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Circular labor migration and land-livelihood dynamics in Southeast Asia's concession landscapes



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ABSTRACT

Labor migration and large-scale land enclosures are increasingly central to the story of agrarian change throughout the Global South. Nonetheless, there remain limited understandings of how recent explosions of mobile labor and new sources of smallholder capital shape and are shaped by ongoing land use and property transformations. This article reviews this gap in Southeast Asia – a region where labor and capital are highly mobile and where the expansion of industrial agriculture and forestry has been particularly rapid. We begin by synthesizing recent labor migration trends in Southeast Asia and discussing key conceptual frameworks for studying labor mobility and agrarian transformations. We then summarize shifts in land use, land control, and labor relations linked to both labor mobility and large-scale land enclosures. We conclude by highlighting two questions deserving of further study. First, how do large-scale industrial agriculture and forest concessions affect rates and patterns of labor migration out of nearby communities? Second, how do new patterns of household resource control and labor allocation from labor migration affect land use and land cover, particularly in sites dominated by large-scale commodity concessions? These questions cannot yet be answered fully though work has begun to address them both directly or indirectly. We use the existing literature to highlight directions for future research on these themes.

"...migration does indeed need to be central to the way we now tell the story of agrarian change in Southeast Asia" (Kelly, 2011: 502).

1. Introduction

Migrant labor to and from agrarian regions of the Global South has grown significantly over the past several decades, and now drives billions of dollars in annual remittance investments (Kelly, 2011; Rigg et al., 2016; World Bank, 2018a). Simultaneously, agrarian environments have been transformed by large-scale land acquisitions for industrial agriculture and forestry (Borras et al., 2011; Cotula, 2012). What do these changes imply for agrarian livelihoods and landscapes, and what are the relationships between these two emergent phenomena? As an entry into addressing these questions, this article critically reviews evolving geographical debates on the linkages between circular labor migration, agrarian livelihoods, and changes in land use and control. We focus on understandings in Southeast Asia (SEA), a prominent and growing contributor to new mobilities of labor and smallholder capital and a region in which the expansion of industrial agriculture and forestry has been particularly rapid.

A central thread shaping our review is an emphasis on the complicated but as-yet understudied relationships linking labor migration, large-scale land acquisitions and conversions, and processes of land use and cover change ("land change") both on and around plantation lands. We begin by discussing regional labor migration trends and key conceptual frameworks linking labor migration, rural livelihoods, and changes in land use and control. We then ground these frameworks in SEA-based research, highlighting the hybridity and multiplicity of emergent agrarian, forest, and mobility transformations across the region. We also highlight the ways that existing research speaks to the two key questions we are unpacking in our Indonesian research sites¹: (i) how large-scale land enclosures alter or reinforce rates and patterns of labor migration, and (ii) how labor migration reshapes land and labor relations in sites dominated by large-scale land enclosures. We

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conclude with suggestions for future research.

We show below that research on both labor migration and largescale land enclosures is growing. Nonetheless, the articulations of mobile labor and smallholder remittance capital with rapidly changing property relations, labor relations, and land uses remain poorly understood in SEA. This synthesis thus emphasizes the need to further explore not only how and why rural people are pushed or pulled out of landscapes marked by large-scale land enclosures, but what happens to these landscapes after they leave, when they send remittances, and when they return to their agrarian homes - or when they do not. We come to these questions amid an explosion of social science research on the role of large-scale land enclosures in restricting access to agrarian resources, altering local economic opportunities, and simplifying landscapes and on the role of labor migration in altering agrarian livelihood strategies.

The evidence we review below suggests that the exodus of labor from agrarian landscapes in and around large-scale land enclosures is not inevitable. In many instances, evidence does suggest that plantations increase out-migration by bringing in their own contract labor and establishing strict access rules, thus reducing local access to jobs and land. Yet industrial plantations can also create the labor opportunities they promise in agrarian areas, and/or enhance ancillary economic opportunities, thus reducing labor migration out. Furthermore, even where plantations increase out-migration, the loss of smallholder control over land in and around plantations cannot be assumed. Some evidence now suggests that the small individual flows of capital and labor produced by labor migration can meaningfully shift dynamics of resource control and land change even in land-constrained environments.

We turn to these discussions and debates below, noting the wide range of mediating contexts and conditions that can shape associated land, labor, and resource control relations. Undergirding our review throughout is thus an emphasis on the multiplicity of pathways shaping contemporary agrarian, forest, and mobility transformations in SEA.

2. Labor migration in Southeast Asia: regional trends

While off-farm work has a long history in agricultural regions, the nature and locations of such work has changed, as have the agrarian contexts within which it is performed (Hart, 1989; Kelly, 2011; Rigg, 2003; Vandergeest, 2012; White, 1983).² Circular as well as permanent patterns of in and out migration for work are often the main livelihood choice of younger generations in agrarian regions (Fox, 2018) and are increasingly common among even those households in the Global South with good access to agricultural land (Rigg, 2003; Winkels, 2008). Whether their destinations are domestic or transnational, this exodus of workers from rural areas and the remittances they send or bring home have generated significant changes in patterns of resource control, land use, labor relations, and land cover in home villages and environments (Hecht et al., 2015; Kelly, 2011; McKay, 2005, 2003; Rigg, 2007; Rigg and Salamanca, 2011).

Hundreds of millions of rural people now migrate to work transnationally, traveling further, contracting for longer periods of time, and earning higher wages than previously by working in countries where there is a better return on their labor than can be obtained in home economies (Cole et al., 2015; Hecht et al., 2015; Rigg et al., 2016; Tacoli, 2011; World Bank, 2013). Globally, an estimated 258 million people migrated internationally in 2017, 72 percent of whom were born within countries in the Global South and 41 percent of whom were born in Asia (United Nations, Department of Economic and Social Affairs, Population Division, 2017). This figure is up 49 percent from an estimated 175 million international migrants in 2000 (World Bank, 2016) and excludes an additional 750 million people estimated to migrate domestically (World Bank, 2017). Remittances associated with international migration reached an estimated \$689 billion in 2018, \$518 billion of which was sent to developing countries – a figure roughly three times the volume of all official development assistance (World Bank, 2018a).

SEA (Fig. 1) is a prominent and growing contributor to these new mobilities of people and remittance capital. Between 2006 and 2016, Asian countries produced a total of 26 million new transnational migrants overall. Asia also experienced the second largest relative increase in migrant populations following Africa, with migration increasing by an estimated 62 percent from 2000 to 2017 (United Nations, Department of Economic and Social Affairs, Population Division, 2017). SEA is home to two of the twenty largest sources of transnational migrants, that is the Philippines (which sent ~5.7 million migrants between 2000 and 2017) and Indonesia (which sent \sim 4.2 million migrants over the same period) (United Nations, Department of Economic and Social Affairs, Population Division, 2017). Two of the top ten remittance-receiving countries globally are also in SEA, which are the Philippines (\$33.7 billion) and Vietnam (\$15.9 billion) (World Bank, 2018a). Remittances to the region have grown steadily over the past ten years (2008-2018, Table 1, World Bank, 2018b). These estimates can be considered both tentative and conservative, particularly as most migration and remittance data fails to include undocumented migrant workers or domestic labor migrants (Cole et al., 2015).

