Hybrid Governance of Transboundary Commons: Insights from Southeast Asia

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This article examines how hybrid environmental governance produces, maintains, and reconfigures common property across transboundary geographies of resource access, use, and ownership. Transboundary commons are a category of environmental goods that traverse jurisdictions and property regimes within as well as between nation-states. They are forged through collaborative partnerships between spatially dispersed state, private-sector, and societal institutions and actors. This article disaggregates these transboundary commoning arrangements into two geographically discrete yet conceptually intertwined categories of governance: mobile commons and in situ commons. We ground our enquiry in Southeast Asia, a resource-rich region where diverse formal and informal practices of resource organization blur the boundaries of environmental governance. Whereas environmental commons are often analyzed in terms of resource rights and entitlements, this article argues that a focus on power relations offers a more productive analytical lens through which to understand the dynamic and networked ways in which transboundary common property is continually being (re)made through processes of hybrid governance in response to changing ecological systems and shifting social realities. *Key Words: ASEAN, common property, cross-border governance, environmental commons, hybrid governance.*

Attention by environmental geographers and political ecologists to the cross-border impacts of climate change, extreme weather events, and human-generated transformations of nature has yielded a rapidly growing literature on the governance of transboundary resources that defy containment within individual jurisdictions (Reed and Bruyneel 2010; Wiering and Verwijmeren 2012). Scholarship on transboundary common environmental goods such as sequestered carbon, biodiversity, and sustainably produced food continues to grapple with challenges of governance across divided geographies of resource use, access, and ownership (Agrawal 2001; Andonova, Betsill, and Bulkeley 2009; German and Keeler 2009; Ostrom 2009). Yet common property theory is not well integrated with allied research on transboundary environmental governance. The commons literature remains predominantly concerned with communal ownership in opposition to the rules and social norms that define private property (Brown 2007; Buck 2013; Dahlin and Fredriksson 2017). This has often come at the expense of wider theorizing about the transboundary environmental commons as an emergent property of governance (Giordano 2003). This article seeks to better integrate these discrete bodies of work by exploring how common property theory intersects with work on hybrid environmental governance to create transboundary spaces for environmental practice.

Our specific concern is with transboundary environmental commons. Spanning boundaries of spaces and species, these commons require hybrid governance, or collaborative commoning activities involving state, private, and societal actors and institutions across mixed landscapes and regulatory regimes (Agrawal and Lemos 2007; Lambin et al. 2014; Ponte and Daugbjerg 2015). *Environmental commoning* refers to the active processes involving multiple state, private, and civil society actors that produce and maintain commons, and that (re)distribute environmental costs and benefits through broadly fair and inclusive knowledge production and informed decision making (Linebaugh 2009; Ryan 2013). In this way, commoning can best be understood as a functional modality or method of governance.

The challenges posed by overuse and degradation of transboundary common pool resources necessitate

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such hybrid forms of governance due to their complexity and extension well beyond individual jurisdictions and property regimes. Transboundary commons are epistemologically and politically distinguishable from related concepts of transnational commons and global commons in that the environmental externalities they denote are not necessarily fixed at the level of national borders (Miller 2019). Transnational and global commons tend to signify only resources that traverse international borders (Dasgupta, Mäler, and Vercelli 1997; Ansari, Wijen, and Gray 2013). Transboundary commons, however, also describe the networked political relationships, revenue streams, labor mobilities, and environmental flows that move across subnational boundaries.

The aim of this article is to show how hybrid governance underpins the creation, shapes the practices and regulation, and ensures the maintenance of transboundary commons. Hybrid governance arrangements comprising diverse actors and institutions are enacting transboundary commons across multiple organizational scales. We argue that the global trend toward an expanding role for markets as represented by hybrid cogovernance, public–private, and private–societal partnerships is fundamentally changing the organization and direction of transboundary environmental commons. Whereas many scholars and activists have treated environmental commoning as a strategy of resistance against global capitalism and the commodification of nature (Holder and Flessas 2008; Bollier and Helfrich 2012; Antonio 2013), emerging transboundary commoning activities are increasingly also centered on sustainable development goals and monetarized conservation schemes that intend to reform capitalism as a green economy along the lines of ecological modernization (Turner 2017). We posit that detailing the political dynamics of these transboundary commoning arrangements around various forms of hybrid green growth partnerships is vital to understanding current efforts to fill policy gaps in formal transboundary environmental governance regimes. To this end, we need to learn how hybrid governance regimes are being enacted across borders, including in legally flexible ways that span the formal and informal spheres. This is necessary to improve the efficacy and inclusiveness of existing transboundary governance arrangements to sustain transboundary resources and mitigate cross-border environmental threats and crises.

In this pursuit, we ground our theoretical enquiry in empirical findings from Southeast Asia, a resource-rich but land-scarce region (Hall, Hirsch, and Li 2011), where environmental governance is being increasingly influenced by markets in conjunction with state institutions amidst diverse formal and informal practices of organizing resource landscapes (Beban and Gorman 2017; Schoenberger, Hall, and Vandergeest 2017). Despite covering only 4 percent of the world's land mass, the eleven countries that compose Southeast Asia are home to almost 650 million people and an estimated 15 to 25 percent of all known plant and animal species (Woodruff 2010; Corlett 2014; Hughes 2017). The region is also one of the most rapidly developing and globally connected parts of the world, a trend accelerated in recent years by economic regionalization initiatives such as China's Belt and Road Initiative (BRI) for transport, trade, investment, and human connectivity (Ascensão et al. 2018; Oh 2018). As national governments struggle to keep pace with the magnitude of socioecological change and biodiversity depletion (van der Mark 2015; Forests and Finance 2016; Victor 2017), hybrid partnerships across Southeast Asia are mobilizing to conserve common environmental goods and address transboundary flows of harm such as air pollution and the downstream impacts of hydropower dam construction.

