, June 14, 2014). The extent of the socio-ecological transformations introduced by the project will also not become fully apparent until the 35,000 ha implementation stage is completed.

The methodology of the company's negotiations with communities and local governments for access to land is an important feature of the project. The land zoning process is based on the new Laos standard for 'Participatory Land Use Planning' (PLUP), which supersedes the previous Land and Forest Allocation Policy (LFAP) (implemented circa 1993–2003, see Lestrelin et al. 2012). A number of roadside villages in these districts of Savannakhet have gone through the previous LFAP process, although further afield, in eastern Salavane, the target villages have no previous exposure to any formal internal state land-use planning process. Under the company's programme, all community spaces are to be re-zoned, in accordance with the new PLUP policy. The state land zoning process is ultimately being financed through the company, which potentially introduces a certain degree of conflict of interest into the 'participatory' planning process.

The company's framework for land-use planning and zoning of plantation land involves a stepwise process, involving a mix of technological and social definitions and elements of the PLUP system.² Notably, even in these more remote areas of Laos, there is no 'empty space' between the territories of different villages. According to a local company staff member, even National Production Forests and National Protection Forests in these areas of Laos are often "just lines on a map" (Author interview 2008). Areas within national state forest zones are most often fully claimed and settled by villagers, similar to the areas outside of these national forest zones. Thus, plantation space must be carved out of the patchwork of village-managed forest-lands, either through the participatory land-use planning process, or through more coercive means. This is formally accomplished through establishing the administrative concept of state-owned 'degraded forest' (Barney 2008; Barr and Sayer 2012). In this way, the distinction between villager land, state forest-land, and concession land,

must be politically negotiated in every village, for every large plantation development project in Laos.

For the purposes of this paper I will set aside normative judgements concerning the present and future livelihood outcomes of this case study project for local communities. One can simply note that villages in these areas of Laos face extreme livelihood vulnerability. There is certainly the potential for this agribusiness investment project to stimulate broad improvements to local livelihoods, although this is by no means guaranteed. Further and more extended local research would be required to gain insight into understanding how participation is being managed, and how disputes are being handled in the land-use planning process between local communities, the company, and district, provincial, and national authorities. From my personal fieldwork observations to date, the company appears to have taken significant care to secure appropriate village consent before developing plantation lands, and in one particular case I observed, has taken careful steps in resolving a local negotiation disagreement. If the company formally adopted a Free Prior and Informed Consent policy (which they have not to date), a key question is whether in the authoritarian political context of Laos, villagers would actually hold a right of refusal in ceding customary land to the company through the land concession programme.³

My primary interest here is to examine the logics of knowledge production that enables this company to gain access forest-land for commercial development. I argue that what stands out in this company's approach is the intensive nature of the production and circulation of sustainability-oriented ecological knowledge. What also makes this company's sustainability strategy particularly intriguing, is that it may not be successful. There are other competing concessionaires willing to curry favour with elite decision makers and secure access to land through more direct 'top down', non-transparent, and coercive land acquisition strategies. There are also policy measures within Laos that have constrained new concession approvals for investors (most recently Prime Minister's Order No. 13/PM 2012, invoking a moratorium on approval of new eucalyptus and rubber plantation projects to 2015, see Vientiane Times 2012, 2015), and Laos is in the process of drafting a new Land Policy, Land Law, and a Forestry Law, which could again alter the investment framework. In the future, the head office of the company could decide that progress has been too slow, the land zoning process too difficult to negotiate, commodity markets have changed, or the financial costs of this project in Laos are proving too high to produce an adequate rate of return. In comparison to some of the company's competitors, adopting a slow, methodical, and transparent approach, drawing heavily upon the transparent production and dissemination of new ecological knowledge, could therefore involve some business risk.

In this general context, what is especially interesting is how the company neither seeks to *erase* the presence of upland communities from their concession area, nor to underplay aspects of local-environmental history. Rather, portrayals of local people, evidence of war-era destruction of landscapes,

and the remaining threat of UXOs, feature quite prominently in the company's published images and documents. The people I met who worked for this company often displayed a strong commitment to clearing UXO from the landscape, and to contributing to the company's community development initiatives. Indeed, at a reported cost of USD 700 per hectare for de-mining operations down to a vertical depth of 30 cm into the soil profile, a 35,000 ha project could entail an outlay of up to USD 25 million in unexploded ordinance clearance alone. Even though not all areas are likely to require 100% clearance, clearly this is not a minor undertaking, and the company has promoted their UXO strategy as a key part of their justification and legitimacy, both with Lao decision makers and international observers. In contrast, there are other examples of plantation firms operating in southern Laos that also have UXO contamination in their concession areas, but that have to date circulated very little information or documentation on either ordinance removal or their social-environmental strategy. For the case study company, UXO clearance is a key pillar in their representation as a responsible corporate investor in Laos.

