Cumulative Socionatural Displacements: Reconceptualizing Climate Displacements in a World Already on the Move

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Climate-induced displacement is attracting increasing media, state, and scholarly attention, albeit often in a way that situates migration as either an example of climate adaptation or a failure thereof. Whether depicted as success or failure, both framings can invisibilize the preexisting socioenvironmental processes that render climate-induced migrations necessary—or, conversely, that can inhibit them entirely. Perspectives on displacement and environmental migration from within political ecology and human geography offer an alternative register, looking beyond unidirectional socioeconomic or environmental drivers to document how uneven development reproduces displacements relationally and historically. Drawing on these theorizations, as well as empirical research from agrarian Southeast Asia, this article develops the notion of cumulative socionatural displacements as one approach for conceptualizing socioecologically driven displacement in a world already on the move. We demonstrate this approach through an analysis of displacement in Southeast Asia that begins by tracing the evolving state, market, and agroecological relations that have made mobility integral to agrarian viability while setting the stage for more intense climate impacts. In doing so, we also center the long-term (nonclimatic) environmental changes that are often sidelined in both anthropocentric debates on rural displacements and climate doomsday scenarios. We argue that examining climate-induced migration as just one facet of cumulative socionatural displacements is necessary for overcoming the ontological and political impasses engendered by prevailing narratives that collapse climate migration into convenient but misleading binaries. *Key Words: agrarian change, climate change, displacement, migration, Southeast Asia.*

Climate change is unequivocally shifting the way people live and get by. Agrarian Southeast Asia is no exception and might be particularly susceptible to climate change given high dependence on rain-fed agriculture, accelerating agribusiness investments in land and preexisting social vulnerabilities. This implies that displacement can no longer be theorized without reference to climate change. Simultaneously, the dominant representations of climate displacement can leave much to be desired, particularly in agrarian landscapes where preexisting mobilities are often assumed away or taken as evidence of an already-arrived-at conclusion.

As recent work within human geography and political ecology notes, for instance, mobility and displacement have often been taken as one and the same, with out-migration alternatively read as either climate adaptation or a failure thereof (see, e.g., Middleton, Elmhirst, and Chantavanich 2018). Critical work on environmental migration and climate disasters likewise illustrates the problematic persistence of "catastrophist" and "resilientist" binaries (Agustoni and Maretti 2019). As Gray et al. (2014) noted, however, some environmental displacement work nonetheless emphasizes displacement as involuntary permanent relocation or as a full and final exit from prior livelihood strategies. Important to our arguments here, such framings can invisibilize the preexisting socioenvironmental processes that render climate-induced migrations necessary or, conversely, that might inhibit them entirely. They are also at odds with understandings of migration to and from agrarian regions, which generally comprises only one dimension of intentionally multilocal and hybridized livelihood strategies (Kelley et al. 2020).

This article focuses on how climate displacement can be engaged and understood in an agrarian world

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already on the move. We do so by developing the notion of cumulative socionatural displacement to communicate our emphasis on conceptualizing displacement not only in relation to climate or migration but with attention to historical and evolving agrarian circumstances, development strategies, and (nonclimatic) environmental changes. We draw on our ongoing empirical work in agrarian Southeast Asia as well as recent geographical and political ecological work on displacement and agrarian and mobility transformations to show how these dynamics can render migration necessary while intensifying climate impacts. In what follows, we illustrate why climate-induced migration must be conceptualized as just one among many facets of cumulative socionatural displacement. We argue that decentering climate and migration as either primary drivers of or indicators of displacement can help to recenter more just sites of intervention, agency, and political response.

Conceptualizing Displacement and Transformation

Popular imaginaries of climate displacement, although long contested within work on environmental migration and displacement (Piguet 2013), remain durable in state, institutional, media, and even some academic accounts, including determinist strands of environmental science (e.g., Myers 2002; but see discussion in Agustoni and Maretti 2019). One highly cited World Bank report predicted that climate change will "force" more than 143 million people to relocate internally from South Asia, sub-Saharan Africa, and Latin America (Rigaud et al. 2018, xiv), and the Institute for Economics and Peace (2020, 4) suggested that extreme ecological shocks could displace up to 1.2 billion people globally by 2050.

