GREY AREAS IN GREEN GRABBING: SUBTLE AND INDIRECT INTERCONNECTIONS BETWEEN CLIMATE CHANGE POLITICS AND LAND GRABS AND THEIR IMPLICATIONS FOR RESEARCH

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Grey areas in green grabbing: subtle and indirect interconnections between climate change politics and land grabs and their implications for research

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ARTICLEINFO	A B S T R A C T
<i>Keywords:</i> Climate change politics Land grabbing Agrarian climate justice Green grabbing	This paper builds on the literature on green grabbing. It makes a fresh contribution by bringing in aspects of green grabbing that are less visible and obvious. These are subtle, fluid and indirect interconnections between climate change politics and land grabs. It is difficult to see these interconnections from an 'either black or white' perspective. It is likely that the extent of this 'grey area' intersection in terms of affected social relations, nature and land use change is quite significant globally, even when such interconnections tend to operate below the radar of dominant governance institutions and database tracking. This situation calls for more nuanced understanding of governance imperatives, and for constructing the necessary body of knowledge needed for appropriate political intervention. This paper offers preliminary ways in which such interconnections can be seen and understood, and their implications for research and politics' as a possible framework for formal governance or political

activism relevant to tackling such grey area interconnections.

1. Introduction

This paper builds on the initial and growing literature on green grabbing – i.e., resource grabbing in the name of the environment (Fairhead et al., 2012). It aims to expand and deepen the concept of green grabbing by exploring the subtle, indirect, fluid, complex, and often invisible interconnections between climate change politics and global land grabs. In a way, this is a grey area in green grabbing. Being less concrete and obvious does not make it less important and urgent; quite the contrary. Because it is even more difficult to govern, the imperatives of having a better understanding of this grey area becomes even more urgent and necessary. This paper offers a preliminary sketch towards a better understanding of such complex interconnections. The discussion in this paper flows from two basic assumptions.

First, the *politics* of climate change is an important area of inquiry analytically distinct from 'climate change' *per se*. Our paper concerns '*climate change politics*' broadly defined here as the dynamics within and between the implicated spheres of social structures, institutions and political agency – namely, social relations; policies, treaties, laws, procedures, norms; projects, programs, narratives, ideas, advocacies,

social mobilizations and movements, rumors, or gossips – separately or collectively, and among and between different social classes and groups within the state and in society that set and shape the meanings of climate change, its causes and consequences, how it can be addressed, by whom, where and when. Often, what is privileged in public debates and academic research are *formally constituted* climate change *policies* or *projects* officially labeled by powerful entities (state or non-state) as climate change mitigation or adaptation measures, such as biofuels policy or REDD + .¹ These are relevant to study, *but these are not the only important ones*.

Climate change *politics* – especially those in informal and indirect manifestations of climate change politics, and thus are often invisible – require urgent, necessary and careful attention, academically and politically. For example, rumors or gossip about a biofuel project that would purportedly require vast tracts of land could trigger a frenzy of land speculation among local or foreign individual or corporate entrepreneurs on the one hand, and/or panic among villagers on the other hand. The politics of access, use and control of natural resources may be altered dramatically – triggered not by climate change per se, but by rumors, speculation, or spectacle. This was what exactly happened in

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¹ REDD + is 'Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries'.

several villages in Northern Shan State in Myanmar in 2012–2015 when there was a rumor about a biofuels project that would require the government taking about 300,000 acres of village lands.² Rumors and gossips about a new project or revival an old project for hydropower dam building for climate change adaptation that could displace thousands of villagers have similar effect: panic among villagers, land speculation among elite entrepreneurs – as what has been happening in Northern Shan State and Kachin State in Myanmar during the past ten years (Lamb and Nga, 2017). An official order of 'no dwelling zone', passed in the name of climate change-related disaster prevention, effort along coastal areas can adversely affect the lives and livelihoods of fishing-farming communities where villagers are prevented from claiming their land (for farming and for landing spots for their fishing activities), while big business are permitted to construct concrete commercial buildings for tourism business - as in the case in central Philippines in the aftermath of the 2013 typhoon Haiyan (Uson, 2017). These are all dynamic political economic and ecological ripple effects partly triggered when global climate change policies and initiatives hit the ground and reshape the politics of resources, as Newell and Bumpus (2012) explained.

What this means simply is that: it might be, it can be, that climate change *politics* may or can displace or dispossess more people from their land than actual climate change. Whether or not this is indeed the case, and if so, to what extent is a much larger question –that is largely empirical – than what can be tackled in this paper. The current paper's aim is to make a case that could warrant further empirical exploration into such a research agenda, or at least a plea not to disqualify a priori such an empirical research question.

Second, although in recent years global land grabbing has increasingly fallen out of the global media spotlight, actual land grabbing may not have necessarily slowed down or ceased, and those that got stalled are not necessarily politically irrelevant. On the one hand, some large global databases, such as the Land Matrix (Anseeuw et al., 2013) demonstrate decreasing number of cases and geographic area of land deals principally because of adjustments in their definition of what can be included or excluded in particular definitions of land grabs, and not necessarily because the extent of land deals have decreased in real and absolute terms (although this needs empirical validation). On the other hand, many high profile corporate land deals never materialized as planned or were later scaled back, stalled or withdrawn (see, e.g., Zoomers and Kaag, 2014). Still, many of these land deals made lasting, wide-ranging and profound social, environmental and political impacts.

Corporations may withdraw from a specific geographic site, but the early spectacle and the initial planning process of acquiring lands by themselves may have already reshaped conditions of and for social relations, nature and land use. Regardless of the actual status of a land grab - whether pursued, withdrawn, or invented/imagined - such dynamic shifts around land investments recast the politics of resources just the same. When an investor fails to mobilize its speculated financial investment and abandons the investment plan, the affected villagers do not necessarily or automatically get their access or control of such resources back, nor do they lose the sense of insecurity, threat and precarity. Even when an investment does not exist at all, but rather is simply invented or imagined on paper as an elite ploy to get control of resources, just the same, villagers' access may be profoundly altered. When the celebrated case of Karuturi Indian flower company stopped operation in 2012, a few years after it boasted of setting up a massive scale business in the Gambella region of Ethiopia (Gill, 2016; Shete and Rutten, 2015), the national government just moved on to look for new investors for the same site; for the villagers, the threat and insecurity remains, as demonstrated by the continuation of social unrest, still shaped by the lingering land politics that were first triggered by Karuturi's initial entry into the region (for a broad overview, see Moreda, 2017).

This paper is informed by our more than a decade of uninterrupted engagement with the research community interrogating the phenomenon of global land grabbing, with extensive fieldwork in Asia, Africa, Latin America, Europe, inside China, as well as a concentrated field research in 2014–2018 exploring climate change politics in Cambodia, Myanmar and the Philippines. Before going into the main part of the paper, a few words about land grab definition are warranted because how one defines land grabbing is key to what one sees not just in the land rush phenomenon, but also in the realm of climate change politics.