The article is structured as follows. We first locate transboundary commons within the literature on common property theory by delineating two discrete spatial categories of governance for transboundary resources: mobile and in situ commons. The next section shows why hybrid governance is necessary to provision the transboundary commons. We then consider how power relations circulate through these transboundary geographies of hybrid governance to allow or block access to the benefits of particular resources, resulting in (redistributive) inclusions and exclusions, with implications for environmental (in)justice. Drawing on examples from Southeast Asia, the article argues that the analytical lens of power relations rather than resource rights alone offers a more productive basis for considering hybrid governance of the transboundary commons, given that overlapping spheres of authority tend to render user rights more ambiguous, opaque, and less enforceable. In the article's conclusion, we reflect on hybrid governance research as a future agenda for addressing the policy challenges of governing

transboundary commons across divided geographies of state, private, and communal ownership.

Locating Transboundary Common Property

This section describes the spatial organization of transboundary commons and why this matters for transforming property relations and emerging patterns of environmental governance. Our approach is focused on the geographies of human relationships that animate around particular resources rather than on transboundary resources themselves, although we acknowledge that particular resources have materialities that shape their governance. This approach requires attention to the networks that function at different spatial scales of environmental governance, including through less fixed ideas of commons connectivity such as embedded power relations (Reed and Bruyneel 2010). From a governance viewpoint, transboundary environmental commons need networks of actors whose collective actions and values attend to the everyday labor of sustaining common pool resources, without which transboundary commons could not exist (Gidwani and Baviskar 2011). Transboundary commons thus involve the work of commoning by multiple (hybrid) institutions and actors across mixed property regimes around specific forms of environmental stewardship (Miller 2019). We differentiate these transboundary commons into spatial categories of mobile and in situ commons in what follows, before returning to the issue of how they are relationally (re)made through hybrid governance arrangements. These spatial classifications are conceptually and heuristically useful to analyzing how dispersed and situated collectives of resource users create transboundary commons and the sorts of narratives that define their utility. Although we discuss each in turn, mobile and multisited in situ commons necessarily connect ecologically as well as across scales of governance.

Mobile Commons

Observing that nature often confounds territoriality has profound governance implications. Yet mobile resources such as air, water, and certain species of birds and fish—which have always complicated, if not eluded, fixed spatial imaginaries—are frequently overlooked when attempts are made to enclose the commons for their conservation or sustainable commodification (Amin and Howell 2016; Turner 2017). Here, we use the term *mobile commons* to denote the governance of resources that cannot be physically contained within demarcated spaces and bounded regulatory regimes. Scholarship on the mobile commons has its origins in the global commons literature, which is commonly traced to seventeenth-century Dutch jurist Hugo Grotius, who drew on Roman property law to articulate the first modern principles for ordering transboundary water resources in his *Mare Liberum* (*The Free Sea*, 1609). Treating the world's oceans as ownerless (*res nullius*), Grotius divided these open spaces into sites of *res communis* (common goods, belonging to all) and a *res nullius* of unclaimed natural property for conversion into private property, such as captured marine life (Schriiver and Prislan 2009). Although variously disputed among his contemporaries—most notably by English lawyer John Selden, who advocated for state-controlled *Mare Clausum* (*Closed Seas*, 1635)—Grotius's work became the cornerstone of current international property law based on the state of nature (United Nations 2013; Price 2017).

Research on the mobile commons has evolved separately from global commons scholarship in at least three ways. First, as noted earlier, mobile commons entail the hybrid governance of transboundary resources that traverse property regimes within as well as between nation-states. That is, mobile resources such as water, fluvial sediment, and many animals move across public, private, and common property domains even within the same country, where they are differentially valued by state, private, and societal users. These users often have diverging interpretations of key concepts such as sustainability and conservation that result in conflictual approaches to governing the mobile commons (Dell'Angelo et al. 2017; Nagarajan 2017; Lamb, Marschke, and Rigg 2019). Because such transboundary disputes cannot be settled at a single scale of interest, they require cooperative agreements between divided collectives of resource users, frequently in asymmetrical power relationships, across sectors and scales of environmental governance (Gururani and Vandergeest 2014).

Second, much of the recent geographical literature on mobile commons is concerned with the governance of migratory taxa. Multisited commoning networks are increasingly seen as a potentially

productive approach to the conservation and sustainable consumption of migratory species. One way in which multisited commons are enacted is through payment for ecosystem services (PES), a market-based strategy of environmental governance that financially rewards or compensates stewards of conservation and restoration landscapes (Milder, Scherr, and Bracer 2010). Although PES can be used for a diversity of purposes, in the conservation of migratory taxa such schemes might center on the protection of distant and physically disconnected habitats where such species temporarily reside. Thus, spatially dispersed communities use PES to coproduce and share ecological knowledge about migratory species quotas and to undertake coordinated conservation activities aimed at sustaining "mobile links" between the habitats frequented by migratory wildlife (López-Hoffman et al. 2017). The findings of this literature have been mixed, however, observing that the efficacy of multisited environmental protection schemes like PES vary greatly between contexts. Whereas monetarized incentives can assist in the provisioning of common environmental goods (ranging from biodiversity conservation to enabling indigenous minorities to negotiate fuller benefits of citizenship), they might equally be captured by powerful elites and exploited for resource grabbing, thereby generating new forms of enclosure, restrictions on movement, and environmental injustice (Douglass and Miller 2018; Rasmussen and Lund 2018).