It is important to differentiate such predictions from more nuanced theoretical engagements with climate displacement, including that of Miller (2019), who defined climate displacement as "distress or involuntary migration, both internal and crossborder, as well as involuntary resettlement" (112). Miller's engagement with the involuntary dimensions of displacement raises important questions of procedural and distributional justice vis-à-vis relocation schemes. At the same time, however, such nuance is often lost when media representations and state discourses engage the figure of the "climate refugee" in ways that play into racialized neo-Malthusian imaginaries[1] and exclusionary national security agendas (see critique by Baldwin 2013).

Reductive depictions of climate migration also underpin contradictory perspectives on mobility, such that the figure of the climate refugee fleeing untenable conditions might simultaneously be reframed as pursuing a "legitimate adaptation strategy" (Bettini, Nash, and Gioli 2017). As Bettini, Nash, and Gioli (2017) noted, the slippage of climate migration from involuntary displacement to adaptive strategy valorizes and reinforces individualized responses to a collective problem. Rather than promoting social support systems or structural changes, this framing orients climate adaptation around practices and policies designed to support individual preparedness and risk reduction, short-circuiting questions of care, responsibility, rights, and justice. Within this neoliberal governmentality of climate adaptation, mobility is conceptualized as an important element of individual preparedness and the structures and institutions most responsible for producing violent global changes are obscured from view.

In contrast, environmental migration research has long shown why "categorizing climate migrants as distinguishable from 'non-climate migrants' is not empirically possible" (Boas et al. 2019, 902). Rather than attempt to quantify probable climate displacement or migration, then, such work has instead explored migration, both forced and voluntary, as embedded within and produced through complex and interacting geopolitical, economic, social, and environmental relations (Piguet 2018). This point is echoed by scholarship on climate disasters, which emphasizes the need to understand disasters not as singular events but as "compounding and intersecting with societal histories" (Rivera 2020, 1). Work within both of these fields has also drawn on concepts and approaches from political ecology and environmental justice to illustrate how the lines between voluntary and involuntary moves can be quite blurred in a world of limited options (e.g., Blondin 2019).

An appreciation of the blurriness between voluntary and involuntary moves is also central to geographies of displacement writ large. Werner's work, for instance, theorized displacement as part and parcel of uneven development, with livelihoods, ecologies, and place-based possibilities shaped by extralocal

relations and economic changes (Werner 2015). Whether or not to move, and under what circumstances, is always a mix of compulsion and agency, even when powerful factors such as poverty, unemployment, lack of land, or climate distress work to push people outward. Werner (2015), for instance, outlined how moving from country to city can enhance young people's social positions vis-à-vis their families and neighbors, even when factory jobs are exploitative and offer few prospects for economic advancement.

These perspectives, in short, situate displacement as a process, one with multiple overlapping causalities and meanings and one that is influenced by local politics, history, and people's everyday aspirations (Doshi 2015). Displacements always have to reckon with political economy, agency, and the ways in which capitalism exploits social difference (Doshi 2015; Werner 2015). Processes that drive displacement can include shock events and disasters, but such stressors interact in determinative ways with the slower processes of agrarian change, ecological unraveling, social difference, and state policy (Tacoli 2009). Far from seeing displacement as a single, permanent, or involuntary event, then, work from political ecology and critical geography recognizes displacement as a complex relational and historical process.

As related work on agrarian transformations illustrates, these processes are also contingent and indeterminate, with migration in and out of agrarian areas also serving to *counteract* uneven developments. Rigg et al. (2018) argued that "[o]ne of the enduring agrarian puzzles of the development era has been the persistence of the Asian smallholder" (327), a dynamic in part sustained by recent increases in domestic and transnational labor migration. Remittances associated with migration have enabled new agrarian investments, even in highly constrained tenurial circumstances (McKay 2005; Peluso and Purwanto 2018). Labor mobility has also enabled younger generations to pursue "cosmopolitan" experiences (Hertzman 2014) and off-farm aspirations (Hall 2009). Such pursuits can lead to investments in smallholdings rather than plantation labor (Elmhirst and Darmastuti 2015) and can reinforce the role of women as family breadwinners (Lam and Yeoh 2018).