A distinguishing feature of labor migration in SEA – one we focus on in this review - is its circular nature, which involves temporary rather than permanent exodus from agrarian and urban areas and, often, sustained personal and professional connections between sending sites and work sites (UN Women, 2013). Temporary or circular labor migration outside of workers' home settlements has a long history in the Asia-Pacific, one that dates to "colonial times when there were substantial 'contract coolie' types of indentured and semi-indentured labour flows between colonies," (Hugo, 2009: 26; see also Stoler, 1995) and one that includes longstanding flows of migrant workers to and from agrarian and forested regions seeking work and income. This suggests any claims to the "newness" of labor mobility need to be critically examined. Agrarian historians in Indonesia, for instance (e.g., Breman, 2014, 1983; Elson, 1994), have long demonstrated the importance of labor mobility to a significant portion of the Indonesian peasantry.

Contemporary labor flows however are generally represented as being both more substantial (in relative and absolute numbers) and more diverse (in terms of destinations, participants, and arrangements) than in previous centuries (Hugo, 2009, 2016; Kelly, 2011). Long-distance (predominantly international) migration is characterized by two geographic patterns within SEA. Migrants from the mainland (e.g., from Cambodia, Thailand, Vietnam, and Myanmar) tend to migrate for work to Thailand, while those from "insular SEA" (Indonesia, East Malaysia, the Philippines) tend to work in Singapore and Peninsular Malaysia (Kelly, 2011). These distinctions blur outside regional bounds with migrants from all Southeast Asian countries commonly seeking work in Hong Kong, Japan, Taiwan, and the Middle East in factories, construction, urban service industries, and as domestic labor and caregivers (Kelly, 2011).

Tables 2 and 3 collate recent migration data in SEA, depicting gross estimates of in- and out-migration in SEA from 1990 to 2010, and bilateral migrant flows within SEA from 2005 to 2010, respectively.

² Various terms have been developed to understand corresponding shifts in agrarian livelihoods, including occupational diversity, multiplicity, and multilocality; pluriactivity; and livelihood diversification-for-survival (Rigg et al., 2016). This review focuses primarily on circular labor migration as one component of multi-local, diversified livelihoods, particularly to and from predominantly agrarian contexts. As defined by the IOM, circular migration refers to "[t]he fluid movement of people between countries, including temporary or long-term movement which may be beneficial to all involved, if occurring voluntarily and linked to the labor needs of countries of origin and destination" (https://www.iom.int/key-migration-terms). This review also examines domestic patterns of circular labor migration.



Fig. 1. The Southeast Asia region.

Table 1	
Estimated remittance flows to countries	within SEA, 2008-2018 (\$US, in millions).

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018e	% GDP (2018)
Brunei	no data											
Cambodia	188	142	153	160	172	176	377	400	371	386	414	1.7%
Indonesia	6794	6793	6916	6924	7212	7614	8551	9659	8907	9012	11,157	1.0%
Laos	18	38	42	110	59	60	40	93	116	139	149	0.8%
Malaysia	1329	1131	1103	1211	1294	1423	1580	1644	1604	1648	1821	0.5%
Myanmar	55	54	115	127	275	1644	1864	2005	2346	2565	2754	3.9%
Philippine	18,851	19,960	21,557	23,054	24,610	26,717	28,691	29,799	31,142	32,810	33,728	10.1%
Singapore	no data											
Thailand	1898	3808	4433	5256	5657	6585	6524	5895	6270	6729	7462	1.5%
Timor-Leste	18	113	137	137	120	34	44	62	80	87	88	3.2%
Vietnam	6805	6020	8260	8600	10,000	11,000	12,000	13,000	14,000	15,000	15,934	6.6%
Total	35,956	38,059	42,716	45,579	49,399	55,253	59,671	62,557	64,836	68,376	73,507	

Notes: Data obtained from The World Bank Group, "Remittance Data in Flows," obtained at http://www.worldbank.org/en/topic/migrationremittances/data and updated in December 2018; data presented for the year 2018 are initial estimates. Despite within-country fluctuation, remittances to SEA have exhibited steady growth over the ten-year period captured here, contributing a respective 6.6% and 10.1% to GDP in Vietnam and the Philippines (vs. the respective contribution of agriculture in both countries, 18.1% and 9.7%).

Estimated remittance in-flows to countries in SEA. Despite within-country fluctuation, remittances to SEA have exhibited steady growth over the ten-year period captured here, contributing a respective 6.6% and 10.1% to GDP in Vietnam and the Philippines (vs. the respective contribution of agriculture in both countries, 18.1% and 9.7%).

These estimates are highly uncertain given insufficient efforts to collect data on migration in many countries, and variation in the types of data collected to quantify migration across countries. Nonetheless, they suggest the contrast between strongly labor-absorbing countries such as Singapore, Thailand, and Malaysia and labor-sending countries such as Vietnam, the Philippines, and Indonesia (Table 2). Thailand is an interesting case in that it shifted from a labor-sending to a labor-absorbing country between 1990 and 2010. Data presented in Table 3 also demonstrate the "neighborly" nature of movement between net labor-sending and labor-absorbing countries. Migration from Cambodia to Thailand, Indonesia to Malaysia, Malaysia to Singapore, and Myanmar

to Thailand, for example, comprised 79.7% of all estimated bilateral migration flows in SEA between 2005 and 2010 (Table 3).

Fig. 2 situates these trends against recent demographic and economic shifts within SEA, data which suggest the declining significance of agriculture as a share of GDP and percentage of total employment and coincident urbanization in most countries in the region. Despite some regional consistency in these trends, however, and as Liu-Farrer and Yeoh (2018: 2) point out, "extreme variations in development both drive and prohibit the movements of people, and create complex patterns of mobility," not least given the "increasingly restrictive immigration regimes" now being put in place in some countries. Inter-

Table 2

Estimated flows of migrants to and from countries in SEA, 1990-2010.

	1990–1995			1995–2000			2000–2005			2005–2010		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
Brunei	20,214	16,038	+ 4445	14,861	9476	+5385	57,443	53,792	+ 3651	58,515	54,758	+ 37 57
Cambodia	153,457	0	+153,457	92,196	0	+92,196	10,442	129,753	-119,311	15	253,917	-253,902
Indonesia	26,293	751,906	-725,623	0	903,784	- 903,784	43,282	1,171,783	-1,128,501	26,094	1,273,155	-1,247,061
Malaysia	516,499	196,567	+319,932	664,808	243,869	+420,939	743,782	344,897	+ 398,885	739,267	650,142	+89,125
Myanmar	0	125,437	-125,437	39,261	36,377	+2884	1181	1,003,322	-1,002,141	10,048	508,658	-498,610
Philippines	51,259	748,969	-697,710	50,898	831,342	-780,444	14,960	1,135,335	-1,120,375	15,933	1,207,144	-1,191,211
Singapore	284,101	53,303	+230,798	306,742	53,378	+253,364	309,031	78,318	+230,713	741,139	23,686	+717,453
Thailand	18	1,097,473	-1,097,455	505,934	1273	+504,661	1,075,453	94,285	+981,168	675,498	253,620	+421,878
Vietnam	15,128	337,483	-322,355	17,893	307,515	-289,622	15,186	446,793	-431,607	15,066	440,560	-425,494

Notes: Data based on calculations presented in The Global Flow of People, available at www.global-migration.info/. Estimated bilateral migrant flows to and from countries in SEA.

Table 3

Estimated bilate	al flows	of migrants	within	SEA,	2005-2010.