Defining 'land grabs' is not straightforward: it is politically contested. Different quarters see the phenomenon differently. Competing definitions have also evolved over time. For instance, the Food and Agriculture Organization (FAO) initially defined land grabs as involving at least 10,000 ha, a foreign government, and a negative impact on the food security of affected communities (see Borras et al., 2012), while the International Land Coalition (ILC) and ILC member Oxfam emphasized land deals involving 1000 ha or more, and human rights implications in terms of land deal procedures and impacts (Zagema, 2011). The analytical concepts and issues raised in these definitions are important, and centrally focus on scale of land deals in terms of land size, impact on local communities, and intervention of foreign powers. A definition of land grabs has practical implications for database building, and quantification of land deals. There are critical scholars who have raised and debated these issues, such as Anseeuw et al. (2013) and Scoones et al. (2013) and thus we will not re-run such in this paper.

The definition we adopt in this paper is one that puts front and center the character and scale of capital involved in a land deal, as well as the nature of existing social relations and balance of power when and where land deals come into play, and how these may be altered by both formal procedures and wider political processes surrounding land deals, among others. We adopt a definition of land grabbing that identifies it as essentially 'control grabbing' (Borras et al., 2012: 851): "[C]ontemporary land grabbing is the capturing of control of relatively vast tracts of land and other natural resources through a variety of mechanisms and forms that involve large-scale capital that often shifts resource use orientation into extractive character." This definition conceptualizes land grabbing "whether for international or domestic purposes, as capital's response to the convergence of food, energy and financial crises, climate change mitigation imperatives, and demands for resources from newer hubs of global capital" (ibid.). It therefore highlights the power relations and politics embedded in social relations among antagonistic social classes and groups who are competing for control of these natural resources, while suggesting that the institutional bases for and forms that land deals take are shaped by political contention and therefore can vary significantly (land purchase, lease, joint venture or contract farming, resulting in the expulsion of villagers or in villagers' incorporation into the emerging enterprises (Xu, 2018), or not), from place to place and over time. This approach broadens the discussion in at least three ways, namely: (i) beyond the initial food crisis-centric analysis of much of the scholarly literature and media coverage; (ii) beyond the initial land-centric analysis to problematize grabbing of water, seas, forest, and other resources such as carbon as well (Franco et al., 2013); and (iii) beyond just foreign actors to include analysis of domestic corporate actors and nation-states (Wolford et al., 2013), as well as land grabbing inside the countries that are usually tagged as origins of large-scale land investments, such as Brazil, Russia and China (Cousins et al., 2018; see also Xu, 2018; Schoenberger et al., 2017). Such a definition helps frame better our discussion about the subtle interconnections between climate change politics and global land grabs.

² Fieldwork by authors in Northern Shan State (in the general area north of Kutkai, and near the border with China) in 2014-2018.

2. Climate change politics could trigger or inspire land grabs and/ or spillover effects

As mentioned earlier, the interconnections between climate change politics and land grabs may not always be obvious and palpable, but these exist, nevertheless. These can be seen in at least three broad ways.

First, one phenomenon that links the global land rush and climate change mitigation and adaptation politics albeit in indirect and subtle ways is the rise in popularity, materially or discursively, of 'flex crops and commodities' that have been enabled by climate change politics (Borras et al., 2016).³ The multiple-ness and flexible-ness of uses of certain crops – for food, animal feed, biofuel, and so on – such as corn. sugarcane, and palm oil, for example, at a commercial scale can be real. anticipated or imagined, and have important impact: the dramatic net increase in the global production of these crops and commodities. Producing these crops and commodities is usually done through largescale, industrial monocultures that require dramatically changing existing social relations around control and use of land, water and forests, even when at times these incorporate individual smallholders through a variety of contract growing schemes. The notion of flex crops helps reveal underlying interconnectedness in terms of different sectoral 'value chains' that become entangled to form a 'value web', and truly cross-border, international interconnectedness (see also Virchow et al., 2014). A sugarcane plantation producing only sweeteners in Cambodia is just as embedded as the sweetener-ethanol production system in Brazil in the global 'flex sugarcane complex', as McKay et al. (2016) demonstrated. A particular company operating a sugarcane plantation and mill does not have to produce multiple products of sweeteners, ethanol and others to be considered part of the 'flex sugarcane complex'; rather, the company is subsumed, objectively, within the global complex of flex sugarcane. The global expansion of flex crops has depended on recasting global land control. The expansion of sugarcane plantations worldwide, including Brazil, Cambodia (McKay et al., 2016), China and Myanmar (Borras et al., 2018); or the expansion of corn production that links what has happened in the US corn belt (Gillon, 2016) and how it has triggered spillover effects in distant places such as in contemporary Northern Shan State in Myanmar (Woods, 2015) are (in)direct outcomes, intended or unintended, of changing climate change politics. If there was no net increase in the demand for vegetable oil for biofuel (for instance in the European Union due to its mandatory blending policy, Franco et al., 2010), the global complex for these commodity complexes would not have been as large as they are today. Recent empirical studies on flex crops offer preliminary evidence about the pivotal role played by climate change politics in the phenomenal rise of commodity complexes, such as palm oil (Alonso-Fradejas et al., 2016), sugarcane (McKay et al., 2016), corn (Gillon, 2016), and soya (Oliveira and Schneider, 2016). When the European Union converted part of its rapeseed production to biodiesel feedstock in response to biofuel mandatory blending policy, it had to replace its original use with alternative vegetable oil: palm oil. Thus, even when some enclaves of expansion of oil palm plantation in, for instance, Nigeria or Colombia do not directly include direct biodiesel production, it does not mean that these local oil palm plantations are not embedded in

the 'global palm oil-biodiesel complex' (see Alonso-Fradejas et al., 2016). When soya and sugarcane production expanded in Brazil, they took over lands previously devoted to cattle ranching, while the latter moved to engage in new forest clearing further into the Amazon. These spillover effects and indirect interconnection dynamics have fueled complicated debates over 'indirect land use change' (ILUC) - precisely because the connections are less direct and obvious, and are challenging to govern (see Lapola et al., 2010 in the context of Brazil and ethanol production). In this paper, we see 'indirect land use change' as involving social processes that connect climate change politics and land grabs via web-like routes (as in 'value web', or 'chain of chains'), rather than via single straight lines (as in 'value chains'). Again, at first glance, connecting various hubs of production, circulation and consumption across the globe via the concept of 'flex crops' may be a bit of a stretch, but at closer inspection it becomes clearer that at the very least it is a question that warrants deeper empirical investigation. Our hunch is that the notion of 'flex crops' makes the 'indirectness' in ILUC less subtle, or that indirect land use change (ILUC) is inherently entangled conceptually and materially - with global flex crops complexes. This strategic relationship potentially exists, but is not yet fully explored theoretically or empirically in the literature.