The company's knowledge-based sustainability model, and their claims to concession land, is further supported by an NGO-style attention to local livelihoods. The firm's high degree of media sophistication—presenting compelling images of local people enjoying enhanced livelihoods and food security through the company's intercropping programme—marks a clear distinction from other private sector plantation operators in Laos. Given the presence of potential competitors for access to plantation land in these districts of Laos, a long-game strategy of slowly building a track record of social-ecological sustainability, and developing positive relationships with local communities and officials, can be understood not just as good corporate social responsibility, but also as a particular strategy used by the firm for securing forest-land access. In author interviews, company manager Carl has at times voiced frustration with government officials, who reportedly tie up the company with regulatory knots and hurdles, and requests for 'per diems' and other supporting expenses, while other competing firms are said to strike non-transparent deals with decision makers, and have large land concession survey blocs in nearby areas approved with expediency.

In many ways the project forwards a sympathetic claim. Who could not be in favour of removing dangerous UXO from a post-conflict landscape? Who would disagree with due process, rule of law, environmental-social impact assessments, and participatory land-use planning? Who could argue against poverty reduction through village development interventions, and the provision of new agricultural extension services with increased yields, community infrastructure, improvements in health and well-being, and new income generation opportunities? The company's assertions of environmental and social sustainability are made more compelling by the lack of any obvious alternatives for local economic development in these areas of Laos.

A key issue at stake is gestured towards by Bridge's (2001: 2155) notion of how local socio-natural spaces slated

for conversion to export commodity production become “simultaneously emptied and full.” I conceive of the ‘empty-full’ paradox as a discursive process of selective erasure and re-encoding of landscape meanings, achieved in part through the generation of performances and spectacles of sustainability, through which new forms of ecological knowledge and new ideologies of nature and development are produced and legitimated.

Selective patterns of landscape *erasure* emphasise villagers’ poverty, food insecurity, and safety problems due to UXO, and render these issues as objective, naturalised facts, sidestepping a deeper analysis of the historical and geo-political sources of these problems. As mentioned, in the company’s image-repertoire, there is close attention to the historical effects of the war, as shown with aerial photographic images of cratered, swidden-dominated and scrub landscapes. What is under-emphasised in the company’s images and narratives is closer attention to the existing ways in which villagers are engaging with, and managing, these landscapes. This includes local swidden practices, cattle grazing, and non-timber forest product livelihood systems (including, controversially, illegal collection of UXO and prized luxury rosewood collection and sale), their histories of landscape occupancy and resource management, and other cultural-environmental practices (for example in the way local people regard the landscape as inhabited by spirits). To be sure, the company has undertaken extensive baseline studies on resource use patterns, which is a key source of new knowledge production, in a way that most other resource firms in Laos avoid. However, this corporate documentation avoids deeper and more probing questions regarding the nature of project interventions into the customary and cultural landscape. The company’s image repertoire avoids presentation of alternative local futures that do not involve the company. This is not a surprising observation—as the developers are ultimately profit-oriented actors, seeking to establish the legitimacy of their own project.

The issue of UXO is enlisted into the project’s representations in a nuanced manner. UXO as a problem is incorporated into a broader discourse of ecological degradation by the company, that generally devalues local forestlands, and effectively renders these spaces more easily, and more cheaply available for investors. To be sure, UXOs are a real and potentially deadly problem in these districts, and it should be reiterated that the company is one of the few private sector actors who are actually addressing the problem on the ground in an effective manner. Nevertheless, what is underplayed are practical alternative options for the development of local communities, or for improvements to the productivity of these upland agricultural systems, which do not involve allocating large areas of villager land to a private concessionaire for the next fifty years, and re-zoning community spaces as a global agri-business supply zone. More direct and progressive notions of social and ecological justice are also set aside in this framework—for example in the idea that the American (and Vietnamese) governments, through donor assistance programs, might be doing more in terms of war reparations and

UXO clearance in Laos. Notions that local communities hold an inherent right to their homeland territories that should be upheld through a more rigorous programme of Free Prior and Informed Consent; or the idea that local communities deserve a greater share of the land rents and potential profits accruing from this project, perhaps through entering into company-community joint equity agreements, are also underplayed.