	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Timor-Leste	Vietnam	Total (In)
Brunei	0	107	0	0	159	0	28	0	2928	72	0	3294
Cambodia	0	0	15	0	0	0	0	0	0	0	0	15
Indonesia	26	194	0	0	1012	0	431	2372	5312	37	0	9384
Laos	0	224	11	0	21	48	10	0	434	1	1792	2541
Malaysia	4455	3357	346,048	0	0	84,959	198	0	1287	1026	91	441,421
Myanmar	2	2	65	0	68	0	46	0	2	3	0	188
Philippine	72	13	494	0	289	28	0	171	236	19	0	1322
Singapore	12,033	394	100,871	0	395,727	0	5000	0	5876	518	2	520,421
Thailand	31	189,393	1156	77,679	1166	368,832	793	0	0	36	5658	644,744
Timor-	0	0	0	0	0	0	0	0	0	0	0	0
Vietnam	80	6	4552	229	34	2013	105	25	147	575	0	7766
Total (Out)	16,699	193,690	453,212	77,908	398,476	455,880	6611	2568	16,222	2287	7543	

Notes: Data based on calculations presented in Sander and Abel (2014). Columns reflect origin countries while rows reflect destination countries. Estimated migrant flows to and from countries in SEA.

regional distinctions are also shaped by the differences between political regimes in SEA (which range from democratic, secular states to socialist market economies).

3. A critical review of conceptual frameworks linking labor migration, agrarian livelihoods, and changes in land use and cover

As Haas (2010) argues, governments, policy makers, and some development scholars have represented labor migration more "optimistically" by evoking the freedoms made possible by globalization, be it the pull of new opportunities, the physical and technological infrastructures that permit their realization (cell phones, radios, new institutions, air travel, and electronic banking), or the decline of strict social and behavioral barriers (e.g., gender norms, marital arrangements, dynamics of class, caste, or religion). This "optimistic" perspective is also accompanied by a view of labor migration as enabling flows of money, goods, and knowledge from capital-abundant countries into labor or resource-abundant countries and/or as facilitating a "transfer of labor to dynamic sectors of the economy" (World Bank, 2007: 22). Under some structural conditions, and where this enables higher wages and earnings, labor migration is also seen to represent a "pathway out of poverty" for individuals and households (e.g., Hazell and Rahman, 2014).

Zelinsky's *Hypothesis of the mobility transition* (1971) is akin to these more unilinear and apolitical perspectives in its reliance on Rostow's (1990) notion of the key stages of economic growth and modernization theory. Modernization theory applied to what Zelinsky calls "the mobility transition hypothesis" links demographic transitions to shifting patterns of mobility by conceptualizing a series of five states, from a "pre-modern traditional society" through to an "advanced society." Other work that is similarly unilinear integrates Zelinsky's mobility transition hypothesis with an analysis of associated land changes that may correspond with these distinct phases of mobility, e.g., those land changes characteristic of a more sedentary agrarian society or those characteristic of more stabilized internal or international migration flows (Chen et al., 2014).

Such positivist frameworks, however, have arguably been "overly influenced by the social experiences and political experiments of classical immigration countries, especially those in North America" (Liu-Farrer and Yeoh, 2018: 2). This renders them ahistorical where they are applied without attention to the specificities of development elsewhere. For instance, Arnold and Campbell (2018: 183) highlight the diversity of development trajectories characteristic of Mekong SEA, noting that: "... the very concept of transition – born of a particular Western European historical experience – carries with it historicist assumptions of shifts from traditional to modern, informal to formal, agrarian to industrial and petty producer to wage worker." Feminist scholars have added to these critiques by highlighting how economistic and other reductionist approaches obscure the roles of social reproduction and gender relations in shaping and informing observed trajectories of change (Elmhirst, 2011; Federici, 2004; Silvey, 2004).

Understanding such changes as forest or agrarian *transformations* rather than "transitions" is a more context-and-historically attentive means of interpreting reasons for labor migration and land change. Instead of focusing simply on a preconceived shift from an agrarian society into a more urbanized, industrialized and market-based society, the word transformation allows the analyst more flexibility in discussing what is happening in a specific place and time; it does not presuppose before and after states (Fox, 2018; Hart, 1989; Kelly, 2011). This alternate terminology encourages analysts to move away from concepts like "phases of economic development," "industrialization," and other disproven ideas about frontier settlement (Perz, 2007), and

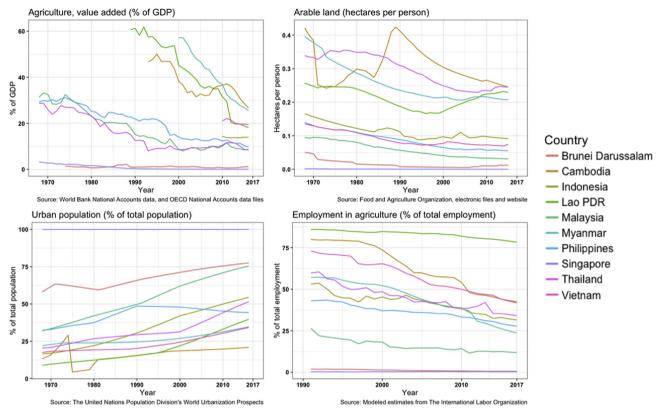


Fig. 2. World Bank indicators and development trends in SEA, 1968–2017. From 1990 to 2017, agriculture declined as a share of the GDP in all displayed SEA countries, now accounting for less than 20% of GDP in all tracked countries except Cambodia and Laos. Simultaneously, urban populations grew in all countries in SEA. Note, while these indicators do not capture land allocated to agriculture, we expect we would see an increase here because of industrial agricultural development.

provides more "contextualized descriptions of forest transition [or agrarian transition] that hardly reflect 'smooth', ineluctable, and completely general processes" (Walker, 2008: 137; Mather, 1992; Rudel et al., 2005).³

Scholars of agrarian transformation, for instance, typically emphasize change as a series of contradictions, tensions, conflicts, and subsequent changes, including those associated with the introduction and elaboration of capitalist relations in agrarian societies (Hart, 1989; Kelly, 2011; Nevins and Peluso, 2008). Studies of agrarian transformation using the frameworks of Marxian political economy and political ecology thus frequently begin from the understanding that labor migration is not simply a variable in agrarian change but both a cause and an effect of agrarian change, depending on extant and historical circumstances. The contingency of these dynamics are highlighted through multi-scalar, historically-oriented, and relational analytical approaches (Hart, 2002; Hebinck et al., 2018).

The notion of telecoupling within land systems science is consistent with this mode of analysis through its emphasis on causal feedbacks between locations often otherwise treated as distant or disparate (Seto et al., 2012). Indeed, the telecoupling concept has been applied to understand relationships between labor migration and large-scale land enclosures (Baird and Fox, 2015), and to assess drivers of concession expansion (Friis and Nielsen, 2017); tracking, for example, the connections between growing economic strength in China, Thailand, and Vietnam and investments in Laotian plantations (Friis and Nielsen, 2017). Telecoupling approaches move beyond the more place-based approaches characteristic of earlier land change analyses, in this way, pushing back against the language of "transitions" by asserting "the various manifestations of globalization ... as well as the increasing speed and dimensionality of connectedness" (Friis et al., 2016a, b: 3).

4. Southeast Asia's agrarian, forest, and mobility transformations

Building on the discussion above, the following two sections review work from within critical agrarian studies, migration studies, and political ecology that detail the specific hybridities and contingencies of contemporary agrarian, forest, and mobility transformations in SEA. They also introduce the dynamics of land acquisition and enclosure that are reworking the agrarian environments in which labor migration occurs.