Second, the long-standing central state campaign to stop some forms of agrarian production systems and ways of life, especially shifting cultivation, pastoralism and some forms of artisanal fishing, has gained renewed momentum recently amid resurging climate change politics. The general assumption and insinuation, implicitly or explicitly, is that these systems are ecologically destructive, even when evidence remains contested (Mertz et al., 2017; Dressler et al., 2017; Fox et al., 2014; Scheidel, 2018). Big conservation projects, REDD+, and other adaptation projects limit or altogether prohibit these traditional practices largely by pushing villagers into land use change usually towards sedentary forms of production, which is usually carried out by dangling formal, individualized private land titles. What this typically means in a shifting agriculture context is a two-pronged onslaught. On the one hand, sedentarization frees up large tracts of land to be picked-up afterwards by agribusiness and/or big conservation organizations. On the other hand, lands that remain in the hands of villagers that are largely turned into sedentary cultivation are then converted in their previous diverse land uses into boom crops (most of which are flex crops) where social relations and production systems are largely capitalist, using industrial grade seeds, irrigation, chemicals, and postharvest infrastructure. Together, these are then implicitly or explicitly considered as climate change mitigation and adaptation practices - the flip-side of the 'ecologically destructive' shifting cultivation - although one can argue that the land use shift brings these spaces into the fold of the global industrial food system, one of the single biggest contributors to GHG emissions (McMichael, 2013).

As Borras and Franco (2018) argued, climate change-related political narratives about the purported ecologically destructive character of some agrarian systems have dovetailed with another long-standing narrative portraying these agrarian production systems as economically inefficient. The latter is a cornerstone narrative underpinning much of the contemporary land deals (World Bank, 2007; Deininger and Byerlee, 2011). Combined together, these two narratives, i.e. economically inefficient and ecologically destructive agrarian systems, seem to us to be informing the idea of 'Climate Smart Agriculture' (CSA) - a project based on the fusion of two central obsessions in mainstream economics: the quest for economic efficiency (technical, allocative and distributive) on the one hand, and on the concern for environmental sustainability on the other hand. CSA has three pillars, namely, 'increased productivity', 'increased resilience', and 'reduced emission'. But it is completely silent on inequality, unequal power relations, and redistributive reforms (Borras and Franco, 2018; Clapp et al., 2018; Newell and Taylor, 2018; Taylor, 2018). But such assumptions are not beyond question. In their study of a land deal that was justified on the basis of economic efficiency and environmental sustainability gains,

³ Flex crops and commodities are those that 'have multiple uses (food, feed, fuel, fibre, industrial material, etc.) that can be flexibly interchanged while some consequent supply gaps can be filled by other flex crops. Flexibility arises from multiple relationships among various crops, components and uses' (Borras et al., 2016: 94). Moreover, 'Specific forms of flexible-ness and multiple-ness can become more profitable through several means – *e.g.* changes in market prices [...], policy frameworks [...] and technoscientific advance facilitating conversion of non-edible feedstock [...].' Finally, 'The latter's economic viability depends on low-cost feedstock, which can be cheapened by several means, *e.g.* mining nature, super-exploitative labour, more intense market competition and land grabs.' Key examples are soya, sugarcane, oil palm, and corn (Borras et al., 2016: 94).

Richards and Lyons (2016: 209) found just the opposite outcome; they concluded: "investor claims regarding the economic development and environmental sustainability at the site level do not match with the lived reality of Ugandan villagers at the investment site. Whilst carbon capture is possible, it is outweighed by a suite of social and environment ills, including forced dispossession, biodiversity loss and chemical pollution." This Ugandan experience has broader resonance. It is similar to what we see in Myanmar where the ongoing transformation of much of Northern Shan State's once-biodiverse and variegated land uses into an increasingly uniform small farm-based corn monoculture sub-ordinated to merchant capital (Woods, 2015), is a manifestation of the direct connection between climate change politics and land grabs where biodiversity is just one of society's net losses.

Third, climate change politics may or may not lead to or constitute land grabbing in one place; the same climate change politics, however, could trigger land grabbing elsewhere. On some occasions, mitigation and adaptation initiatives such as REDD+, like the conservation project in Prey Lang forest in Cambodia, may have blocked agribusiness expansion inside the cordoned conservation area,⁴ but an agribusiness company may simply shift to a nearby area for their expansion. The implication of this is that if we limit our analysis of mitigation and adaptation projects within the specific fenced area of conservation, we will fail to see the indirectly related expansion of land grabs elsewhere. It is somewhat like a balloon: press it here and it will blow up there. When a big conservation organization started to claim the Lenya Forest in Myeik and Kawthaung Districts in southeastern Myanmar, a Korean company (MAC) simply carved out its 100,000 acres from the outlying portion of the Lenya forest for oil palm plantation.⁵ This has prompted some scholars, such as Hunsberger et al. (2017) and Barbesgaard (2019) to argue for a 'landscape' approach in one's political economy and ecology analysis of climate change politics and resource grabs.

3. Land grabs undermine (potentially genuine) climate change mitigation and adaptation

Another major point of connection between climate change politics and land grabbing is when land grabbing undermines actual activities that constitute climate change mitigation and adaptation, and this can happen in at least three ways.

First, land grabs can *block* potentially genuine mitigation and adaptation projects by taking over, or significantly reducing the size of, the area meant for or suitable to the latter. This is especially in the context that natural resources (land, water, forests) are finite resources, and recasting land control and use becomes a zero sum process. A closer look at the Prey Lang forest in Cambodia reveals how the Economic Land Concessions (ELCs) (the government program that is largely credited for massive land deals or land grabs) trimmed down the size of forest conservation by taking over significant areas in and around this huge natural forest, contributing to transforming Prey Lang forest into something like a reduced block of Swiss cheese with many holes inside.⁶ This is not unique to Cambodia. Many of the so-called conservation sites worldwide demonstrate similar characteristics, including among others the Lenya Forest in Myeik and Kawthaung Districts in Myanmar, and the southern Sierra Madre in the Philippines – the latter is at the same

time the site of the largest REDD + project in the country (200,000 ha) and a hotspot of land grabbing for tourism, real estate and other corporate investments, speculative or otherwise.⁷

Second, the sheer scale in terms of land area that corporations have taken over or are taking over for agribusiness expansion where forest clearing and use of fossil energy (fuel, chemicals, and so on) is a key feature can easily outweigh any gains that may be made by mitigation and adaptation projects. As Davis et al. (2015: 772) concluded in their quantitative study of the Cambodian experience between 2000 and 2012: "Nearly half of the area where concessions were granted between 2000 and 2012 was forested in 2000: this area then represented 12.4% of forest land cover in Cambodia. Within concessions, the annual rate of forest loss was between 29% and 105% higher than in comparable land areas outside concessions." Indeed, it is like putting one thing into someone's left pocket, while taking five things from her right pocket. Practitioners and researchers, if preoccupied with the size of a specific mitigation and adaptation project in a particular project site, could easily miss seeing the larger setting and broader political economic and ecological interconnections. Thus, one may get caught up in celebrating the gains of a 10,000-ha. REDD + project, even when in the same subnational region a 100,000-ha forested area was just cleared to open an oil palm plantation. If we take an 'isolationist view' focused on the REDD + project alone, then we will end up concluding that society gained 10,000 ha in its equivalent GHG savings;8 yet broadening the view to include the 100,000-ha clear-cut forest in the adjacent community reveals, in fact, the society had a net loss of 90,000 ha or its equivalent in terms of GHG emission.