A third strand of research on mobile commons examines the governance of resources that move across property regimes in ecosystems that have geographically discrete and broadly recognizable natural boundaries, such as riverine systems, peatlands, forests, and floodplains. Numerous transboundary agreements have been established in recent decades to revise or nullify certain property rights in the service of regulating the smooth passage of mobile resources that are viewed as shared assets by people in adjacent jurisdictions. The concept of integrated water resources management (IWRM), adopted by the United Nations in the 1990s, offers an example of mobile commons aimed at safeguarding the movement and sustainable harvesting rates of transboundary resources in rivers that flow between neighboring jurisdictions. The concept of IWRM signals not only the need for transboundary coordination among users of the same water resource, but also recognition that the river basin could constitute an appropriate scale of governance in its own right (Bréthaut and Pflieger 2015; Allouche 2016).

Although IWRM represents one effort to enact mobile commons around transboundary river resources, it has been critiqued for privileging expert knowledge and prioritizing a single resource, such as water or hydropower, over other river resources within the same ecosystem (Molle 2008; Hoff 2009). Furthermore, a focus on the river-basin scale could distract from consideration of drivers of river basin change that occur beyond the basin (e.g., national electricity planning), or miss uneven socioecological changes that benefit some and harm others. In Southeast Asia, the transboundary Mekong River Commission (MRC) was established in 1995 by four Southeast Asian countries—Cambodia, Laos, Thailand, and Vietnam—to coordinate the sustainable governance of river commons based on IWRM principles in the lower part of the Mekong. Yet the prioritization of hydropower, combined with the MRC's weak ability to influence energy policies, has fundamentally altered the hydrology of the Mekong at both the local and basin scales (Middleton and Dore 2015; Hirsch 2016). Large-scale hydropower initiatives have progressively degraded other Mekong resources, notably wild-capture fisheries that rely on multisited (upstream and downstream) geographies of mobile commoning to ensure region-wide food security (Grundy-Warr 2017; Thapan 2017). Awareness of this problem has inspired an ongoing search for more comprehensive approaches to governing common property regimes, such as nexus thinking, which goes beyond IWRM principles to emphasize interrelationships between different sectors of water, food, and energy. Nexus frameworks, however, have also attracted criticism for neglecting real-world politics by oversimplifying the task of connecting environmental commons and downplaying the tensions involved in sharing transboundary resources (Keskinen et al. 2016; Lebel and Lebel 2018; Allouche, Middleton, and Gyawali 2019).

It is important to remain mindful that mobile commons are never territorially fixed or bounded, even when transboundary governance frameworks define them as such (Fox and Sneddon 2005). Rather, the boundaries of what constitute mobile commons are dynamic, porous, and continually being rescaled around shifting (geo)politics and market relations as governance priorities change to focus on particular resources (Ahmed and Hirsch 2000;

Hensengerth 2015). In this way, mobile commons do not fit into conventional orderings of the environmental commons as envisaged by Hardin (1968) and Ostrom (1990) that are formulated around clearly defined common property resource regimes with agreed rules of access by a collective of users. Rather, the contemporary relevance and potential resilience of mobile commons rests precisely on their (geo)political adaptability in the current era of unprecedented anthropogenic environmental change. This relationship between mobile commons and more situated forms of transboundary commoning is elaborated later.

In Situ Commons

We tend not to think of national parks, conservation areas, mangrove forests, and fisheries that are often located within a single jurisdiction as transboundary commons. Yet the contemporary structures and programs that govern these commons are typically both transboundary and hybrid in the sense that they are created and maintained by coalitions comprising state agencies, corporations, banks, international donors, local and international nongovernmental organizations (NGOs), and community representatives. These diverse actors come together across multiple dividing lines in pursuit of a common environmental good such as climate action, watershed management, or forest protection. In situ commons are thus forged through transboundary relationships among a range of actors whose generative activities produce new situationally specific institutional practices and social norms for environmental governance (Miller 2019). In spatial terms, in situ commons can extend both outward across domains of private, public, and communal property and upward to connect grassroots communities with international NGOs, donor and lending agencies, big businesses, and multinational governmental institutions. In situ commons are intimately connected to mobile commons because transboundary resources that physically move across property divisions (mobile commons) require the coordinated efforts of spatially networked communities anchored in localities (in situ commons).

Yet in situ commons are an uncomfortable proposition for scholars and activists who regard commoning as a political strategy of resistance against the ambitions of capitalism, the commodification of nature, and the privatization of common property (Holder and Flessas 2008; Bollier and Helfrich 2012; Antonio 2013). The notion of "pure" common property as described by Ostrom (1990) has become a relative rarity in developing countries (Turner 2017), where the trend has been toward various privatization measures as a means of protecting commons against resource grabbing and plural legal systems that are prone to exploitation (Schoenberger, Hall, and Vandergeest 2017; Zanzanaini et al. 2017). In this context, enclosure of the commons, once associated with decommoning or the destruction of common property, has come to be "touted by some as the only practicable way to protect precious environments subject to the existential threat of encroachment" (Amin and Howell 2016, 1). Globalization adds salience to this viewpoint by thickening connections between distant market actors and local resource users. In its most positive application, this opens up opportunities for hybrid initiatives to improve land use practices, address regulatory gaps, and reform common property regimes by promoting fairer resource access and more equitable alignments between formal and informal environmental governance processes (Lambin et al. 2014). Conversely, power asymmetries between local communities and external actors can lead to resource redistribution to the disadvantage of the former (Gururani and Vandergeest 2014).