4.1. 'Hybrid' agrarian, forest, and mobility transformations & the sociopolitical context of labor migration in Southeast Asia

Labor migration does not always reflect a full or final exit from agricultural production. In contrast, it often comprises only one part of the multi-local, diversified, and hybrid livelihood strategies that increasingly characterize agrarian life in Southeast Asia (Rigg et al., 2016; Rigg, 2019). Such strategies span both on- and off-farm pursuits in rural, urban, and peri-urban employment contexts (Hecht et al., 2015). They also rework the geography of agrarian livelihoods, shaping dialectical interactions between livelihood relations, poverty relief or avoidance, and wealth accumulation in home and work sites, thus blurring these very categories (rural, peri-urban, and urban). Resulting

 $^{^3}$ The notion of a forest transition is meant to describe the historical relationship between economic development and forest cover, typically with reference to dynamics of change in countries of Europe and North America (Walker, 2008) whereas ideas of agrarian transition refer to how capitalism transforms agricultural production and labor (Kelly, 2011). For the above reasons, however, we opt for the language of transformations over that of transitions.

household and labor relations also belie the nuclear, unified familial units implicit in more reductionist or abstract theorizations of the agrarian, forest, or mobility "transitions" described above (Hebinck et al., 2018; Rigg, 2006; Rigg et al., 2018, 2016; Shirai et al., 2017).

In some cases, "farmers would like to get out of agriculture themselves ... and hope their children will not become farmers" (Hall, 2009: 118; see also Fox, 2018; Rigg and Salamanca, 2011). Nonetheless, even where migration is structured around aspirations of being "global" or "modern" world citizens, many migrants retain profound emotional, logistical, and personal connections to their home contexts that "pull" them back or give their agrarian contexts new global dimensions (McKay, 2012, 2005). Hertzman (2014: 1), for example, shows that even where Chinese migrants from West Kalimantan, Indonesia are awash in fantasies of becoming "cosmopolitan transnational citizens," many experience limitations in fully realizing these aspirations and/or continue to long for their hometowns (*kampung halaman*) following outmigration. As Peou (2016) demonstrates in Cambodia, many migrants from agrarian areas also simply do not make enough money to afford permanent settlement in urban or peri-urban work sites.

Yet the relations between labor mobility and land or land-based resources in SEA are notable because many labor-sending households continue to maintain ownership or control over land and other agrarian resources (Dressler et al., 2018; Rigg, 2006; Rigg et al., 2016, 2018). While mean household farm size has generally declined over time (falling in Indonesia, for example, from an estimated 1 ha in 1960 to an estimated 0.8 ha in 2003), "far from disappearing ... small farms appear to have tightened their hold on the East Asian agricultural landscape" (Rigg et al., 2016: 123-124). Globally, 87 percent of all 450 million farmers cultivating less than 2 ha are from Asia (Conway, 2014; Hazell and Rahman, 2014; see also Lowder et al., 2016 for an important review of these trends). This "surprising" persistence of the smallholder (Rigg et al., 2016: 118) is particularly striking given the industrial land deals that have enclosed much of the Southeast Asian landscape over the past five decades -a trend we review in detail in Section 4.2 (compare this, for instance, with those analyses that see the end of smallholder agriculture accompanying such enclosures, e.g., Elson, 2016; Li, 2014).

Evidence from SEA also suggests that labor migration can be a critical determinant in enabling poor and middle class individuals to maintain and invest in the agricultural smallholdings that they control formally or informally (Belton and Filipski, 2019; Cole et al., 2015; Peluso and Purwanto, 2018; Rigg et al., 2016; Tran, 2016). Nonetheless, the livelihood outcomes associated with labor migration are often highly differentiated at community, household, and individual levels. While some people reporting off-farm earnings enter the formal economy as workers, others venture out as "enterprising citizens" (Ong, 2006)⁴ that juggle farm work and short-term sources of formal and informal work, often experiencing conditions of exploitation. Some research, for example, has demonstrated the exploitative circumstances that young women may face in providing "intimate labor" as "caregivers, cleaners, cooks, nurses, sex workers and entertainers," working in private homes, most often for "those in and from the wealthier parts of the Global North," without sufficient legal or informal protections (Constable, 2014: xi). As Silvey (2006: 23) notes, cases of "torture, rape, sexual assault, overwork, and nonpayment of wages" are also commonly reported.

Labor migration is selective in that remunerative opportunities often follow pre-existing social divisions (Elmhirst, 2002; Hugo, 2009). Whereas most female labor migration in SEA is for domestic work, most

domestic and transnational migration among men is to capital-intensive and spatially-extensive industries in the primary sector (e.g. mining, logging, plantation wage labor) and construction or factory jobs. These jobs are often short-term or on temporary contracts; they provide few viable prospects for forward advancement, even where they are lucrative. The most remunerative opportunities tend to be mediated by access to capital (Breman and Wiradi, 2002) as well as social connections, higher education, skills, and identity; in other words, dimensions of access to work that constitute "bundles of power" (Ribot and Peluso, 2003) shaped by relations of class, race, gender, and age (Elmhirst, 2011; Silvey, 2004). Thus, although labor migration enables upward mobility for some, for others the terms are adverse, and in some cases, migration only reinforces existing stressors and forms of precarity.

The complex intersections between structural constraints, migrant agency, and shifting agrarian contexts and conditions beget multiple and differentiated pathways of agrarian, environmental, and livelihood transformation: no simple transitions are likely here. Before tracing further the contours of these shifts below, however, the next section introduces a second core phenomenon shaping agrarian, forest, and mobility transformations in the region: large-scale land acquisitions and conversions for industrial forestry and agricultural production. Starting from Philip Kelly's (2011: 502) argument that labor migration "does indeed need to be central to the way we now tell the story of agrarian change in Southeast Asia," we suggest that the linkages and relations between patterns of labor migration and large-scale enclosures of agrarian and forest resources must also begin to be better recognized.

4.2. The enclosure of Southeast Asian agrarian and forested lands

State and corporate investments in the industrial production of landbased commodities (e.g., palm oil, timber, and minerals) now define many rural landscapes (Borras et al., 2011; Li, 2011; Oliveira and Hecht, 2016; Peluso and Lund, 2011; Peters, 2013). This is particularly true in SEA, where contemporary land deals perpetuate decades-long trends. The 2016 Land Matrix Analytical Report, for instance, suggests that Indonesia is the most significant site of land acquisitions in the world, Cambodia the 12th, and Laos the 20th as measured by deals concluded as of April 2016 (Nolte et al., 2016: 18; Schoenberger et al., 2017: 8).⁵ While not all such acquisitions are eventually developed (McCarthy et al., 2012), millions of hectares of these land grants (often referred to as concessions)⁶ have been converted to monotypic commodity production for industrial agriculture and forestry in SEA (Davis et al., 2015; Gaveau et al., 2016).

In the wake of colonial forestry, plantation agriculture, and westerninfluenced property arrangements, many national and state governments in SEA acquired and maintained significant portions of the agrarian landscape as "political forests" (Peluso and Vandergeest, 2001). Such lands were set aside to be kept under permanent forest production or protection, recognized and sanctioned by national state institutions and managed by largely national level institutions. These state land enclosures formed the basis for production forests, national forests and parks, sites of environmental restoration and rehabilitation, and areas of biodiversity and watershed conservation (Peluso, 1992; Peluso and Vandergeest, 2001; Vandergeest and Peluso, 2006a, 2006b). In turn, many customary practices were criminalized, displacing

⁴ The notion of an enterprising citizen (*homo economicus*) refers to an individual embodying instrumentalism and exhibiting individual economic agency; an individual who through calculations and investments (rather than supportive infrastructure) can confront global insecurities and pursue wellbeing.