What is likewise problematic in this context is how 'genuine' mitigation and adaptation initiatives tends to be limited only to those officially labeled by governments or big NGOs as such; and everything else outside the official glossary and maps are rendered not real mitigation and adaptation, and therefore up 'for grabs'. In this way, many long-standing practices by communities that are embedded in their socio-cultural and agro-ecological traditions – e.g. community forest as traditional storm surge protection, and so on -have been invisibilized. Invisibilizing such practices is often based on prior assumptions, or could lead to future assumptions, that such geographic spaces are idle or vacant, and their land uses inefficient or destructive, or both. Scheidel and Work (2018) have documented and demonstrated how the long-standing community-based forest conservation work of rural villagers in Prey Lang region of Cambodia had been undermined not only by straightforward ELCs - but by 'reforestation projects' invoked in the name of climate change mitigation, that is, industrial monoculture acacia tree plantation that have been built after clear-cutting and burning rural villagers' community forest.9 Indeed, such narrative of economically inefficient and ecologically destructive poor peasant agricultural practices could easily lead to justifications for the state to claim those spaces for its own development projects, or giving these away to private investors (e.g. tourist business clear-cutting mangrove forests), as what has happened in many parts of Myanmar, Cambodia and the Philippines.¹⁰

Third, the *character* of production systems in the emerging enterprises in land grab sites can cancel out any gains in carbon savings from mitigation and adaptation projects. The volume of carbon that can

⁴ Based on one of the author's fieldwork in Prey Land Forest and adjacent communities, 2015-2016. See also Work and Thuon (2017).

⁵ Based on fieldwork by the authors in Lenya Forest in 2015 and several subsequent workshops with affected villagers during the period of 2015-2018 in Myeik and Kawthaung Districts, Myanmar. In Brazil, at an even larger scale, the surge of agribusiness in the Matopiba region in recent years and the movement of corporations and *gauchos* (well to do farmers of European descent) into Matopiba region has been triggered partly by environmental and climate change mitigation initiatives in the Brazilian Amazon (Calmon, 2017).

⁶ Based on author's fieldwork in Prey Lang forest in 2015-2016; see also Work and Thuon (2017).

 $^{^7}$ Based on fieldwork by one of the authors in southern Sierra Madre towns of Infanta, Nakar and Real during the period of 2015-2018.

 $^{^{8}}$ See Corbera (2012) and Lawlor et al. (2010) for critical reflections and cautionary notes on REDD+.

 $^{^{9}}$ One of the authors did fieldwork in 2015-2016 in this case together with the cited authors Scheidel and Work.

¹⁰ This sentiment was raised quite often during interviews and discussions with local community leaders in our research sites in Cambodia, Myanmar and the Philippines, and was most powerfully articulated by a Karen community leader (Saw Frankie) in an interview with one of the authors in September 2015 in Dawei.

be saved by conserving 10,000 ha of forest can be easily cancelled out by the volume of emissions in clearing forest and using peat lands and setting up an industrial, mechanized, and chemical-based monoculture in 100,000 ha or a sprawling 20,000 open pit coal mining. Thus, if we map climate change mitigation and adaptation sites and how much carbon savings there is on the one hand, and then map the high GHG emitting monoculture and extractive industry activities (coal mining, and so on) on the other hand, then we will see a significant mismatch. Thus, mapping nature conservation areas in isolation from broader socio-ecological processes can be misleading. Overlaying multiple maps across sectors: big nature conservation, community forests, agribusiness land deals, extractive industries, tourism expansion, and so on, such as the human rights NGO LICADHO's interactive online map (http://www. licadho-cambodia.org/land_concessions/) are more appropriate.¹¹

4. Climate change politics used as cover for, and/or to legitimize, land grabs

Still another point of interconnection between climate change politics and land grabbing has to do with subterfuge and deception in the specific context where climate change politics have been, and continue to be, used *as convenient cover for* and/or *to legitimize land grabs*. Indeed this is at the very heart of green grabbing. However, in most green grabs at least there are actual concrete links between resource grabs and environmental justification, such as in the case of biofuels. What will be demonstrated below is a particular type of green grabs where land deals are straightforward land grabs and nothing to do with environmental justifications – but that at some point, climate change narratives are mobilized in order to provide a convenient cover for what are otherwise straightforward land grabs. This is illustrated in at least three ways.

First, where large-scale land-oriented enterprises, such as timber extraction, face regulatory efforts such as a ban on commercial timber extraction, logging corporations and enterprising individuals (or, 'timber mafia' as they are often collectively called in many countries), may try to bypass these institutional constraints by manipulating climate change mitigation or adaptation measures for their profit-making agenda. This is often the case with regard to production of biofuel feedstocks. In Myanmar and Indonesia, some logging companies, to advance their timber extraction interests, saw opportunity in the government promotion of an expanding oil palm sector that, in turn, is underpinned by the rhetoric of producing biofuel. The only way for logging companies to gain access to forests and engage in legal timber extraction is to have legal land concession contracts. Companies managed to secure government contracts for agricultural land concession, ostensibly to set up oil palm plantations. Once they physically got control of the forested land, they proceeded to clear-cut the forests for timber extraction, and then leave without ever establishing any oil palm agribusiness enterprise. In Myanmar, the companies routinely plant thin rows of oil palm along the road in an effort to conceal or divert attention away from the logged down forest, indeed a very crude way of hiding their scheme.¹² Unsurprisingly, by 2016, only about onefourth of all the lands covered by officially issued land concession contracts in Myanmar had actual plantation emerging (Woods, 2016).