For scholars such as Gavin Bridge (see also Baird 2008), the discourses of development that are applied in producing extractive resource concession spaces out of customary territories ultimately needs to be considered as colonial in character:

Such narratives are colonial in that they naturalize and legitimize hierarchical distinctions between extractive and consumptive economies, and displace into the abstract, technical realm of resource economics fundamentally sociopolitical questions about contemporary and future uses of land. As such they facilitate the annexation and enrolment of lived-landscapes as resource-supply zones to the extra local economy (Bridge 2001: 2160–2161).

Building further on Bridge’s (2001) analysis on the making of extractive territories, subsequent to erasure, I forward that a *re-encoding* of the landscape in this project takes the form of new discursive and material interventions that establish and legitimate plantation territories and a new, state-corporate controlled, plantation economy. Along the Ho Chi Minh Trail in Laos, the project developers are mapping and re-organising customary forest territories into a new, rationalised, and industrialised agroforestry complex—achieving in concrete reality what Lestrelin et al. (2012: 2) call a “...territorial projection of particular socio-environmental perspectives and values.” Spatial re-encoding of the landscape includes new forest re-zoning and the participatory land-use planning process used by the company, and the assemblages of practices and discourses that enable the replacement of a customary swidden agro-ecosystem, with scientific-commercial agricultural practices, under the guidance of a new, corporatized rural development paradigm.

The strategies associated with this active *re-encoding* of the landscape include compelling images of the company’s high productivity agroforestry intercropping model, with smiling farmers in lush upland rice fields. Significant ecological knowledge about local peoples and ecologies is generated in this re-encoding process, and applied in the re-territorialisation of community landscapes. As Sioh (2010) writes with respect to the making of new plantation spaces in post-colonial Malaysia: “Territorializing Malaysia required both physical reconfiguration and imaginative recuperation of the physical landscape.” In Laos, the subjectivities and livelihoods of local farming households are unevenly transformed through this governance model of concession-based national development (Barney 2011). New developmental identities are promoted, as formerly marginal, ‘less productive’, and environmentally recalcitrant ethnic minority swiddeners are encouraged and incentivised to become modern farmers, and enlisted into

the mainstream Lao system of sustainable agri-business production.

Lastly, I forward that *performances and spectacles of sustainability* assist in the advertising and legitimization of project development. Project legitimacy is enhanced through the prosaic, everyday practices of sustainable concession development, as well as through more high profile ‘image-spectacles’, performed by the developer for national and international consumption. In the case concession project, performances of sustainability can involve everyday visits by company staff to local project villages, meetings around village development and land-use planning, or farmer study tours of other project villages. Grander ‘spectacles’ of sustainability have involved high-profile helicopter visits from members of the Lao Politburo and the National Assembly, and executive decision-makers from the corporate head office, to project sites. In part through these practices and nation-building spectacles, the marginal uplands of eastern Laos, these poorest districts in the country, are being transformed into productive, sustainable, and profitable global commodity supply zones. A re-organised and newly disciplined landscape serves as a stage, a ‘moral theatre’ in the Lao hinterlands, for performances of agribusiness development, scientific and environmental rationality, and productive nation-building after a devastating Cold War conflict and an isolationist interregnum (Sioh 2010). I forward that the production and circulation of various forms of ecological knowledge has played a key role in each of these successive transformations in southeastern Laos, from the unruly and dangerous spaces of the Ho Chi Minh Trail, to a remote post-war frontier site for building state socialism, to a new commodified and regulated, sustainability enclave.

CONCLUSION

... the production of nature in colonial discourse did not occur through a straightforward erasure of Native presence. Dispossession did not hinge on ignoring Natives; it hinged on *how they were described and incorporated within orders of knowledge* — Braun (2002: 61; original italics).

In this paper, I have argued that the making of calculable plantation concession territory out of the battlefield terrain of the Indochina War in southeastern Laos forms the latest in a series of governmental interventions, part of a changing historical, political and technological effort for producing and controlling geographical space and producing more governable upland subjects. I assert that the case study company proactively produces and circulates new forms of local social and ecological knowledge, and strategically engages with the particular material landscapes in which they are working. The corporate strategy in play can be considered as a specific reaction to previous controversies around the displacement effects of industrial tree plantations, and as a requirement for accessing advanced capital and consumer markets. The role of particular development subjects such as that of plantation manager Carl, in how development interventions are shaped,

is also key in how this story plays out on the ground in Laos. Most crucially, I view the practices, performances, and image-spectacles of pro-poor sustainable resource development as part of an effective corporate approach for securing project approvals, and for gaining access to concession territory, in a contested and often opaque regulatory environment.