Technologies, too, are contributing to the creation of new in situ commons through land reclamation, forcing us to think about changing ways of governing land use and resource ownership. The construction of canals and dams to control water flow across vast tracts of historically thinly populated carbon-rich peatlands in Indonesia and Malaysia to facilitate plantation agriculture has ushered in a multitude of in situ commons around issues of transboundary pollution and biomass burning mitigation, carbon offsetting, biodiversity conservation, and sustainable farming. Classical distinctions between conservation enclosures and open communal spaces, or commodification and common use, are therefore no longer fit the purpose of governing common resources. In this way, the concept of in situ commons offers an expanded optic to examine the role of market forces and wider political dynamics in reorganizing common property into new contemporary forms by working through governments, NGOs, private actors, and local communities.

Because in situ commons are coproduced by multiple actors across extended spatial scales of

governance, they often decenter the formal authority of government institutions and their representative bodies (Gururani and Vandergeest 2014). This "hollowing out" of the state (Bulkeley 2005, 883) or "limited statehood" (Risse 2013) happens in direct and discrete ways. Transboundary institutions and actors might influence situated conservation outcomes by shaping environmental agendas (e.g., by prioritizing endangered species over indigenous livelihoods, or vice versa) and by channeling funds, knowledge, expertise, or technologies into targeted programs. In Southeast Asia, in situ commons for peatland restoration, watershed management, and forest rehabilitation that cross a mixture of domestic property regimes are officially the responsibility of national line ministries. They are frequently brokered via transboundary agreements, however, when governments in developing countries lack sufficient financial resources to implement such large-scale conservation efforts independently (Hensengerth 2015). An alternative interpretation of this arrangement might be of a political settlement designed to reinforce unequal power relations that sustain a specific set of hegemonic values at the expense of genuine environmental reforms (Larsen et al. 2018).

Yet it is possible to overstate the rolling back of state authority in the governance of in situ commons, not least because "the state" is almost never a homogenous entity with a singular viewpoint or objective (Wolford et al. 2013). At both the national and subnational scales, state and private actors alike work through transboundary networks to augment their own power positions and interests in environmental agendas (Kattelus et al. 2015). Through such processes, in situ commons become sites of political contestation when weaker actors mobilize to resist resource capture and enclosure by more powerful states. Across mainland Southeast Asia, in situ commons have mobilized in response to China's hydropower hegemony over mobile commons associated with the Mekong, combined with the broader perception of China's indifference until recently to social and environmental problems outside its borders (Biba 2018). In 2011 in Myanmar, this anti-Chinese sentiment contributed to the halting of the multibillion-dollar Myitsone dam project on the Irrawaddy River in Kachin State (Corbera, Hunsberger, and Vaddhanaphuti 2017). Despite the deployment of xenophobic nationalism, in this case as a part of a commoning strategy, which also included demands for public participation and decision-making accountability (Zhu, Foran, and Fullbrook 2016), the outcome was hailed as a "great success for the environment movement" (Lamb and Dao 2017, 401).

Somewhat differently, the success of efforts to address transboundary environmental issues in situated commons might hinge on higher scales of state authority (Feitelson and Fischhendler 2009). We see this in public–private partnerships where governments do not play a clear role in administering common property resource regimes, but they create conducive conditions for private companies to work collaboratively with communities (Lambin et al. 2014). In Southeast Asia, the creation of spaces for enacting in situ commons has become increasingly contingent on the tacit support of authoritarian strongmen (Dittmer 2018; Pongsudhirak 2018). This Q2 support is routinely channeled toward environmental programs sponsored by patronage networks (Baker and Milne 2015), which themselves pose countervailing restrictions on state authority and legitimacy. The reassertion of elite patronage politics in state resource regimes, however, is fundamentally changing the nature of commoning in Southeast Asia in ways that represent a reversal of a region-wide trend toward democratic decentralization dating back to the mid-1990s (Miller 2012).

Finally, it is worth noting here that in situ commons frequently come into being and converge with mobile commons in the face of an emerging environmental threat or crisis. When key actors see their lives and livelihoods as being intertwined and identify their own ecologically unsustainable behaviors as contributing to a transboundary perturbation, they are more likely to mobilize a coordinated response. Southeast Asia is replete with commoning work aimed at combating transboundary air pollution, commonly and legislatively known as *haze*. Although a complex politics of blame has emerged in relation to haze, it originates in the burning of vegetation and the large-scale drainage of peat swamp forests by multinational plantation companies and, to a debated degree, by smallholders (Forsyth 2014). To mitigate the impacts of this transboundary problem, multisited activities within and between haze-producing countries (especially Indonesia and Malaysia) and surrounding affected countries (notably Singapore) are complementing formal governance programs. In many cases, they are even filling

policy gaps to address the root causes and most significant effects of biomass burning. In the following section, we explore how hybrid governance regimes are provisioning these mobile and in situ commons in Southeast Asia, both in addressing resource sustainability issues and in ameliorating the serious health and livelihood impacts of transboundary disasters.