Second, some corporate investments have features that could easily be repackaged to look like climate change mitigation or adaptation measures, even when these were originally conceived and/or remain to be plain profit-making enterprises that have nothing to do with climate change politics. The relabeling aims for easier, faster and wider political and administrative purchase and legitimacy. For example, facing public criticism and resistance from villagers who were potentially to be displaced by large-scale hydropower projects aimed at servicing mega industrial and commercial interests, promoters of these hydropower projects are suddenly (re)packaging these dams as climate change mitigation and adaptation projects. One outcome of this is that those opposed to the dam project are now labeled as opposed to climate change mitigation initiatives. The Salween River (or 'Nu' in China and 'Thanlwin' in Myanmar), the longest free-flowing river in Southeast Asia has been eved for hydropower development. Since the 1980s Myanmar and Thailand have been in talks, and in 1997 the two governments signed a Memorandum of Understanding (MOU) for several hydropower 'battery dams' (e.g., mainly for export of electricity to China and Thailand) with a combined capacity of 22,500 MW to be built on this one river alone.¹³ In recent years, there were fierce battles between resisting villagers and the government over dam projects and the fact that such projects will not only displace villagers, but will destroy thousand acres of village farm lands. Resistance in the past had forced the Myanmar government to suspend the projects. However, recently, the Myanmar government has been developing a national strategy for complying with international climate change agreements, and large-scale hydropower development now figures prominently as the country's main potential renewable energy source (alongside the government's promise for expansion of state forest conservation area) ((MoNREC, 2017). Here, (re)packaging is a discursive strategy played out at the level of policy declarations and political discourse ostensibly in order to sell an idea. In the lead-up to the UNFCCC Conference of Parties in Paris in 2015, the Myanmar Government repackaged some existing interventions, such as building large-scale hydropower dams and expanding its generic forest conservation area, as part of its Intended Nationally Determined Contributions (INDC) (Republic of the Union of Myanmar, 2015). Such efforts may be designed to preempt or dampen public criticism and debate around controversial projects, or to 'demonstrate' to skeptical publics that projects perceived as dubious or dodgy have a larger social function or are intended to contribute to a large public good.

Third, many big generic neoliberal nature conservation initiatives (forest, biodiversity, wildlife) expel villagers from, or curtail (or threaten to curtail) their access to, forest, water or sea. There are different variations of how nature conservation can lead to dispossession (Arsel and Büscher, 2012; Büscher and Fletcher, 2015). Increasingly, generic neoliberal big conservation initiatives are explicitly or implicitly put forward as climate change mitigation and adaptation. Indeed, one of the biggest beneficiaries of the rise of climate change politics is the sector of big conservation groups working on forestry, biodiversity and wildlife conservation. Forest conservation projects that are explicitly labeled as climate change mitigation, specifically REDD +, while important (Canadell and Raupach, 2008) are just a smaller part of this much larger generic category of nature conservation and its link to climate change mitigation. In Cambodia, Myanmar, Philippines and many other countries, government commitment to inter-governmental climate change mitigation and adaptation initiatives is usually focused on the generic nature conservation, more commonly about claims of protecting and expanding biodiversity and forests (Prescott et al., 2017).

In some settings, the central state plays a key role in brokering what seem to be negotiated agreements between corporate land investors and

 $^{^{11}\,\}text{See}$ also the map in Woods (2016) for the case of Tanintharyi region in Myanmar.

¹² Separately and together, the authors interviewed several local villagers and NGO professionals in Tanintharyi region of Myanmar during the period of 2015-2018, and this is a conclusion among residents and observers that is quite commonplace. We also travelled across the region and saw for ourselves such cases where there were thin rows of oil palm trees along the road to cover what are obviously clear-cut forests.

¹³ For more background information, see https://frontiermyanmar.net/en/ its-time-to-renegotiate-hydro-contracts-on-the-thanlwin). Also based on authors' separate fieldwork in Northern Shan State portions of the dam project (two of the planned seven dams) during the period 2016-2018 See also Lamb and Nga (2017).

big conservation organizations, where each seeks to carve out areas of control in a particular space or territory, with the latter type of organization often invoking generic climate change mitigation and adaptation imperatives to strengthen their case. Negotiated agreements provide a way for each actor to get a piece of the pie, so to speak, with experience suggesting that there is often less tension than might be imagined between agribusiness and big conservation groups - as long as both get their share of the coveted space. In Cambodia, Myanmar and the Philippines there are maps that curiously show land investors and big conservation organizations 'snuggling' with each other spatially and politically in what Work and Thuon (2017) call 'mutual accommodation' between big nature conservationists and agribusiness land grabbers. Striking examples include agribusiness-conservation accommodations in Prey Lang Forest in Cambodia, in Lenya Forest in Myeik District in Myanmar, and in the southern portion of the Sierra Madre forest in the Philippines as mentioned already in several parts of the paper. This phenomenon and related dynamics, at least in these three country cases, are well known and well documented (in local languages) by affected villagers and their local CSO allies. Yet the scientific and policy making communities, especially those focused on authorizing climate change mitigation and adaptation, have been slow to recognize (or acknowledge) how often, in practice, climate change mitigation starts only where corporate commercial interests agree to stop.

These three broad examples may be more commonplace than previously thought. Recent publications that we know have also attempted to cover this angle in a more systematic way include Hunsberger et al. (2017). Corbera et al. (2017), and Borras and Franco (2018) more generally, Lamb and Dao (2017) on hydropower in the Mekong region in Southeast Asia, Work and Thuon (2017) on forest conservation in Cambodia, Uson (2017) on natural disaster prevention in the Philippines, Barbesgaard (2019) on ocean-land continuum in southeastern part of Myanmar, and Soeters and Zoomers (2017) on community-based adaptation in Africa.

5. Further discussion and conclusion: exploring implications for policy and political dynamics and research

A key implication of the discussion so far is that addressing global land grabs and pursuing climate change mitigation and adaptation have become increasingly inseparable - empirically, analytically and politically. Global land grabbing and land-oriented climate change politics are two of the most important defining features of political economic and ecological changes in the world in the contemporary era. Land grabs and climate change politics are closely intertwined because: (a) the main social force that gave birth to them is more or less the same, namely, capitalism (Moore, 2017), (b) they require and thus compete over the same natural resources, and (c) political economic and ecological change caused by either of the two in one institutional and ecological zone can trigger direct and indirect changes in another. That means the causes, conditions and consequences of the two are inherently intertwined, and that for truly effective climate change mitigation and adaptation to gain ground, global land grabs have to be addressed, and vice versa. This can be complicated and can be far more difficult politically. The reason is because these interconnections often manifest not in very visible and concrete manner, and thus efforts to expose these links are not easy, and governing such interconnections becomes an absurdly difficult challenge, as the contentious policy debates around indirect land use change (ILUC) have initially indicated.

There is one common thread in most of the studies on land grabs, namely, implicitly or explicitly, some elements of a 'moral economy' are being conjured: the idea that land grabs are of grave concern because the 'commons¹¹⁴ in which ordinary people depend for their livelihood

are being enclosed and rural villagers are displaced - all for the narrow interest of some corporations for private profit. We see and feel this kind of angst or concern in most of the studies on land grabs. This underlying sentiment, however, may not necessarily get played out in the context of land grabs embedded or cloaked in climate change mitigation and adaptation narrative. When a big conservation organization in tandem with large transnational corporations and the central state move to delegitimize and illegalize swidden agriculture in a large block of forested area, declaring the same as conservation site to be emptied of villagers, and a carbon sequestration and trading scheme set up – such act is not necessarily and always seen by the broader public as something negative, unlike when high profile corporations moved in to engage in forest clear-cutting and setting up an oil palm or sova plantation, displacing villagers. In fact, aside from the directly affected villagers and some of their allies, the public may see such big conservation in the name of climate change mitigation as something urgently necessary, and many could easily and uncritically subscribe to the anti-swidden agriculture discourse. We see this unfold from one society to another in recent years, as climate change politics penetrate the countryside and alter existing social relations. Given the discussion so far in this paper, and if we assume that indeed the broad ways in which climate change politics overlaps with, triggers or constitutes land grabbing, the scenario becomes more worrisome, especially because the political and policy momentum is on the side of such a trajectory, worldwide.