The ecological knowledge being generated by the plantation developer is nevertheless selective and partial. Ultimately, it functions in a broadly neoliberal development model, in which primary production zones are carved out of lived community spaces for integration into a corporate-dominated, global resource economy. What is arguably ultimately at stake in this process is the notion of community rights to land, versus local appropriation (RRI 2013). Under a more assertive rights-based approach, impoverished upland Lao villagers who have experienced such hardship arising out of the Indochina conflicts and the years of post-war socialist isolation, would maintain access to a local form of sustainable development through which UXO is removed, their living standards are raised through new commercial opportunities and assistance, and through which they maintain a mix of community and individual decision-making control over their historical village territories. This would involve quite a different model, compared to a concession-based development programme by transnational corporations, that is ultimately backed by the coercive force of an authoritarian state, whereby non-local beneficiaries (including the central Lao state and corporate shareholders) would control the majority of resource rents and potential revenue surplus.

In place of such debates, and in the apparent absence of practical and realistic alternatives, I argue that the case study company is producing a new and, in many ways, a highly compelling narrative, whereby the economic development of these upland forest-land areas of Laos will be managed through corporate investment. In this process, the unruly social-natural landscape of the old Ho Chi Minh Trail is enlisted into forms of political and cultural spectacle—a kind of ‘moral theatre’ (Sioh 2010), whereby private actors and the Government of Laos use the resource concession system, foreign investment, UXO removals, and neoliberal poverty indicators, to promote sustainable (extractive) development. This ‘sustainability enclave’ underway in southeastern Laos is particularly interesting for a number of reasons. The future of the project is still open, and is potentially subject to future policy change, perhaps even circumvention by other competitors for land who are unconstrained by a corporate sustainability framework. Although I have not analysed this in great detail, there are indeed indications that the project holds significant promise for delivering tangible livelihood benefits for an impoverished local population (although starting from such a low per capita income base, achieving ‘success’ on this front should not be overly difficult). In this way, the project seems to represent a departure from the dystopian coercive ‘land grab’ scenario in Laos. The qualitative conceptual difference I point to in this paper is the distinction between the production and circulation of ecological knowledge as a minimal response to regulatory

requirements, versus knowledge production of local ecologies and populations as a more central and generative component of a project's justification and legitimation; a source of productive innovation, and potential competitive advantage. Through such landscape enclosures and processes of re-territorialisation, through the described ecological knowledge practices, and the strategic use of performance, images and spectacle, new, sustainable, 'concession empires' are being born in Laos, and new socio-spatial and economic hierarchies are legitimated.

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NOTES

1. Company fund payments include: Village Development Fund: Total of approximately USD 360 per hectare for 50 year period, 50% paid upfront, other 50% paid in installments every 7 years; Subdistrict Development Fund: approximately USD 5 per hectare for 50 years 100% paid upfront; and District Development Fund: approximately USD 21 per hectare for 50 years 100% paid upfront (fieldnotes, May 2012).
2. The formal steps include: Use of updated SPOT satellite imagery which shows areas of tall forest and degraded forest/swidden burns, ground-truthed through GPS (tall forest not available for tree plantations). Overlay with topographic maps which indicate terrain steepness (slopes over 25 degrees are not available for plantation development). Overlay with state maps of National Protected Areas, National Production or Conservation Forest.
 - Mapped and ground-truthed village border delineation with village representatives and leaders from neighbouring villages
 - Overlay with village PLUP system which show village conservation forest, production forest, protection forest, and spirit forest, housing areas, wet-rice fields, and roads, amongst other categories. This produces a map of 'potentially suitable' plantation areas
 - The company then ensures that sufficient spaces of swidden managed/degraded forest are set aside for each household to still have sufficient space to conduct 1 ha of swidden on a seven year rotational basis
 - A participatory process is then organised whereby the company, with government officials, meets the villages and agrees upon the areas to allocate for tree planting.
3. Based on the available literature and author village visits, there is some early evidence at this point for beneficial economic and agricultural outcomes to local villagers, in terms of the payments offered by the company for land access (2.8 million kip per hectare, 50% of which is paid upfront), access to wage income, and improved rice yields in the first years of the intercropping arrangement (field research, 2008, 2010, 2012). These benefits need to be placed in the context of villagers' loss of access to the forest-lands in question for the next 50 years of the concession

period, and possibly compared to the counterfactual scenario of the benefits and profits that villagers could have enjoyed under alternative community development options. Notably, in a Rapid Participatory Biodiversity Assessment conducted in 2008 by IUCN, certain issues were reported with the 'participatory' component of the company's land-use planning process, whereby it was noted that villagers perceived the company-supported land-use planning sessions to be top-down government exercises in identifying land for the company.

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