Hybrid Environmental Governance

The well-rehearsed argument that complex environmental problems cannot be resolved within organizational silos or at a single scale of decision making has increased geographical interest in hybrid governance. Deliberative, multisector (cogovernance, public–private and private–societal) partnerships that collaboratively produce, synthesize, and mobilize knowledge from diverse sources and through flexible institutional arrangements are portrayed as a panacea for piecemeal or inflexible formal governance regimes (Lemos and Agrawal 2009; Rana and Chhatre 2017). Indeed, traditional forms of state-led governance alone are inadequate in dealing with transboundary environmental issues. By definition, transboundary commoning requires spatially dispersed networks of institutions and actors whose generative activities illustrate the "intrinsically complex hybridity of boundaries" (Fall 2005, 10).

Here, the term *governance* rather than *management* is important in understanding how hybrid partnerships transcend the exclusiveness of property boundaries. Managerial frameworks tend to privilege sector-driven expertise in the production of knowledge, offering technical diagnostics and infrastructural solutions at the expense of understanding how social complexities inform broader governance processes (Miller and Douglass 2018). Governance, however, directs more rigorous attention toward the politics and diverse institutions through which societies shape conservation agendas and resource-sharing practices across hybrid territories of private, public, and communal property (Armitage, de Loë, and Plummer 2012). Although governance and management each have utilitarian value, commoning is most compatible with the multistakeholder remit of governance, with its organizing ethos around the social contexts that influence political decision making in the (re)distribution of environmental benefits and costs.

Yet hybrid governance tends to valorize democratic environmental collaborations—usually with the support of market incentives—without fully understanding the trajectories of different combinations of hybrid instruments or their interplay at specific scales of governance (Larsen et al. 2018). Hybrid governance regimes thus should be regarded with caution as they are not equally well designed and might degrade transboundary commons when contradictory imperatives create operational confusion (Lockie and Higgins 2007). If key stakeholders are unable to overcome obstacles to coordination, flexibly adapt to changing circumstances, resolve issues of trust, or address power asymmetries, then hybrid interventions could result in suboptimal outcomes, such as biodiversity depletion and social dispossession or displacement (Lemos and Agrawal 2009). A failure to share information necessary for transboundary decision making (e.g., about fish quotas) or to systematically organize knowledge (e.g., forest classifications) can undermine hybrid governance programs from the initial planning stage (Armitage, de Loë, and Plummer 2012). In the longer term, coercive tactics by more powerful actors in hybrid partnerships—such as manufacturers and major retailers who concentrate power along commodity value chains, compelling local producers to respond by lowering sustainability standards—could thwart commoning objectives of attaining sustainable development targets and environmental justice (Lambin et al. 2014).

In Southeast Asia, we see the democratic ideal of collaborative participation in hybrid environmental governance routinely being subordinated to the illiberal agendas of developmentalist governments (Baker and Milne 2015; South 2018). The return to prominence of authoritarian leadership across the region following a period of democratic decentralization in the late 1990s and early 2000s (Miller 2009) has afforded the infusion of East and Southeast Asian state capitalism into transboundary commons via entrenched patronage networks (Barney 2017). Emerging hybrid environmental governance regimes have thus included many top-down state and market interventions in the production of mobile and in situ commons, introducing new forms of contestation and social conflict between actors with incompatible ideologies.

The resulting dividing lines, as represented by governments, markets, and communities, mean that

multiple permutations of environmental governance are generated. Hybrid governance regimes in Southeast Asia are especially diverse due to their mixed (formal and informal, liberal and illiberal) political systems and cultures (Robison 2012) and variegated capitalisms (Peck and Theodore 2007). Mobile and in situ commons centered on corporate social responsibility commitments and eco-certification schemes are proliferating in sectors once dominated by state rules and regulations, albeit with implicit state support and varying operational effectiveness (Vince and Haward 2017). The viewpoint that monetarized incentives, which could be interpreted as the greenwashing of capitalism, mask social inequalities produced by privatization (Bakker 2010; Swaffield 2017) is being tested in the rapidly developing societies of Southeast Asia. There is broad consensus across the region that markets have a potentially productive role to play in mitigating environmental problems. This region-wide value shift toward market environmentalism, otherwise known as green neoliberalism, is fundamentally restructuring transboundary commons around hybrid green growth partnerships that promise virtuous development based on the idea of attainable resource sustainability (Gilson 2018).

Momentum toward the greening of economies in Southeast Asia through hybrid partnerships was initially led by the United Nations Development Program's Green Economy Initiative in the aftermath of the global financial crisis of 2007–2008 (Middleton et al. 2015). Insofar as it is possible to speak about pan-Southeast Asian governance, the ten member countries of the Association of Southeast Asian Nations (ASEAN) have embraced this spatial reorganization of "regional common goods" as a region-wide buffer against global environmental shocks and climate uncertainty. From its current investment of US $40 billion per year in green finance, ASEAN has a goal of increasing private-sector investment tenfold to generate US $3 trillion in green business opportunities by 2030 (Development Bank of Singapore 2017). The challenge of achieving this goal should not be understated; even ASEAN itself acknowledges the problems of addressing wide-ranging degradation of environmental resources across the region (ASEAN Secretariat 2018).