 $^{^5}$ We stay away from the term land grabbing here as a less than robust term for analysis.

⁶ The term concession, common in Southeast Asian context, refers to the allocation of rights, land or property by governments, corporations or other individuals and entities. Such rights or holdings are typically conferred for a fixed period of time, with use rights corresponding to a pre-determined set of activities (e.g. gold mining, timber harvest, sugarcane development). Most concessions in SEA are granted to corporate or parastatal entities by national, provincial or district governments for the sake of resource development and extraction.

swidden agriculturalists, peasant farmers, and forest users from their prior resource-based livelihoods (Peluso and Vandergeest, 2001). Today these kinds of environmental institutional formations would fit the label "green grabs." For the purposes of this article, it is important to understand state land control as a precursor to formal programs and spontaneous migrations across and within the region for work.⁷

The 1970s and 1980s saw the rise of private and state capital investments in industrial agriculture and forest plantations, as well as smallholder-controlled tree crops, staple grains (Green Revolution), and in some upland areas, livestock. In the Philippines, Indonesia, and Malaysia, large-scale timber harvesting for export accelerated, as did the establishment of corporate and state-owned forest plantations (Barr. 1998: Dauvergne, 1997). Simultaneously, the incorporation of smallholder producers into export markets shaped "everyday" processes of accumulation by dispossession (Hall et al., 2011), as where development policies sought to replace swidden cultivation by promoting crops such as coffee, cacao, and rubber (Kelley, 2018). In Central Kalimantan, Indonesia, the notorious million-hectare project in rice self-sufficiency and agricultural modernity was implemented through authoritarian rule and political violence, transforming millions of hectares of peat land into wet rice holdings (McCarthy et al., 2012). Such projects, enabled by state control over land, resulted in high rates of forest cover loss in Indonesia and most other countries in SEA, in the process, creating new property arrangements and farming practices (Peluso and Vandergeest, 2001; Woods, 2011).

The 1990s and 2000s accelerated these dynamics of formalization, eventually enabling the new property systems through which concessions were able to spread after the millennium. During these years, Laos, Cambodia, Vietnam, and China shifted into "market socialism" (Dwyer, 2014). Market socialism had an interesting and unintended side effect in that these countries became more influenced by the stateled initiatives and neoliberal policies shaping other economies in the region (Dwyer, 2014; Nguyen and Locke, 2014). In Cambodia, the 2001 Land Law and subsequent sub-decrees authorized concessions up to 10,000 ha for 99-year leases (Chandet et al., 2010). By 2018, an estimated 274 concessions covered 2.1 million hectares across Cambodia (LICADHO, 2019). In Laos, conservative estimates suggest that 2642 land deals spanned 1.1 million hectares by 2012 - roughly 5 percent of national territory (Schönweger et al., 2012). Land deals in both of these countries have their roots in shifting "national legal frameworks [to] facilitate the recognition of private property and the granting of concessions" as well as "the embrace of capitalism and the associated elite capture of resources associated with post-war state building" (Schoenberger et al., 2017: 13).

Since 2000, the sustained de-regulation of financial capital, liberalization of domestic economies, and globalization and industrialization of agro-food-fuel complexes are thought to have encouraged largescale appropriations of agrarian and forested lands (Borras and Franco, 2011). In Vietnam, for instance, policies to promote rubber in the northwest - involving tree plantations allegedly "owned" by smallholders but leased to corporate investors - have resulted in a widespread loss of villagers' land in a state-capitalist politics of possession that involves both shareholding and labor contracts (Dao, 2015). Decentralization in the Philippines and Indonesia-in both countries following the ousting of long entrenched dictators-propelled concession expansion as regional elites capitalized on regulatory confusion to capture benefits from lands not yet committed to commodity production (Setiawan et al., 2016). In the 2010s, "green grabs," including on lands zoned for environmental protection in the 1990s or earlier, proliferated (Fairhead et al., 2012; Montefrio, 2017).

Land enclosures do not always steamroll over the iconic peasant

cultivators of upland and lowland SEA, though legal forms may have. As mentioned above, "virtual land acquisitions," or the acquisition of land for speculation rather than for the contracted formal use belies the actual land use practices and land cover of many plantation/concession zones (McCarthy et al., 2012). These acquisitions are those linked to the goal of "appropriating subsidies, obtaining big loans using land permits as collateral, or speculating on future increases in land values" (McCarthy et al., 2012: 523). Other scholarship on contemporary land rushes has also noted frequent project failure, wherein land transactions or developments fail to reach the stage of implementation due to conflict or competition with existing land users—whether or not these users have formal, informal, or customary claims to these lands (Bachriadi and Lucas, 2001; Lund and Rachman, 2016; Rutten et al., 2017; Schönweger and Messerli, 2015; Yasmi et al., 2010).

In SEA, lack of coordination or transparency within and between government agencies commonly limits data on concession locations and implementation status (Deininger and Byerlee, 2011). Data on land allocation is also notoriously difficult to obtain (Oya, 2013), and even when data are available, maps often depict overlapping land claims and may contain outdated or incorrect information (Edelman, 2013). Further, concession and concession-like arrangements vary widely: From classic state land concession models to new forms of contract farming, smallholder-beneficiary plantations, and village leasing schemes (Barney and van der Meer Simo, 2019). As we discuss below, these dynamics are important to attend to not only in conceptualizing largescale land acquisitions but in understanding how they influence property, labor, and livelihood relations-for instance, through their role in pushing local farmers to give up lands (voluntarily or involuntarily) while encouraging mobile laborers to see concessions as sites of domestic employment and residence.

5. Current and future research

While both labor migration and large-scale land enclosures have extensive individual literatures, the intersections between these two phenomena are still being explored. We turn to these intersections now, based on two of our own research questions in four sites in Indonesia. We see these questions as important sites for future research into how migration articulates with agrarian change in and around concessions.

5.1. How do large-scale industrial agriculture and forest concessions affect rates and patterns of labor migration out of nearby communities?

Though migration and agrarian change scholars in SEA have clearly begun to explore the linkages between migration and industrial concessions, research has yet to fully engage with the uneven and varied relationship between land enclosures for industrial agriculture and forestry and contemporary increases in labor migration. In this section we synthesize available research on this theme, focusing on the ways land enclosures are affecting livelihoods, land, labor, and property relations, and on how migration is implicated in these changes.

One key theme is that rather than occupying 'marginal,' 'idle,' or uninhabited 'frontier' lands (common discourses surrounding land enclosures in SEA, see, e.g., Borras and Franco, 2011: 10),⁸ large-scale land deals often directly overlap with smallholder-claimed lands. One study in West Kalimantan, Indonesia demonstrated that between 1990 and 2011, oil palm leases overlapped with 59 percent of the land claimed by 247 communities (Carlson et al., 2012). More than 90 percent of these leases, however, remained virtual land grabs (Carlson et al., 2012). Similarly, Obein et al. (2007) found that 84 percent of the agricultural land in 33 villages in Bachieng, Laos had been lost to rubber by 2006 due to a single industrial concession; 18 villages were

⁷ The Indonesian Transmigration Program, for example, could not have existed without the establishment of a vast network of colonial and post-colonial state-controlled forests first.

⁸ We cite Borras and Franco's review but both before and after that paper, a huge literature on this topic has emerged in Southeast Asia and beyond.

left with less than 10 percent of their own land to work and four with none. This study also showed that the company had no policy in place to employ people from these villages; a situation that Obein (2007: 26) suggested may lead people from the area to resettle elsewhere.