These perspectives, much like those from political ecology and critical geography, highlight the long-in-the-making and blurry boundaries between voluntary and involuntary migration. They also foreground the preexisting livelihood dynamics that complicate a determination of when so-called climate displacement might be taking place. This is particularly true given the constraints—as well as emotional, logistical, and personal connections—that commonly "pull" migrants back into agrarian areas. Silvey (2006), for instance, noted how human rights abuses and wage withholding can force people both out and back in, whereas Peou (2016) showed the barriers migrants face in establishing permanent work site settlements. This multiplicity of aspirations and structural constraints informs circular and intentionally flexible patterns of in- and out-migration rather than permanent departure.

Cumulative Socionatural Displacements in Agrarian Southeast Asia

The preceding perspectives highlight the need to foreground the processes, relations, and histories that are making mobility integral to agrarian livelihood viability while preconditioning agrarian regions for more intense climate impacts moving forward. We do so in this section by moving beyond an existing empirical emphasis on specific climate stressors (e.g., flooding, salinity intrusion; Dun 2011) or cropping systems (e.g., climate impacts on rice or coffee production; Ahmed and Diana 2015) to identify shared dimensions of cumulative socionatural displacement in three distinct regions of agrarian Southeast Asia (Figure 1). Indeed, comparing across these cases, we find similar dynamics of cumulative socionatural displacement mediating agrarian transformation and smallholder livelihood responses despite disparate commodity and climate contexts and despite the variable incidence of floods, droughts, seawater intrusion, storm surge, and tropical storms even within these sites.

In what follows, and drawing on our ongoing research into agrarian, mobility, and climate transformations in agrarian Southeast Asia, we argue that although climate stressors contribute to recent increases in migration, such changes would be poorly understood without looking at cumulative socionatural displacements much longer in the making. We also illustrate why nonclimatic socionatural changes appear determinative in driving accelerating mobilities, albeit in different ways across these distinct sites. The research we present is based on published work as well as ongoing ethnographic and mixed