Institutionally, green growth partnerships are reconstituting mobile and in situ commons along a continuum ranging from "thin" to "thick" green economic approaches (Ehresman and Okereke 2015). Q3 Mobile commons centered on thin green hybrid arrangements between plantation companies, governments, and farmers are seeking to maximize resource efficiency through the mobilization of green supply chains loosely based on sustainable development goals (Fairhead, Leach, and Scoones 2012; Middleton et al. 2015). In situ commons are also operationalizing landscape reforms via moderate green governance frameworks that locate environmental justice reforms within sustainable development agendas and existing market systems. These often take the form of hybrid partnerships around incentivized livelihood schemes that support sustainable upstream crops such as paddy rice terracing to offset negative downstream effects including erosion, declining biodiversity, and deforestation (Neef and Thomas 2009). Still other transboundary commons formed through thick green restructuring strategies of degrowth seek to provide redress for the unrestrained consumerism of burgeoning middle classes in Southeast Asia, although overall these are still nascent (Middleton et al. 2015). With no immediate solution in sight to accumulating environmental problems, thick green hybrid networks of smallholder organizations for food sovereignty, or self-reliance in sustainable food production, are organizing degrowth commoning activities to gain inroads into global environmental debates, especially at the United Nations (Leach and Scoones 2015). In Vietnam, for example, bottom-up in situ commons around food sovereignty are forging internationally connected "community webs" to redirect agriculture toward a "repeasantisation" and "deglobalisation" that departs from commercial processes (Fortier and Trang 2013, 93–94). As we elaborate in the next section, however, these hybrid green partnerships are not always inclusive and could exacerbate social conflict. For instance, thick green in situ commons can restrict equal access to natural resources when conservation areas forged through the fusion of foreign and national capital lack strong community support and displace local people from their homes and livelihoods (Kelly 2011). In other cases, conservation commons can open the way to subsequent hydropower developments and commercial logging (Käkönen and Thuon 2018).

The use of emerging technologies is expanding the scale of environmental change across Southeast

Asia, ushering in new hybrid governance arrangements centered on the conservation of human-generated landscapes. When dredgers construct artificial islands and dams and canals alter the hydrology of millions of hectares of peatlands and entire rivers, large-area land reclamation changes the characteristics of entire ecosystems, creating complex transboundary environmental impacts. Widespread land reclamation in the service of agricultural production and coastal zone development is thus attracting new assemblages of multisited commons. The dual purpose of these transboundary commoning arrangements is to ensure that the commercial raison d'être of constructed landscapes (Zimmerer 2000) is met through sustainable development practices, at the same time mitigating the harmful transboundary effects that the restructuring of nature invariably produces.

These human-generated landscapes are magnets for hybrid forms of environmental governance, both because their artificial nature is suggestive of legally contested or overlapping property rights and because their environmental impacts confound territorial enclosure. In Indonesia and Malaysia, in situ commons comprising a hybrid mix of communities, plantation companies, NGOs, and government actors animate around millions of hectares of drained and degraded peat swamp forests that are highly flammable in the dry season, when peat fires generate severe transboundary air pollution, releasing carbon and other greenhouse gases into the atmosphere. Efforts to restore drained peatlands to their naturally saturated condition and ameliorate these severe seasonal transboundary impacts requires hybrid governance interventions on multiple fronts. In situ commoning activities in Indonesia and Malaysia are targeting transboundary haze reduction by promoting sustainable palm oil production, implementing biomass fire-free land clearance policies, limiting planting crops on high carbon stock peatlands and primary forest, and preserving areas that are seen as fundamental to meeting the basic or traditional cultural needs of local communities (Tan et al. 2009; Garrett et al. 2016). In neighboring Singapore, the government-sponsored charity PM Haze (People's Movement Against Haze) is working to make the palm oil sector more sustainable through hybrid collaborations with Indonesia-based plantation companies and by lobbying Singapore-based businesses to use palm oil products that are grown sustainably without burning land or clearing forests. PM Haze also engages in social outreach activities with student organizations like SOS Students of Singapore against Haze, who in turn connect outward with Indonesia-based Kids Cut Palm Oil students. These hybrid partnerships further undertake fire mitigation activities and sustainable agriculture programs with peatland community organizations in Indonesia, who themselves connect upward to work with international partners like the World Wildlife Fund.

In acknowledging an expanded role for markets in environmental governance, we should not lose sight of the fact that transboundary commoning—as a modality of hybrid governance—is less about economic activities than it is the outcome of social and political processes. The narratives that differentially value resources, the uneven distribution of costs of environmental disasters, and the factors that allow or block access to particular resources are all functions of power relations between diverse actors with varying objectives and even conflicting ideas about the environment. What conjoins these hybrid partnerships in cooperative and generative activities is their pursuit of a specific common environmental good. In the final section, we expand on the formal and informal ways in which hybrid power relations circulate through mobile and in situ commons to reconstitute the emerging common property of environmental governance.

Reconfiguring Power Through Transboundary Commoning

Common property theory has directed more thoroughgoing attention to questions of user rights and entitlements than to the role of power in shaping access to environmental benefits. This policy–practice divide remains pronounced, despite clear intersections between resource rights regimes and power relations in determining whose knowledge is privileged in decision making, whose values are embedded into formal policy and laws, which spaces are available for collective action, and who is included or excluded from sustainable livelihood opportunities. Rights-oriented approaches tend to assume that power is woven into the rule of law and the social norms that enforce claims to common property. Power in rights-based approaches to common property is thus construed as a fixed entitlement, structurally distinct from public and private

property by its nonexcludability (collective rights to open access resources) and subtractability (vulnerability of these rights to diminution when one person's overuse degrades another's use of the same resource; Dietz 2017). Power-based approaches, by contrast, take a more dynamic view of common property, emphasizing the abilities of key actors to catalyze environmental change in response to social realities, thereby allowing consideration of a wider range of relationships in environmental governance regimes.