Even where land deals are not implemented, the formalization, consolidation, and privatization of property rights in land and tree crops often result in the (semi)-proletarianization of local people/smallholders who lose land-based entitlements and livelihood options (Kenney-Lazar, 2012). This is particularly true where large-scale enclosures take place within landscapes "already marked by extractivist resource politics" (Elmhirst et al., 2017: 1142). In Northwest Vietnam, for example, smallholder land entered into a rubber contracting scheme had previously been allocated to villagers as part of a hydropower resettlement scheme (Dao, 2015). This history compounded challenges of land access and food security when households 'voluntarily' entered 1 ha of land into the rubber scheme.⁹ While Dao (2015) does not explore the implications of these changes for migration, reduced resource access has been associated with out-migration among dispossessed households in other contexts (Barney, 2012).

Industrial agriculture or forestry expansions in the form of corporate plantations have also been shown to reconfigure local economies by shifting land control, accumulation, and access to jobs or income on lands not taken up by the concession. For instance, after one plantation company in Laos acquired and converted villagers' upland fields to rubber from mixed cropping of rice and vegetables, and forests previously used for non-timber forest product collection, villagers converted additional land to rubber, fearing more land losses to the company. The company's introduction of a penalty scheme for damages to rubber trees by browsing livestock also led villagers to sell their livestock. This caused declines in soil fertility, rice yields, and local food production (Friis et al., 2016b).

Industrial oil palm expansion in Southern Palawan, Philippines has also motivated and accelerated land accumulation by wealthy in-migrants (Montefrio, 2017). Their scramble to acquire land and capitalize on boom conditions raised land prices. In addition, some local residents planted oil palm on their own land as others invited prospective landowners from outside the village to purchase their land. Limited access to land has subsequently led indigenous borrowing practices for swidden agriculture to be replaced by land rentals. Montefrio (2017: 810) suggests that some villagers "left the community for off-farm work elsewhere," citing new difficulties in accessing land. Similar dynamics have been identified in northwest Cambodia, where large-scale land enclosures have pushed "more vulnerable peasants into seeking wage labour and resorting to job migration" (Diepart and Sem, 2018: 1).

Diverse factors shape the ways large-scale land acquisitions affect land access and local livelihoods, including the commodity crop's material properties, the conditions of land access, the labor processes involved, and the ways labor can be absorbed into new property and land use arrangements (Barney and van der Meer Simo, 2019; Li, 2011). Li (2017) argues, for instance, that the casualization of oil palm work in Indonesia is "an entirely predictable trend ... [as] landless people desperately need jobs, and plantations no longer have to offer decent work and living conditions in order to attract and hold labor" (2017: 1163). Casualization is not new in Indonesia, dating back to plantation intensifications under colonial rule (Breman, 1983; Elson, 1994; Stoler, 1995). However, Li also highlights the irony that corporate agriculture's vast acquisitions of land are forcing smallholders to seek work on the plantation to survive. Plantations may also import contract laborers rather than providing jobs to local residents. In some cases, this may be because local residents prefer working their own agricultural land over plantation work (Elmhirst and Darmastuti, 2015). It is also commonplace for plantations to claim that local people do not work as hard as laborers brought in from elsewhere (Li, 2011)¹⁰. Plantations raise the cost of agricultural labor on private lands as well. Thus to pay for their own labor needs, Elmhirst and Darmastuti (2015) find that smallholders in Sumatra, Indonesia, especially women, migrate to seek extra-local work (particularly as access to employment networks has grown). In Indonesia, labor migration into areas with stronger economies has also helped to make some plantation workers into smallholders (Gilbert, 2019; Peluso and Purwanto, 2018). Indeed, plantation economies often *attract* transnational labor migrants, as is true of Indonesian labor migrants traveling to work in Malaysia's oil palm economy.

While plantations often reduce local access to land and livelihood opportunities, plantations can also stimulate local investment and/or enhance local livelihood opportunities, including through newly generated jobs and off-plantation opportunities for local inhabitants. This is especially true where plantation companies provide favorable (or promised) benefit-sharing arrangements to the smallholders that sell or lease lands to investors. A study in Riau, Sumatra, for instance, found that 84 percent of oil palm-linked income was reinvested locally (Syahza, 2005); a "new injection of spending" that generated employment opportunities linked to the concession economy (e.g. kiosks, trade or distribution, construction industries) (Budidarsono et al., 2013: 175). In a study of four villages in West Kalimantan and Sumatra, McCarthy (2010) showed that households in early scheme oil palm farms¹¹ reinvested their surplus income to finance the conversion of their own rubber gardens to oil palm. They also benefitted from new oil palm markets in the form of oil palm mills as well as infrastructure built to serve the concessions, such as roads. Ancillary opportunities connected to concession economies may include producing products that support the concession industry (e.g., gravel, food, services for in-migrants, or contract labor), or opportunities to grow the same commodity.

Such changes brought by the establishment of concessions have in some cases slowed labor migration by contributing to local livelihoods, as found in a recent study of six plantations in Laos (Barney and van der Meer Simo, 2019). However, such benefits are contingent on the specific concession model adopted and on whether or not the plantations provide "sufficient compensation for the land used, space for other land uses, and comprehensive benefit-sharing through intercropping, employment of local labour, and contributions to village development and infrastructure" (Barney and van der Meer Simo, 2019: 4). In the absence of such guarantees, the authors of the study found that plantations were not competitive with other land use arrangements for smallholders, including existing swidden-fallow management. Work highlighting the connections between road construction and access to land in frontier regions (Laurance et al., 2014) also suggests a scenario in which plantation development may increase access to land by spurring infrastructural developments.

Recent work in Kalimantan, Indonesia – though not explicitly engaging the question of labor migration – further helps to disentangle the conditions under which concessions may generate improvements in village well-being (Santika et al., 2019a, 2019b). The researchers applied a matching method to provide generalizable findings from > 50 villages while accounting for time delays in the realization of plantation

⁹ In this case, households were coerced into entering land into the rubber scheme by high penalties incurred where managing independent croplands in ways that damaged adjacent rubber trees; by promises of withheld land titles if land was entered into the rubber scheme; and by insecure/partial access to resulting titles, whose original copies remained held by district authorities to ensure villagers did not reclaim entered land (Dao, 2015: 359).

¹⁰ This is a contemporary version of the "myth of the lazy native" frequently cited by colonial and post-colonial land and labor managers (Alatas, 1977).

¹¹ Early oil palm schemes in Indonesia, many associated with transmigration, were far more lucrative for smallholder participants. The shares favored rubber and oil palm farmers with a 70-30 split of profits on wholesale transfers. Current shareholders typically receive 20-30 percent shares and lose control of farm management.

benefits (Santika et al., 2019a), finding communities already reliant on markets realized greater socioeconomic benefits from oil palm development than communities previously reliant on subsistence-based livelihoods. Even those regions realizing socioeconomic benefits, however, faced challenges such as socioeconomic disparities and environmental deterioration due to oil palm development (Santika et al., 2019a). As shown above, such conditions have informed outmigration decisions elsewhere for economically or politically weaker households.

The above studies highlight the need to disaggregate how different households and individuals respond to plantation economies and how the livelihood impacts of large-scale land deals may be mediated by landscape, regional and political histories (see also Elmhirst et al., 2017; Kenney-Lazar, 2018 Fig. 2). They also highlight how industrial agriculture and plantation economies can produce a "complex array of production and supply systems, with highly contingent consequences for rural livelihoods" (Cramb and McCarthy, 2016: 2). Starting from this work, this review suggests three foci for further research on the relationships between land enclosures for industrial agriculture and forestry and labor migration.