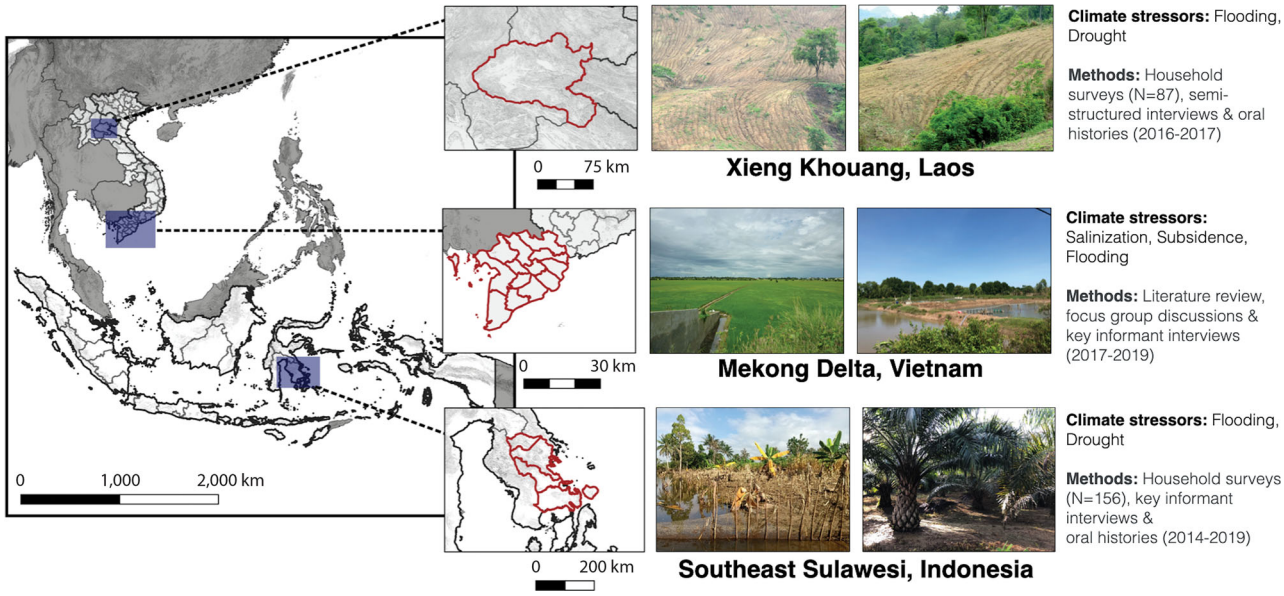

Figure 1. The three study areas in regional and commodity-climate context. Photos, top to bottom, depict maize production and erosion in Laos, irrigation in a triple rice cropping area and shrimp ponds with aerators in Vietnam, and the flooding of vegetable lands and newly planted oil palm in Indonesia.

methods engagements in each location, the core elements of which are synthesized in Figure 1.

Maize and Migration in Northeastern Laos

Previous mobilities and environmental changes are determining present migration patterns and sensitivity to even small-scale climate stressors. Since 2006, upland forests, fallows, and rice fields in northeastern Laos have been transformed by a boom in maize production driven by cross-border agribusiness demand. By 2017, yields had plummeted, soil erosion was rampant, average incomes in two surveyed typical maize villages declined to less than $1.00 per person per day, and land was no longer available to clear, driving more young people to migrate for work. Localized drought in 2012 was often mentioned as the onset of the bust. Migration was becoming increasingly common for young people, but the process that led to it was set in motion thirty years prior.

Government policy resettled ethnic minorities closer to municipal centers beginning in the 1990s, placing many in the near uplands in the heart of what became the maize boom. Forced resettlement crowded minorities on inadequate land prone to erosion—often taking grazing areas from majority villages. Demographic pressure from low-lying communities with irrigated lands sent landless young people to the near uplands as well. In 2003 the government began enforcing a limit on swidden rotations; the long fallows that kept upland production sustainable in the past were no longer possible. Movement was restricted; pressure on land and forests increased. By the early 2000s, demand for rosewood and nontimber forest products had emptied the surrounding forests of valuable species, and in 2006, enforcement decimated local opium production. Between forced resettlement, demographic pressure, overharvesting, and limitations on swidden and opium, upland farmers in Xieng Khouang experienced a cash crunch.

At the same time, schools, hospitals, motorbikes, and other modern essentials of social life were becoming within reach, accentuating the need for cash. The fact that the maize boom that followed did not last—with plantings on the same steep hillsides year after year—was not a surprise locally. Unlike in southern Laos, labor migration here was a relatively new phenomenon. In village surveys, the ability to send remittances varied widely, from one relatively well-connected village in which 33 percent of households had a member working outside the province, about half of which received remittances, to a more remote ethnic minority area, where 17 percent of households included a migrant worker but not a single one earned enough to send money home. The villages known to send the most migrant

workers were minority villages forcibly resettled on low-quality land.

The long-term forms of displacement at work here—and the long periods of restricted mobility due to swidden regulations and forced resettlement—had a powerful role in determining future patterns of mobility and displacement. Seen cumulatively, the ecological changes in the area assured that there was no return to the previous upland rice–forest food systems. The displacements that were beginning to become visible in the late 2010s were part of a much longer pattern.

Agriculture and the State in Southern Vietnam

The net out-migration of 1 million people from the Vietnamese Mekong Delta (VMD), in conjunction with severe flood, drought, and salinity intrusion events in recent years, appears to corroborate projections of climate-induced displacement from low-lying deltas (Oanh and Truong 2017; Berlemann and Tran 2020). To attribute such relocation solely or even primarily to climate change, however, would require the gross omission of decades of agrarian change in the VMD that has significantly altered the delta's biophysical dynamics and, in turn, livelihood possibilities and prospects.