We may recall that there are, broadly speaking, three political tendencies apparent in the regulation of global land deals today, as argued by Borras et al. (2013), namely, (i) regulate in order to facilitate land deals, (ii) regulate in order to mitigate adverse impacts and maximize opportunities, and (iii) regulate in order to stop and roll-back land deals (Borras et al., 2013; Hall et al., 2015). The first two are the most pervasive and dominant tendencies among relevant actors. Part of what we are trying to suggest in this paper is that the first two tendencies in efforts at regulating land deals, despite their popularity, are unlikely to contribute to genuine and effective climate change mitigation and adaptation because in fact they ultimately facilitate the expansion of global land grabs (Borras et al., 2013). Thus, it is even likely that the first two tendencies may further undermine potentially genuine climate change mitigation and adaptation. What we are suggesting here is straightforward, that is: facilitating genuine climate change mitigation and adaptation strategies necessarily requires blocking and rollingback land grabs. Blocking and rollingback land grabs in turn imply social justice framework in terms of framing political intervention in resource governance.

Agrarian justice - that is, the agenda of carrying out a sense of fairness for historically oppressed social classes and groups in agrarian societies - has been promoted historically, and can continue to be promoted today, partly through the twin principles of a 'guaranteed minimum land/resource access' to those who need these resources to construct a livelihood that is based on either full-time or part-time farming on the one hand, and a 'land/resource size ceiling' that sets a maximum land size or resource volume (maximum volume of resources that can be extracted or harvested, for example) that an individual or corporation can accumulate or extract. Radical land reforms during the first three quarters of the past century had these twin principles as their foundational framework. Without these twin principles, individuals and corporations who have financial ability, or the political connections, can accumulate as much land or natural resources as they wanted to or could acquire, leaving less (if not altogether nothing) to marginalized classes or groups in society who do not have the financial means or political connection to protect their access to resources or gain new

⁽footnote continued)

theoretical traditions. See Dell'Angelo et al. (2017) for a recent, quantitative engagement in this discussion.

access to such resources.

Amidst the global land rush, these fundamental agrarian justice principles have become even more urgent and necessary. The problem is that since the early 1980s, neoliberalism had shunned agrarian justice oriented deep social reforms such as redistributive land policies (land reform, restitution). Where governments are forced to address contentious natural resource (land, water, forest) politics, they address this in piece-meal, project-oriented petty reforms, such as miniscule formal land titling projects here and there. Overall, in the agrarian front worldwide, what we saw during the past three decades was *the rise of petty reform incrementalism*, shying away from system-wide transformative social reforms. Thus, resurrecting the necessity of deep social reforms today becomes a daunting challenge (see Borras and Franco, 2018; Borras, forthcoming 2019).

Moreover, and even more complicated, is that in the past, deep social reforms were accomplished to varying degrees through the twin principles of agrarian justice, but often without any clear perspective on ecologically sound production systems. During the past century – the century of land reformism between the 1917 Mexican revolution and the 1979 Sandinista Revolution – land redistribution processes either paved the way for or have been subordinated to industrial and chemical-based monocultures often dominated by agribusiness corporations. This partly reinforced and expanded the dominant industrial food system worldwide, which contributes up to a third of global GHG emissions (McMichael, 2013). The relevance and urgency of agrarian justice in the era of climate change lies in being reconceptualized and pursued within a 'climate justice' perspective (Borras and Franco, 2018).

Climate justice refers to an agenda of taking the climate crisis seriously and pursuing measures to actually tackle it, while being conscious of the role of social relations in the emergence and resolution of this crisis (Harris, 2009: 36–37). It is motivated by a sense of justice for both ecology and social classes and groups in society. In the rural world, climate justice can only be pursued within the context of agrarian justice, that is, one that asks the fundamental question of 'why' some social classes and groups are vulnerable to climate change in some particular ways, while others are not (see Ribot, 2014). For example, forest conservation initiatives in the name of climate change that expel villagers from the forest, along the tradition of 'fortress conservation' (see, e.g. Brockington, 2002), in our view, cannot possibly contribute to *climate justice*. This partly builds on the cautionary warning by Adger et al. (2011) about being blind to the social and cultural impacts of climate change.

A positive future can only be based on both agrarian justice and climate justice; indeed, towards a notion of 'agrarian climate justice', as Borras and Franco (2018) argued recently. The recent increasing convergence of sectoral social justice movements (agrarian movements, fishers' movements, indigenous peoples' movements and so on) partly suggests about the objective imperatives of intertwining issues, and partly provides some hints that such a notion of 'agrarian climate justice' may in fact hold some potential as a rallying political concept.¹⁵

In closing: one of the strategic research frontiers in the study of global land grabbing is the latter's intersection with natural resourceoriented climate change politics, more specifically, the subtle, indirect, and often invisible forms of such interconnections. We have tried to demonstrate the ways in which and the extent to which this kinds of intersection is strategically important, yet remains relatively understudied in the academic world. With a view towards shaping future research, a few analytical points, or rather, potential research questions, are put forward.

First, the combined extent in terms of possible geographic areas of coverage of global land grabs and climate change mitigation politics

maybe be more extensive than currently assumed, and merits serious attention and empirical investigation. It is quite plausible that the geographic area of global land grabs may have even expanded and land grabbing gained more political momentum because of climate change politics. But this is more of an empirical question than a theoretical one, and thus should be investigated urgently and carefully. Second, the logic of the intertwining of the two processes shows a far more problematic situation: land grabbing can undermine genuine climate change mitigation and adaptation, while the latter can constitute, trigger, legitimize or reinforce the former. If this is the case, a related empirical question could be: if so, to what extent? Third, the challenge of tackling global land grabbing from a social justice perspective necessarily brings in a similarly social justice perspective on climate change politics, and vice versa. To what extent is this feasible given the balance of social forces from one nationally bounded society to another, and at the crosscountry and inter-state transnational political-institutional spaces? Fourth, it has become crucially important to extricate the study and practice of natural resource-oriented climate change mitigation and adaptation from its currently too narrow, albeit popular, framing of largely project-oriented initiatives, e.g. REDD+, carbon sequestration, mangrove reforestation, or forest conservation project sites - towards research questions framed in the context of broader and deeper systemand society-wide perspectives.