- First, how industrial agriculture and forest concessions change land and other resource availability, likely (though not necessarily) by reducing local access to agricultural lands, forests, and other resources, potentially increasing labor migration from surrounding villages.
- Second, clarifying the ways that industrial agriculture and forest concessions alter local work opportunities and patterns, beyond or in addition to those related to changes in land control. This work could explore how associated labor migration dynamics are further differentiated by generational, gender, and class structures.
- Third, and more loosely related to the above, further exploration of the contextual configurations that alter migration into or out of sites of agricultural and forest concessions, and how these differ from historical concession-migration relations. Such work might examine, for instance, how the environmental declines associated with plantation economies and reduced land access (e.g., intensification-induced deterioration in soil fertility and yields due to shortened fallow periods, reduced water quality, and/or the contamination of common property streams) contribute to migration decisions.

More directly documenting these dynamics will require careful conceptual work to determine what constitutes a valid *a priori* or counterfactual, particularly given that much research begins after the point of plantation establishment and given time lags inherent in the establishment of plantations, secondary land cover and market changes, realization of associated livelihood costs or benefits, and decisions to migrate (or not). In our ongoing research in Indonesia, we find that there is a need for both more quantitative research and more qualitative-historical research on the extent and degree to which land concessions affect in and out migration. While statistically accounting for the range of confounding conditions that mediate livelihood, labor, and resource control relations will be infeasible in all but the largest studies, additional empirical research will improve our ability to chart trends as well as theorize which interacting conditions are productive of certain outcomes.

5.2. How do new patterns of household resource control and labor allocation from labor migration affect land use and land cover, particularly in sites dominated by large-scale commodity concessions?

This section turns to a second key complexity of the intersection between labor migration and large-scale land enclosures that remains poorly understood in SEA: the imbrications between labor migration and agrarian and land change in settlements adjacent to or surrounded by industrial agriculture or forestry concessions. How is labor migration reworking land and property relations amid the conflicts, opportunities, and changes ushered in by commodity concessions? How do differences across generations, socioeconomic class, and gender inform these linkages (Cramb and McCarthy, 2016; Elmhirst et al., 2017)? Context again matters, and we see this as critical to research into changing practices and discourses in home and work sites.

As reviewed above, many if not most transnational labor migrants from SEA are women, as are many domestic workers on short-term fixed contracts (see, e.g. CARE International, 2017; Hoang et al., 2012; UN Women, 2013). Many labor migrants are also young (Parsons et al., 2014; Rigg, 2006; Rigg et al., 2018). It is thus not surprising that migration affects household divisions of labor and gender relations. When women migrate, new gender relations in households and rural areas often ensue, in part because women play equal or larger roles as family "breadwinners" (Elmhirst, 2011, 2007; Hoang et al., 2012; Lam and Yeoh, 2018; McKay, 2003). Migration can change the householding roles and responsibilities of left-behind family members. Lam and Yeoh (2018), for instance, show how the feminization of labor migration has contributed to a reformulation of household strategies in migrant sending sites in the Philippines and Indonesia, leading migrant women to adopt practices of "long-distance mothering" while fathers and other family members assume migrant women's former household tasks.

We are particularly interested in the ways that these shifts affect agricultural labor relations and practices both on and off the plantations we hypothesize influence migration. Some agrarian researchers, for instance, argue that rural landscapes are becoming "geriatrified" (Hecht et al., 2015; Kelly, 2011; McKay, 2005). In northeast Thailand, for example, Rigg and Salamanca (2011) draw on longitudinal data from two villages to show an increase in the average age of household heads from 47 to 60 between 1982 and 2008 as well as an increase in the median age of farmers from 35 to 58 years. This shift derives not from better health care and improved living conditions but from the absence of most young sons and daughters pursuing work in cities and abroad (Rigg and Salamanca, 2011). This means that "young adults who would normally be available for household labor, especially at peak times in the agricultural cycle, are increasingly absent" (Rigg and Salamanca, 2011: 572). Parsons (2017) argues that this has been the case in Cambodia, citing higher rates of out-migration among younger individuals for work in urban industries despite increases in agricultural laborers' wages.

The exodus of labor from villages and the re-orientation of household labor around new or altered roles suggests that labor migration can, under certain circumstances, shape a divestment from smallholder agriculture and agricultural work. These dynamics, though not well documented in SEA, have been explored in Nepal. For instance, Ojha et al. (2017) document direct connections between land abandonment and the labor shortages produced by labor migration. However, these authors highlight how land abandonment also needs to be understood in relation to some farmers' growing sense of tenurial insecurity in the aftermath of insurgency, the marginalization of agriculture within modernization planning, and the water stress facing households amid increasingly erratic precipitation regimes in Nepal. Ojha et al. (2017) find that even those households with capacity to invest in farmland are not doing so in this agrarian context.

While dynamics of divestment and/or de-agrarianization are thus possible, labor migration can also enable and activate processes of "reagrarianization," as when remittances are invested in agricultural pursuits. Work on this theme, nascent in SEA, is better developed in South America. For instance, in El Salvador, Hecht and Saatchi (2007) report that migrant households used remittances to finance investments in tree crops, driving a widespread resurgence in tree cover. In other cases, including where new markets are emerging, smallholder farmers used remittances to expand row crop and pasture landholdings at the expense of forest (Davis and Lopez-Carr, 2014; Taylor et al., 2016). These dynamics may relate to Rigg et al.'s (2016) observation that remittances can enable investments in labor-saving machines that offset labor losses. This point is also echoed by Manivong et al. (2014) in Laos, who finds that rice farming remains an important component of diversified livelihood strategies despite increased labor migration to Thailand. Here, rice farming is sometimes supported by remittance investments that enable subsistence goals to be pursued more laborand cost-effectively.

Some urban-bound migrants maintain part time connections with agriculture in their home villages, including during peak periods in the agricultural cycle. Barney (2012) showed young people from Laos working in Thailand funded new crops and commodities planted on family land. This dynamic simultaneously led younger household members to play a more important role in resource decision-making. As Barney (2012) also shows, however, migration (and linked agrarian investments) may also shift village land control. In this study, this was because remittance investments enabled permanent crops to be planted in village commons, privatizing the space and creating hardships for capital-strained households more dependent on common property resources. This point resonates with the findings of Sunam and McCarthy (2016: 4) in Nepal, who show that remittance investments can inflate land prices, increasing barriers to land access for the poorest.

What is clear is that labor migration does not automatically lead to agro-industrial plantations, protected forests, and/or abandoned smallholder fields (as more teleological depictions might imply), but at times can also produce inhabited "remittance landscapes" (McKay, 2005) and "remittance forests" (Peluso and Purwanto, 2018). McKay (2003, 2005), for example, shows that women's remittance investments and migration practices in the Philippines have enabled investments in new household crops and land purchased outside migrants' land-constrained and tenure-insecure home villages. While women were once closely involved in subsistence agricultural production, they have reinterpreted the feminine "knowing what to do" that produced earlier landscapes through contract work abroad to support more commercial farms at home. McKay's study is important for showing how migration shaped rural transformation "not just through flows of remittances and investments, but also at the level of locally-imagined futures" (2003: 285).