In the upper delta, state-led water management schemes and increased mechanization of agricultural processes have driven large-scale land use changes. From 2001 to 2011, local authorities introduced high dikes to An Giang and Dong Thap provinces to regulate floods and facilitate multicropping, successfully boosting rice yields in subsequent years (General Statistics Office of Vietnam 2020). The water infrastructure simultaneously disadvantaged poor households, however, by diminishing their access to informal farm work and access to wild capture fisheries (Tran 2019). The decline in on-farm employment opportunities is significant given the centrality of agrarian livelihoods in the VMD, where two thirds of the land area is dedicated to agriculture and 69 percent of the workforce is employed in agriculture, forestry, or fisheries (Le et al. 2018).

Moreover, national policies aimed at boosting rice and shrimp production have inadvertently increased farmers' vulnerability to water hazards and crop losses and led to greater inequalities among wealthy and poor households (Gorman 2019). Shrimp is a lucrative export commodity that has experienced explosive growth, largely facilitated by the conversion of more than 500,000 ha of land for aquaculture over the past three decades (General Statistics Office of Vietnam 2020). Farmers seeking to join the sector often take out loans to overcome the steep costs of converting from rice to shrimp cultivation, but it is difficult to recover financial losses resulting from disease outbreaks, which are common (Käkönen 2008). Shrimp farmers also regulate pond salinity levels through unregulated groundwater extraction that is driving parts of the VMD to subside at rates up to ten times that of absolute sea-level rise, thereby accelerating risk of coastal inundation (Minderhoud et al. 2017). Such factors have contributed to greater household insecurity and workforce precarity, with important implications for household ability to remain in the VMD.

Although the persistence of smallholders in the midst of prolonged agrarian change is remarkable (Nguyen, Gillen, and Rigg 2020), it bears highlighting that land accumulation has been proceeding apace since the mid-1990s, despite size limits on cropland acquisition established by the 1993, 2003, and 2013 Land Laws (Quang 2018). The consolidation of landholdings is consistent with two decades of government policies aimed at accelerating agricultural and rural industrialization and modernization, boosting commodity export production, and downsizing the agricultural labor force since 2001 (Government of Vietnam 2001). Thus, temporary and long-term migration out of the VMD more clearly becomes a function not only of climate-driven environmental change but also of the top-down reorientation of agriculture toward increasingly mechanized and low-labor cultivation.

Agribusiness Investment and Convergent Climate Changes in Southeast Sulawesi

Although only three major floods appear to have taken place along the lower reaches of the Konawe'eha River between 1950 and 2010, at least four have occurred since, seemingly corroborating a predicted 2 to 3 percent annual increase in precipitation and associated increases in flood frequency and severity in Southeast Sulawesi (Hirabayashi et al. 2013; Kelley and Prabowo 2019). In 2020, for instance, floods left forty-nine villages underwater and forced thousands of people to evacuate homes and fields (Antara News 2020). These dynamics are

suggestive of climate displacement, but their causes and consequences more centrally derive from cumulative socionatural displacements.

Beginning in the 1960s, the Indonesian government laid claim to extensive "political forests," claims that encompassed 70.5 percent of provincial area and 96.0 percent of remaining forests as of 2018. These claims have since enabled racialized settlement and economic development schemes designed to repurpose "underutilized" lands into more intensive modes of production, unevenly sanctioning some forms of agrarian production and mobility while criminalizing others (Peluso and Vandergeest 2001). State practices and policies from the 1960s onward explicitly prohibited the mobile swidden agricultural practices of Tolaki people indigenous to the region, forcing many individuals into exploitative circular migration practices. At the same time, state schemes have sponsored the in-migration of purportedly more commodity-savvy peoples while subsidizing sedentary tree crop and wet rice production, including within once flood-buffering swamps and marshes (Kelley 2018).