It is important to think about how different "bundles of power" (Ribot and Peluso 2009, 153) circulate through hybrid governance because the plural legalities of transboundary resource regimes tend to render collective user rights flexible and less enforceable (Perrings 2012; Wiering and Verwijmeren 2012). These bundles of power relations range from the intimate social ties that (re)distribute resource inclusions and exclusions at the community level through to the formal and attenuated power dynamics of transboundary networks that delineate the spatial terrain of common property (Hall, Hirsch, and Li 2011). Understanding hybrid environmental governance through this fluid register of power relations affords heightened visibility of the differentiated beneficiaries of environmental benefits around whom rights are unequally organized. Moreover, treating transboundary commons as sites of political contestation (Suhardiman and Giordano 2014; Ingalls 2017) illuminates the struggles for common property that make hybrid environmental governance a complex and contradictory process (Brown 2007). Too often, we see the rule of law being invoked at higher levels of environmental governance (e.g., when thick green state–private sector partnerships establish conservation areas or national parks) that legitimize the dispossession of communities from their own lands and livelihoods, with no legal recourse to distributive justice (Peluso and Lund 2011). Overlapping spheres of authority and inconsistencies in legislation on forestry, mining, and water can similarly reinforce resource inequalities, even within a single jurisdiction. When this happens, power relations—either in the form of soft, informal claims and practices that shape decisions about the environment or as direct, violent power—either replace hard law entirely, or, more commonly, they influence judicial settlements in favor of more powerful actors (Boer et al. 2016).

Mobile and in situ commons across Southeast Asia have historically been forged through such hybrid bundles of formal and informal power relations, which interact with a variety of legal, semilegal, and illegal resource access instruments. The emergence of government-driven conservation schemes in Southeast Asia from the 1970s onward redirected power over spaces of resource organization away from community collectives based on spatially anchored informal kinship and patronage ties and toward the coproduction of hybrid environmental governance with state agencies and markets (Beban and Gorman 2017). These hybrid arrangements combined old bundles of powers such as patrimonialism and customary law with new powers, as represented by governments, technologies, and markets in novel reconstitutions of conservation and resource geographies.

The hybrid engagements between these old and new bundles of powers have specific implications for some of the key (geo)political tensions that are emerging in transboundary commons of Southeast Asia. Patron–client relations, for example, have historically taken precedence over rule-based systems of governance in the region (Varkkey 2015; Middleton and Un 2018). The insinuation of party-based and personalized forms of patronage into state resource regimes is most commonly associated with cultures of corruption, rent-seeking and the deregulation of foreign direct investment for large-scale land acquisitions, resource grabbing and environmentally degrading megaprojects such as large hydropower dams (Schoenberger, Hall, and Vandergeest 2017). Yet in some cases, the relative flexibility of patronage networks has been productively exploited to support a variety of mobile and in situ commoning activities (Nagarajan 2017). In Laos, for instance, communities with traditional informal rights of access to forest resources (Agrawal 2007) have sometimes been able to leverage patronage power relations based on kinship, ethnicity, and historical political links in developing hybrid government–community partnerships, both to effectively lodge grievances with the state against planned plantation agriculture and to sustain forest commons (Kenney-Lazar 2018). Somewhat differently, in Indonesia, indigenous ethnic minorities exploited the nationwide transition toward democratic decentralization in the late 1990s to challenge the "uncertain legality" (Lund and Rachman 2018, 421) of patronage-based land tenure

by successfully lodging both informal and formal claims to communal resource ownership.

Increasingly, the capacity of communities to win the balance of power for situated commoning initiatives hinges on their ideological or tactical openness to embrace key areas of compatibility with outside, often transboundary, market agendas. Private–social green growth partnerships have provided incentivized platforms for minority groups in particular to obtain more equal rights of citizenship through PES and the United Nations' Reducing Emissions from Deforestation and Forest Degradation (REDD+) carbon governance scheme (Murray et al. 2015). The contentious politics of these hybrid environmental protection schemes and their negligible contribution to transboundary commoning efforts, however, when weighed against the supply and demand imperatives of trade flows has only recently been appreciated (Ingalls et al. 2018). There is emerging evidence that hybrid partnerships around the financialization of nature exacerbate social conflict at the local level while expanding the scale of commons enclosure. In the Philippines, for instance, a version of REDD + implemented on Palawan Island to support indigenous livelihoods and mitigate climate change impacts deeply divided local communities by setting opponents of outside investment in oil palm plantations on ancestral lands against proponents of lucrative carbon investment (Dressler 2017). On a wider scale, in Indonesia, the submission of a major land claim by the Indigenous People's Alliance of the Archipelago (AMAN) has been described as an "indigenous-style green grab" (Astuti and McGregor 2017, 454) by those excluded from its ambition to transfer 40million to 70 million hectares of forest from more extractive users to indigenous communities by 2020. For the international agencies in partnership with AMAN, the paradoxical advantage of implementing REDD + around indigenous in situ commons has been that the scheme strengthens the security of their investments within more "governable spaces" of enclosure (Astuti and McGregor 2017, 454).