New research suggests that remittance investments can manifest in meaningful landscape change even in regions seemingly defined by the territorial impositions of industrial actors. This is true of Peluso and Purwanto (2018)'s study, for example, which reflects on how migrants' resource investments in livestock and in planted grass and fodder in forest understories has also effectively enabled greater access to state-controlled land. As they write (2018: 11): "the 'remittance forest' challenges notions of political forest place-making, because of its origins in the mobilities of its inhabitants, as much as in either forest enclosures and state-controlled forest management institutions, or in 'traditional' or 'customary' uses of the forest." Remittance landscapes are not static formations. Embedded within differentiated gender and class relations of upland Java, for example, the control of land in the remittance forest is open for contention as it becomes an asset available for "buying and selling" or making other informal land transactions.

Many migrants are drawn to migration by the prospects of accumulating capital and improving their lives. Thus, unlike investments in land or agrarian resource use, migrant households may first invest in socalled lifestyle improvements, including housing, motorcycles, and higher education for migrants' children and siblings (Hecht et al., 2015; McKay, 2012; Rigg et al., 2016). Remittances are also used to finance debt repayment, or alleviate deprivation among vulnerable families (Barney, 2012; Manivong et al., 2014). In many cases, these investments can be considered necessary investments to improve living conditions in the poor regions from which much labor migration originates. Nonetheless, remittances are often "siphoned" away by recruiters, government officials, and other intermediaries through exploitative contracts and excessive transaction costs (Hugo, 2009; Lindquist, 2010). Even where remittances are not invested in agrarian pursuits, however, they can indirectly affect land use and land control. For example, investments in housing can trigger investments in local timber, gravel, or sand mining markets.

Our synthesis has uncovered almost no research within SEA on how labor migration and remittances affect land use and control specifically around large-scale commodity concessions (Elmhirst and Darmastuti, 2015 are an important exception). We also find very little work documenting the linkages between labor migration and land cover change in SEA. While analysts have extensively documented the dynamics of deforestation associated with capitalized investment in large-scale land enclosures, far less is known of the relatively more silent histories of remittance investments and other migration-related connections to these landscapes, including their role in producing other types of landscape changes (Hecht, 2010; Hecht et al., 2015; Kellev et al., 2017). It is apparent that such land changes are not limited to smallholdings around plantations but can also happen within concessions, which may complicate studies attempting to map these changes. The gender and age of people seeking off-farm work, as well as changes in knowledge, wealth, and power generated through migration, will also condition land change dynamics.

Our review indicates that understanding how concessions influence livelihoods will inform research into the changes in land use and control that result from migration in concession landscapes. For example, how do the ancillary economic opportunities introduced by the concession shape trajectories of land change? How has competition for labor, past or present, informed the livelihood strategies of smallholders and workers and the likelihood of remittance investments in agriculture? How might technological changes introduced by the presence of the concession (e.g., superior seeds, easier access to agri-chemicals) alter the labor inputs necessary for independent smallholder production? How do labor relations at the concession inform the dynamics of out-migration observed? It is possible, for instance, migration may be more common among members of older generations if younger individuals are drawn to work on a newly or long-established concession. Based on our review, and on these questions, we suggest three foci for future research:

- First, a further exploration of the gendered, generational, and socioeconomic divisions of agricultural and other rural labor in origin villages – including specifically around concessions – and of how these labor relations influence subsequent migration dynamics and/ or pathways of land change.
- Second, research into the role of migration remittances in altering village, household, and intra-household patterns of resource control in concession landscapes through both investments in and divestments from farming livelihoods.
- Third, more research into how altered labor relations and/or changing investments in agrarian resources inform trajectories of land change, even in areas seemingly dominated by large-scale commodity concessions.

Specific linkages between labor migration and land change in concession landscapes will need to be carefully untangled in a range of comparative settings. Migration-induced land changes in concession landscapes, for instance, will likely depend on the specificities of enclosure we introduce above, including smallholder resistance and response, and concession arrangements and associated employment opportunities. Further research could also explore how the terms of migration influence land change. Are those individuals more adversely incorporated into migration networks, for instance, more likely to pursue agrarian investments? How are these decisions influenced by differences in available commodity opportunities, prevailing environmental contexts and conditions, and broader institutional contexts? Migrant households well-supported by access to agricultural entitlements (e.g. fair market prices, reliable inputs), for instance, may be more likely to maintain agrarian holdings despite cultural pressures pulling younger generations away from agriculture.

6. Conclusions

In this paper, we highlight the significance of labor migration and large-scale land enclosures to ongoing agrarian changes in SEA. We also critically review existing theoretical frameworks linking these relations as well as empirical work documenting how labor migration and largescale land enclosures relate to ongoing agrarian, forest, and mobility transformations in SEA. Finally, we highlight important gaps in these literatures, including the relative lack of work exploring the connections between labor migration, land change, and industrial commodity concessions. We focus throughout on reviewing that work – drawn largely from the fields of political ecology, migration studies, critical agrarian studies, and land science – that can provide a strong basis for future research on these themes. What, then, might such future research look like?

On the basis of our initial work to build connections between migration and agrarian studies, we suggest that both comparative and indepth multi-sited research may be particularly important. Concession arrangements vary widely in the region, as does their embeddedness in particular historical agrarian environments and migration relations. Both concessions and labor migration are complex phenomena that vary due to complex local and regional histories, political economies, and ecologies. Both derive from diverse and often conflictual property and labor relations. The land-livelihood-resource control outcomes of migration in and out also vary across different temporalities: production cycles, governance regimes, labor contracts, and political economic periods. Understanding how livelihood or land change outcomes shift over time thus requires historical and longitudinal research strategies, as well as research that takes advantage of mixed-methodological approaches. Quantitative data can help uncover patterns and trends; indepth case studies, historical studies, and ethnographic data the "hows" and "whys."

Work in this review suggests that research programs engaging the linkages between migration and agrarian change in and around concessions will also need to grapple with the complexities of collecting data on both migration and concessions. Migration, like concessions, is not well covered in most government reports at present; migration is also often missing from most colonial archival sources. The categories of inquiry will also need to be clearly defined. In carrying out our own research, we have grappled with many questions dealing with both the categories themselves and the comparability of these categories over time: What are the boundaries between local and extra-local work-how are these to be drawn and understood? How to best deal with the actual major differences between family structures, comparing across cultures that find multiple marriages (simultaneously or consecutively) "normal," and those that do not, or where adopted children are not only an accepted norm but a complex commonality? The family structures that are made to appear the same across contexts by focusing on "households" often differ considerably. How do we understand the differences not only in local class, gender, and generational institutions but differences in these relations across research sites? How do we critically understand caretaking and domestic work by men when their wives are away (or present) without falling back on clichés about gender roles?

There are no single answers to these questions given the sociospatial diversity of agrarian regions across SEA. That said, we believe strongly that although the challenges to an integrated approach to migration and agrarian research are not yet fully mapped or recognized, future research will benefit from approaches which are not only methodologically integrative but theoretically diverse. This will entail challenging the assumption of some agrarian scholars that migration is only a negative event that occurs when rural people are pushed off their land and the assumption of some migration scholars who see migration as primarily a story that takes place within destination sites or in the travel to and from these sites. Infusing both agrarian and migration studies with methods and techniques from land science can also help to visualize and understand associated landscape changes. Finally, we believe that drawing these linkages can have strong practical applications. Research into the linkages between large-scale land enclosures and labor migration, for instance, is well-positioned to inform government policies and improve institutional practices concerned with rural employment, transnational and domestic migration, and land or resource control. The ultimate goal is to improve to some degree the lives of the individuals and families with whom research is conducted.

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Appendix A. Supplementary data

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