Over the past two decades, state development strategies have increasingly turned from sedentarizing smallholder livelihoods to incentivizing the mobility of agribusiness capital. More than 309 concessions have been granted in Southeast Sulawesi since 2009, most of these for nickel (199), gold (36), asphalt (36), and oil palm (20). These concessions are implicated in roughly 24.6 percent of provincial tree cover loss since 2000 (Kelley 2020) as well as landslides and silting that are increasingly affecting even upstream passage points of regional river networks previously less vulnerable to flooding (Morse 2019). Building on earlier histories of agro-ecological enclosure, plantation establishment has also commonly involved the acquisition of former swidden lands, lowland vegetable lands, and the pollution of common property resources such as rivers and swamps.

Evolving development strategies and associated socionatural changes have in turn shaped new mobility relations and sites of agrarian inequality. Although some individuals have discontinued long-standing practices of circular migration, coming home to their role as newly established plantation and mining elite, others have been forced out by corporate land acquisitions or have chosen to leave given the adversity of associated labor regimes. Flooding in this context accentuates processes of displacement already underway. In 2019, for instance, and simultaneous to the inundation of vegetable lands, more than 300 people in one flood-prone lowland subdistrict were laid off from work on a nearby oil palm plantation. Lacking access to long-fallowed swidden agroforests and swamp and vegetable subsistence staples, many individuals left in an immediate circumstance of distress. Many individuals returned from distant work sites several months later to find that in-migrants from elsewhere had been recruited into the plantation barracks.

Discussion

Displacement has often been invoked to imply that a person or thing has a correct place from which it is dislodged, a position that naturalizes (im)mobility for some groups and elides the historical contingencies and power relations that establish socioecological systems within particular settings. Kindred to this logic, although inverted in its formulation, is the apolitical notion of migration as adaptation. This article instead emphasizes the dynamic contexts in which displacement and migration occur. As these cases illustrate, recent climate stressors and migration and mobility shifts have been significant in reconfiguring agrarian life. Understanding or addressing these changes, however, is impossible without reference to cumulative socionatural displacements.

Key dimensions of cumulative socionatural displacement we identify here include histories of dispossession via state territorialization, long-term deterioration of smallholder agro-ecologies, recent intensifications in export-oriented commodity production, recent increases in labor migration, and increasingly apparent climate impacts (Table 1). These dynamics are remarkably similar across sites despite their different histories. In all cases, it is clear that migration is already integral to agrarian livelihoods. Such mobilities are uneven, with certain migration opportunities providing clear benefits to rural economies and others offering more ambiguous or even deleterious outcomes. Across all three cases, however, processes of long-term change have intensified both smallholder vulnerability to climate changes and smallholder dependence on mobility as response. The result is that climate stressors across a broad suite of environmental, commodity, and livelihood contexts engender similar mobility responses.

Table 1. Shared dimensions of cumulative socionatural displacements in three sites of agrarian Southeast Asia