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References

- Adger, W.N., Barnett, J., Chapin III, F.S., Ellemor, H., 2011. This must be the place: underrepresentation of identity and meaning in climate change decision-making. Glob. Environ. Polit. 11 (2), 1–25.
- Alonso-Fradejas, A., Liu, J., Salerno, T., Xu, Y., 2016. Inquiring into the political economy of oil palm as a global flex crop. J. Peasant Stud. 43 (1), 141–165.
- Anseeuw, W., Lay, J., Messerli, P., Giger, M., Taylor, M., 2013. Creating a public tool to assess and promote transparency in global land deals: the experience of the Land Matrix. J. Peasant Stud. 40 (3), 521–530.
- Arsel, M., Büscher, B., 2012. Nature[™] Inc.: changes and continuities in neoliberal conservation and market-based environmental policy. Dev. Change 43 (1), 53–78.
- Barbesgaard, M., 2019. Ocean and land control-grabbing: The political economy of landscape transformation in Northern Tanintharyi, Myanmar. J. Rural Stud. https:// doi.org/10.1016/j.jrurstud.2019.01.014.
- Borras, S.M., 2019. Agrarian social movements: the absurdly difficult but not impossible agenda of defeating right-wing populism and exploring a socialist future. Forthcoming, J. Agrar. Change.
- Borras, S.M., Franco, J.C., 2018. The challenge of locating land-based climate change mitigation and adaptation politics within a social justice perspective: towards an idea of agrarian climate justice. Third World Q. 39 (7), 1308–1325.
- Borras, S.M., Franco, J.C., Gómez, S., Kay, C., Spoor, M., 2012. Land grabbing in Latin America and the Caribbean. J. Peasant Stud. 39 (2-3), 845–872.
- Borras, S.M., Franco, J.C., Wang, C., 2013. The challenge of global governance of land grabbing: changing international agricultural context and competing political views and strategies. Globalizations 10 (1), 161–179.

Borras, S.M., Moreda, T., Alonso-Fradejas, A., Brent, Z., 2018. Converging social justice issues and movements: implications for political actions and research. Third World Q. 39 (7), 1227–1246.

¹⁵ See Claeys and Delgado Pugley (2017), Franco et al. (2017), Tramel (2016, 2018), Mills (2018), Borras et al. (2018).

Borras, S.M., Franco, J.C., Isakson, S.R., Levidow, L., Vervest, P., 2016. The rise of flex crops and commodities: implications for research. J. Peasant Stud. 43 (1), 93–115.

Brockington, D., 2002. Fortress Conservation: the Preservation of the Mkomazi Game Reserve, Tanzania. Indiana University Press, Bloomington, IN.

Büscher, B., Fletcher, R., 2015. Accumulation by conservation. New Political Econ. 20 (2), 273–298.

- Calmon, D., 2017. The Politics Behind "The Last Agricultural Frontier in the World: Contestations and Strategic Shifts in the Building of the Matopiba Soy Frontier in Brazil, MA Research Paper. International Institute of Social Studies (ISS), The Hague.
- Canadell, J.G., Raupach, M.R., 2008. Managing forests for climate change mitigation. Science 320 (5882), 1456–1457.

Claeys, P., Delgado Pugley, D., 2017. Peasant and indigenous transnational social movements engaging with climate justice. Can. J. Dev. Stud. 38 (3), 325–340.

- Clapp, J., Newell, P., Brent, Z.W., 2018. The global political economy of climate change, agriculture and food systems. J. Peasant Stud. 45 (1), 80–88.
- Corbera, E., 2012. Problematizing REDD + as an experiment in payments for ecosystem services. Curr. Opin. Environ. Sustain. 4 (6), 612–619.

Corbera, E., Hunsberger, C., Vaddhanaphuti, C., 2017. Climate change policies, land grabbing and conflict: perspectives from Southeast Asia. Can. J. Dev. Stud. 38 (3), 297–304.

- Cousins, B., Borras, S.M., Sauer, S., Ye, J., 2018. BRICS, middle-income countries (MICs), and global agrarian transformations: internal dynamics, regional trends, and international implications. Globalizations 15 (1), 1–11.
- Davis, K.F., Yu, K., Rulli, M.C., Pichdara, L., D/Odorico, P., 2015. Accelerated deforestation driven by large-scale land acquisitions in Cambodia. Nat. Geosci. 8, 772–775.

Deininger, K., Byerlee, D., 2011. Rising Global Interest in Farmland: Can It Yield Sustainable and Equitable Benefits? World Bank, Washington DC.

- Dell'Angelo, J., D'Odorico, P., Rulli, M.C., Marchand, P., 2017. The tragedy of the grabbed commons: coercion and dispossession in the global land rush. World Dev. 92, 1–12.
- Dressler, W.H., Wilson, D., Clendenning, J., Cramb, R., Keenan, R., Mahanty, S., Bruun, T.B., Mertz, O., Lasco, R.D., 2017. The impact of swidden decline on livelihoods and ecosystem services in Southeast Asia: A review of the evidence from 1990 to 2015. Ambio 46 (3), 291–310.
- Fairhead, J., Leach, M., Scoones, I., 2012. Green Grabbing: a new appropriation of nature? J. Peasant Stud. 39 (2-3), 237–261.
- Fox, J., Castella, J.C., Ziegler, A.D., 2014. Swidden, rubber and carbon: Can REDD + work for people and the environment in Montane Mainland Southeast Asia? Glob. Environ. Change 29 (1), 318–326.
- Franco, J., Levidow, L., Fig, D., Goldfarb, L., Hönicke, M., Luisa Mendonça, M., 2010. Assumptions in the European Union biofuels policy: frictions with experiences in Germany, Brazil and Mozambique. J. Peasant Stud. 37 (4), 661–698.
- Franco, J., Mehta, L., Veldwisch, G.J., 2013. The global politics of water grabbing. Third World Q. 34 (9), 1651–1675.
- Franco, J., Park, C.M.Y., Herre, R., 2017. Just standards: international regulatory instruments and social justice in complex resource conflicts. Can. J. Dev. Stud. 38 (3), 341–351.
- Gill, B., 2016. Can the river speak? Epistemological confrontation in the rise and fall of the land grab in Gambella, Ethiopia. Environ. Plann. A 48 (4), 699–717.
- Gillon, S., 2016. Flexible for whom? Flex crops, crises, fixes and the politics of exchanging use values in US corn production. J. Peasant Stud. 43 (1), 117–139.
- Hall, R., Edelman, M., Borras, S.M., Scoones, I., White, B., Wolford, W., 2015. Resistance, acquiescence or incorporation? An introduction to land grabbing and political reactions 'from below'. J. Peasant Stud. 42 (3-4), 467–488.
- Harris, P.G., 2009. World Ethics and Climate Change: From International to Global Justice: From International to Global Justice. Edinburgh University Press, Edinburgh.
- Hunsberger, C., Corbera, E., Borras, S.M., Franco, J.C., Woods, K., Work, C., de la Rosa, R., Eang, V., Herre, R., Kham, S.S., Park, C., 2017. Climate change mitigation, land grabbing and conflict: towards a landscape-based and collaborative action research agenda. Can. J. Dev. Stud. 38 (3), 305–324.
- Lamb, V., Dao, N., 2017. Perceptions and practices of investment: china's hydropower investments in Vietnam and Myanmar. Can. J. Dev. Stud. 38 (3), 395–413.