In many parts of Southeast Asia, the spaces currently available for transboundary commoning have been at least partly shaped by former colonial powers. Many postcolonial countries have inherited national parks, protected forests, and conservation areas that are now regarded as in situ commons from legislation and bureaucracies first introduced by colonial authorities (Kelly 2011; Boer 2017). This old legacy of colonial power is instrumental to understanding ASEAN's geopolitical culture of noninterference in domestic affairs and its nonconfrontational approach to tackling transboundary environmental problems. Such sensitivities about outside interference are by no means unique to Southeast Asia; in the African Union, bounded sovereignties forged through bitter experiences of colonization followed by decolonization are similarly integral to contemporary transboundary strategies for environmental cooperation (Strydom 2015). Among ASEAN countries, however, this noninterventionist regional political culture often takes the specific form of "engaged non-indifference" (Pelling 2011, 85), whereby overtly political aspects of transboundary commoning are actively subordinated to economic strategies such as green growth partnerships and resilience-building strategies in the face of wider environmental shocks. We see this in Singapore's 2014 Transboundary Haze Pollution Act (THPA), which was developed in consultation with civil society organizations and academics to combat transboundary haze. By seeking to impose heavy fines on plantation companies deemed responsible for burning practices that produce haze pollution that affects Singapore, the THPA actively channels responsibility for land reforms through the business sector while carefully diverting blame away from neighboring governments to minimize geopolitical tensions (Lee et al. 2016).

Transboundary commoning is thus the generative outcome of heterogeneous (old and new, formal and informal, liberal and illiberal) political cultures and associated power relations. Coordination of these often competing political dynamics and contrasting ideologies into hybrid environmental governance regimes is neither a smooth nor straightforward process. As we described earlier, mobile and in situ commons are routinely derailed by ineffective coordination, when collective environmental goods are most prone to capture by personalized interests and predatory power relations. The fluidity of these political spaces for transboundary environmental action demands the treatment of hybrid governance as an ongoing process of experimentation. For this reason, we argue that hybrid power relations rather than rights-based approaches afford a more nuanced understanding of the networked ways in which transboundary commons are made and remade in

changing contexts. In their most productive application, these bundles of networked power relations could be thought of as the basis for more flexible, adaptive, and ultimately resilient forms of transboundary environmental governance. Power asymmetries within these bundles, however, raise serious challenges for the achievement of procedural inclusiveness, fair representation, and more equitable distributive outcomes in resource access, use, and control.

Conclusion

Transboundary governance is one of this century's greatest emerging environmental challenges. The current inability of governments to keep pace with the scale of anthropogenic transformations of nature requires new ways of thinking about how to deal with accumulating transboundary environmental problems of resource scarcity, biodiversity depletion, climate change, and related social conflict and environmental injustice. Hybrid institutions and networked power relations have the potential to transcend administrative boundaries and bridge policy gaps between geographically dispersed collectives of resource users. For hybrid governance to succeed, however, the key actors in multisector and multiscalar partnerships need to commit to cooperating in joint actions that privilege a particular common environmental good over individual private interests, often in the face of significant power asymmetries between the actors involved.

For this reason, we emphasize the generative potential of transboundary commoning as an active and dynamic modality of hybrid environmental governance. Drawing from cases in the rapidly changing societies of Southeast Asia, we have made a case for moving away from historically enduring notions of common property that rest on clearly defined rules of access in spatially bounded areas. This is because transboundary commons defy such static imaginaries. Instead, we argue that transboundary commons are more productively conceptualized in terms of geographically discrete categories of hybrid governance. These cover both resources that physically move across property regimes (mobile commons) as well as the changing priorities of spatially divided collectives of users (in situ commons). The fluid dynamism of these transboundary commons is apparent in the flows of knowledge, labor, money, technology, and natural resources that circulate across private, public, and communal property regimes within and between nation-states. These flows are best understood in terms of networked power relations, given that common property rights are suggestive of a spatial fixity that typically encounters operational difficulties in interactions with borders.

The recent value shift toward market environmentalism across Southeast Asia has further diversified the range of power relations in constructing transboundary commons while unsettling received ideas about common property. Market-driven land reclamation supported by technology, for example, is pushing the boundaries of common property theory and practice by producing a multitude of mobile and in situ commons in legally ambiguous landscapes. The policy implications of these emerging geographies are profound. Not only do such heavily modified landscapes compel us to consider new complicated intersections of property ownership and resource access, but they also highlight the imperative of addressing the transboundary damage that sites of major anthropogenic environmental transformation invariably generate.

More broadly, the expanding role of markets in environmental governance signals a fundamental change in the future direction of commoning. Social acceptance of a potentially productive role for capitalism in environmental governance is on the rise. In Southeast Asia, this ideological shift is manifesting in the diversification of commoning activities to include a stronger emphasis on sustainable development through green growth partnerships. The private sector is also increasing investment and human resources into transboundary commoning initiatives aimed at protecting common goods against environmental shocks and crises of resource sustainability.

History has shown that times of crisis, rupture, and displacement create opportunities to enact flexible governance. The potential of hybrid governance to mobilize and regulate transboundary commons warrants further investigation as a dynamic response to the accumulating environmental disruptions caused by anthropogenic activities with cascading and long-term consequences. More detailed attention also needs to be given to the hybrid institutions and actors who generate multiple permutations of transboundary commons around safeguarding conservation heritage, sustainable development, and socio-ecological resilience. Opening up the study of

common property in this way to accommodate a growing diversity of hybrid relationships could facilitate more comprehensive and adaptive approaches to transboundary environmental governance. Yet our attention to bundles of power relations also suggests that inclusive and equitable outcomes are not a given, and must be continually assessed and redressed as and when necessary.

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