Drivers of cumulative socionatural displacement	Xieng Khouang, Laos	Mekong Delta, Vietnam	Southeast Sulawesi, Indonesia
Long-standing processes of dispossession	State limits on shifting cultivation; involuntary resettlement of ethnic minorities; loss of legal land access for young people; demographic pressure; accelerating debts	Livelihood and property dispossession through interlocking processes of debt, mechanization, and land accumulation	State forest establishment and criminalization of swidden agriculture; in-migration for land; agricultural intensification and associated debt, ecological change, and land consolidation
Long-term ecological change	Logging, NTFP overharvesting, soil erosion from shortened fallow cycle, intense soil erosion from maize monocropping on steep slopes	Canalization of waterways, land subsidence, river bank and coastal erosion, mangrove deforestation	Soil erosion, landscape homogenization and associated pest and pathogen challenges, montane and swamp forest clearance, water pollution
Export commodity production	Maize boom for export on former forest and fallows following collapse of opium and forest products economy	Vietnam is the third largest exporter of rice and shrimp in the world, with most production sourced from the Vietnam Mekong Delta	Sulawesi is the fourth largest exporter of cacao globally and increasingly a site of oil palm, gold, and nickel production
Agribusiness investment	Smallholder driven maize production for Thai and Vietnamese agribusinesses	Agricultural mechanization and intensification for export commodity production	Agribusiness investments in more than 300 concessions since 2009 within the province
State policy	Promotion of maize and export agriculture, involuntary relocation, prohibition on swidden agriculture, enforced opium ban	Promotion of agribusiness industrialization and export commodity production, construction of flood management and irrigation networks for agricultural intensification	Promotion of sedentary and export-oriented agricultural production; villagization and resettlement schemes; agribusiness promotion
Circular labor migration	~32% of households have a family member working outside the province; few wealthier families send children to work in Thailand, poorer families become casual labor in primary industries	40% of surveyed households in Ben Tre and Tra Vinh have a family member working outside the province; adults seek work in urban areas and industrial zones, leaving grandparents to care for children	52% of 311 surveyed adults had migrated from one particularly flood-prone village in Southeast Sulawesi, including 36% between 2018 and 2019; most migration is circular and for work at other sites within Indonesia or Malaysia
Climate change impacts	Increased vulnerability to minor drought (2012) and floods (2014) due to altered hydrology, soil organic matter; connected to migration decisions	Extreme droughts and record spatial and temporal extent of seawater intrusion (2016, 2019, 2020) decimated rice crops and freshwater fisheries	Extreme floods in 2013, 2018, 2019, and 2020, disrupting access to local employment opportunities and subsistence and market production; recurrent droughts contribute to flooding impacts

Note. NTFP = non-timber forest products.

Although similar dimensions of cumulative socionatural displacement are at play, these dimensions ultimately intersect unevenly to shape change. In Laos, long-term agroecological degradation, state territorialization, and a commodity boom have eroded the basis for agrarian life. In Vietnam, state policies facilitating export commodity production through water management infrastructure have underpinned long-term ecological change. Meanwhile, in Indonesia, the interplay of shifting state-cum-agribusiness productivism has intersected with land changes to increase both the frequency of floods and the severity of associated impacts. As these cases illustrate, such drivers will necessarily vary according to the specificities of a given site and might encompass factors not described here. Nonetheless,

together they form a register for analyzing what might at first appear to be climate displacements, one likely useful in other rapidly transitioning agrarian economies of the Global South.

As our cases demonstrate, the deficit of attention to historical and shifting patterns of migration and mobility has real effects. Analysts and policymakers who take climate change seriously inadvertently risk naturalizing migration by emphasizing climate drivers to the exclusion of equally relevant biophysical, social, political, and economic changes that inform migration decisions. In other words, climate displacement as an ontological fact becomes inevitable because climate change itself is inevitable. Such logic also effectively performs a double move. First, it enables policymakers and government officials to ignore, and evade responsibility for, political–ecological dynamics that intersect with but are distinct from climatic ones. Second, it invisibilizes the preexisting mobilities that do not fit within the existing dichotomy of migration as climate adaptation or failure thereof.

In documenting decades-long agrarian transformations in Southeast Asia, we question the premise that people can or should be expected to adapt to socioecological destabilizations instigated by state and corporate actors at scales far exceeding the influence of most individuals. We also show why these decades-long transformations are powerfully ecological, making previous forms of agrarian life difficult if not impossible. Seeing subsequent climate-linked migrations as a question of cumulative socionatural displacements does not diminish either their significance to people's lives or the significance of addressing climate changes in agrarian regions. Rather, it can encourage a broadened understanding of what constitutes of what constitutes good climate policy, decentering a predominant emphasis on "climate-smart" farming, improved disaster control, and other techno-fixes and reiterating the importance of (among other things) land reform, migrant justice, and stronger controls on agribusiness investment.

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Note

1. The *New York Times*, for instance, ran a front-page magazine article titled "The Great Climate Migration," which noted that some 19 percent of the world will be inhabiting a "barely livable hot zone" by 2070, and asked, "Where will *they* go?" (italics added; *The New York Times* and Lustgarten 2020).

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