Lapola, David, Schaldach, Ruediger, Alcamo, Joseph, Bondeau, Alberte, Koch, Jennifer, Koelking, Christina, Priess, Joerg A., 2010. Indirect land-use changes can overcome carbon savings from biofuels in Brazil. PNAS 107 (8), 3388–3393.

- Lawlor, K.E., Weinthal, Olander, L., 2010. Institutions and policies to protect rural livelihoods in REDD+ regimes. Glob. Environ. Polit. 10 (4), 1–11.
- McKay, B., Sauer, S., Richardson, B., Herre, R., 2016. The political economy of sugarcane flexing: initial insights from Brazil, Southern Africa and Cambodia. J. Peasant Stud. 43 (91), 195–223.

McMichael, P., 2013. Food Regimes and Agrarian Questions. Fernwood Publishing, Halifax, NS.

Mertz, O., Grogan, K., Pflugmacher, D., Lestrelin, G., Castella, J.C., Vongvisouk, T., Hett, C., Fensholt, R., Sun, Z., Berry, N., Müller, D., 2017. Uncertainty in establishing forest reference levels and predicting future forest-based carbon stocks for REDD+. J. Land Use Sci. https://doi.org/10.1080/1747423X.2017.1410242.

- Mills, E., 2018. Implicating 'fisheries justice' movements in food and climate politics. Third World Q. 39 (7), 1270–1289.
- MoNREC, 2017. Myanmar Climate Change Strategy and Action Plan. Nay Pyi Taw, Myanmar: The Republic of the Union of Myanmar. Version 19 January 2017.
- Moore, J.W., 2017. The Capitalocene, Part I: On the nature and origins of our ecological crisis. J. Peasant Stud. 44 (3), 594–630.
- Moreda, T., 2017. Large-scale land acquisitions, state authority and indigenous local communities: insights from Ethiopia. Third World Q. 38 (3), 698–716.
- Newell, P., Bumpus, A., 2012. The global political ecology of the Clean Development Mechanism. Glob. Environ. Polit. 12 (4), 49–67.
- Newell, P., Taylor, O., 2018. Contested landscapes: the global political economy of climate-smart agriculture. J. Peasant Stud. 45 (1), 108–129.

Oliveira, G.D.L., Schneider, M., 2016. The politics of flexing soybeans: China, Brazil and global agroindustrial restructuring. J. Peasant Stud. 43 (1), 167–194.

Prescott, G.W., et al., 2017. Political transition and emergent forest-conservation issues in Myanmar. Conserv. Biol. 31 (6), 1257–1270.

- Republic of the Union of Myanmar, 2015. Myanmar's Intended Nationally Determined Contribution – INDC. Republic of the Union of Myanmar, Nay Pyi Taw.
- Ribot, J., 2014. Cause and response: vulnerability and climate in the Anthropocene. J. Peasant Stud. 41 (5), 667–705.
- Richards, C., Lyons, K., 2016. The new corporate enclosures: Plantation forestry, carbon markets and the limits of financialised solutions to the climate crisis. Land Use Policy 56, 209–216.

Scheidel, A., 2018. Carbon stock indicators: reductionist assessments and contentious policies on land use. J. Peasant Stud. https://doi.org/10.1080/03066150.2018. 1428952.

Scheidel, A., Work, C., 2018. Forest plantations and climate change discourses: new powers of 'green' grabbing in Cambodia. Land Use Policy 77, 9–18.

Schoenberger, L., Hall, D., Vandergeest, P., 2017. What happened when the land grab came to Southeast Asia? J. Peasant Stud. 44 (4), 697–725.

- Scoones, I., Hall, R., Borras Jr, S.M., White, B., Wolford, W., 2013. The politics of evidence: methodologies for understanding the global land rush. J. Peasant Stud. 40 (3), 469–483.
- Shete, M., Rutten, M., 2015. Impacts of large-scale farming on local communities' food security and income levels–Empirical evidence from Oromia Region, Ethiopia. Land Use Policy 47, 282–292.

Soeters, S., Zoomers, A., 2017. Consolidating contestation and conflict through community-based adaptation (CBA). J. Geosci. Environ. Prot. 5, 174–193. https://doi.org/ 10.4236/gep.2017.511013.

Taylor, M., 2018. Climate-smart agriculture: what is it good for? J. Peasant Stud. 45 (1), 89–107.

- Tramel, S., 2016. The road through Paris: climate change, carbon, and the political dynamics of convergence. Globalizations 13 (6), 960–969.
- Tramel, S., 2018. Convergence as political strategy: social justice movements, natural resources and climate change. Third World Q. 39 (7), 1290–1307.
- Uson, M.A., 2017. Natural disasters and land grabs: the politics of their intersection in the Philippines following super typhoon Haiyan. Can. J. Dev. Stud. 38 (3), 414–430.
- Virchow, D., Denich, M., Kuhn, A., Beuchelt, T., 2014. The Biomass-based Value Web as a Novel Perspective on the Increasingly Complex African Agro-food Sector. Tropentag, September 17-19, 2014 in Prague. Czech Republic "Bridging the gap between increasing knowledge and decreasing resources" (Accessed 28 September 2014). http://www.tropentag.de/2014/abstract.php?code = Kb1yOJda.
- Wolford, W., Borras, S.M., Hall, R., Scoones, I., White, B., 2013. Governing global land deals: the role of the state in the rush for land. Dev. Change 44 (2), 189–210.

Woods, K., 2015. CP Maize Contract Farming in Shan State, Myanmar: a Regional Case of a Place-based Corporate Agro-feed System, BICAS Working Paper No. 14. ISS, The Hague.

- Woods, K., 2016. "Legacy Landscapes" of War, Resources and Armed Conflicts in a Biodiversity Conservation Hotspot in Southeastern Myanmar. Mosaic Working Paper Series. International Institute of Social Studies., The Hague.
- Work, C., Thuon, R., 2017. Inside and outside the maps: mutual accommodation and forest destruction in Cambodia. Can. J. Dev. Stud. 38 (3), 360–377.
- World Bank, 2007. World Development Report 2008: Agriculture for Development. World Bank, Washington DC.
- Xu, Yunan, 2018. Land grabbing by villagers? Insights from intimate land grabbing in the rise of industrial tree plantation sector in Guangxi. China. Geoforum 96, 141–149.
- Zagema, B., 2011. Land and Power: The Growing Scandal Surrounding the New Wave of Investments in Land, Oxfam Policy and Practice, Agriculture, Food and Land 11. pp. 114–164.
- Zoomers, A., Kaag, M. (Eds.), 2014. The Global Land Grab: Beyond the Hype. Zed Books, London and New York.