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Climate change mitigation, land grabbing and conflict: towards a landscape-based and collaborative action research agenda

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ABSTRACT

Recent research has highlighted the conflict potential of both land deals and climate change mitigation projects, but generally the two phenomena are studied separately and the focus is limited to discrete cases of displacement or contested claims. We argue that research with a broader “landscape” perspective is needed to better understand the complex social, ecological and institutional interactions taking place in sites of land-based climate change projects (such as biofuel production or forest conservation) and large-scale investments (plantations or mines). Research that co-produces knowledge and capacity with local actors, and informs advocacy at multiple policy scales, will contribute better to preventing, resolving or transforming conflicts.

RÉSUMÉ

De récentes recherches ont souligné les conflits potentiels des transactions foncières et des projets d'atténuation du changement climatique. Néanmoins, en général, les deux phénomènes sont étudiés séparément et l'examen se limite à des cas distincts de déplacements ou de créances contestées. Nous soutenons que des recherches selon une perspective à l'échelle du paysage sont nécessaires pour mieux comprendre dans toute leur complexité, les interactions sociales, écologiques et institutionnelles qui se produisent sur les sites de projets d'atténuation du changement climatique terrestre (tels que la production de biocarburant ou la conservation des forêts) et sur les sites d'investissements à grande échelle (plantations ou mines). Ainsi, un travail de recherche qui

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coproduit les connaissances et les capacités avec les acteurs locaux, en plus d'orienter le plaidoyer à différentes échelles politiques, aidera à mieux prévenir, résoudre et transformer les conflits.

Introduction

Land-based climate change mitigation policies and large-scale land acquisitions are both likely to have profound consequences for rural peoples of the Global South, by enabling or constraining their livelihoods and potentially causing conflicts. This article makes a case for developing a new research agenda that explicitly studies the interactions between climate change mitigation initiatives, land grabs and resulting patterns of conflict. We propose that in order to improve understanding of these interactions and support actions to promote socially just conflict resolutions, such an agenda should adopt a landscape-level perspective and involve affected people as co-producers of knowledge.

Biofuel production and Reducing Emissions from Deforestation and Forest Degradation (REDD+) are two prominent climate change strategies with potential to shape and be shaped by land conflicts. Governments around the world have embraced biofuels as a low-carbon energy source, many setting targets for biofuel production or use (Bailis and Baka 2011), but critics protest that existing governance mechanisms do not adequately address related land rights, working conditions and other social impacts (La Via Campesina 2009; German and Schoneveld 2012; Creutzig et al. 2013). REDD+ has emerged as a policy framework under the United Nations Framework Convention on Climate Change (UNFCCC) to protect carbon stored in forests by assigning it a monetary value. However, REDD+ projects and policies have potential to reinforce existing inequities and social exclusions (Mustalahti and Rakotonarivo 2014; Chomba et al. 2016; Poudyal et al. 2016). Meanwhile, large-scale land acquisitions for agriculture, forestry or speculative purposes, known as “land grabs” – changes in “effective control” over land and resources that undermine the interests of the rural poor (Borras and Franco 2012) – remain a focal point for research and activism (Borras et al. 2011; White et al. 2012; Cotula 2013).

While each of these topics has generated very active research, debate and political action in recent years, we see two areas in which this work can be pushed further. First, much of the research to date has investigated climate change policies and land grabbing separately. Work on green grabbing – “the appropriation of land and resources for environmental ends” (Fairhead, Leach, and Scoones 2012, 237) – makes a significant contribution by describing how environmental protection strategies, including REDD+, can serve to motivate or justify large-scale land deals. Related strands of scholarship show that elites have drawn on “green economy” discourses to facilitate agro-industrial projects to the detriment of rural people (Montefrio 2013; Montefrio and Dressler 2016), and that market-based conservation measures have deflected attention from their political implications by using socially acceptable market language (Milne and Adams 2012). Critical research on green grabs, the green economy and market-based conservation thus articulates a broad, market-based logic linking environmental motives to land deals and their often unjust outcomes for local people, and clears a path for future research that examines the interactions between land grabs undertaken for environmental and non-environmental objectives.

Second, existing work on the social impacts of climate change mitigation or land grabbing tends to focus on discrete areas, such as particular landholdings in which dispossession or competing claims occur. Transnational connections have received much attention; for example, where biofuel mandates in one country or region are believed to affect agricultural production in other regions (Franco et al. 2010; Pye and Bhattacharya 2013). However, with the important exception of work that explores the effects of water grabbing across time and space (Mehta, Veldwisch, and Franco 2012; Woodhouse 2012), relatively little research so far has studied the cumulative and interactive effects of multiple projects within the same landscape or region.

This article builds a case – and provides direction – for research that addresses these gaps by explicitly considering interactions between responses to climate change and land conflicts and by expanding the boundaries of such analyses from a site-specific to a landscape scale. We outline an agenda for collaborative action research based on discussions between grassroots, NGO, academic and advocacy actors held in the context of developing an engaged research project.¹ Our objective is to lay out the importance of research that co-produces knowledge on the interactions between climate change initiatives, land grabs and resulting patterns of conflict, and in doing so helps transform such conflicts. The relevance of the proposed agenda is justified by the growing number of transnational collaborative programmes that bring together researchers and civil society to analyse and confront conflicts arising from competing positions on land-use in an era of persistent poverty and inequality (Martinez-Alier et al. 2010; Urkidi and Walter 2011; Conde 2014).

The article proceeds as follows. We begin by briefly reviewing recent insights on climate change mitigation and land conflict, drawing on examples from Myanmar and Cambodia to identify the basis for our proposed collaborative research agenda. We then outline what we think should be the three key pillars of the agenda: a landscape perspective, co-production of knowledge between academic researchers and affected communities and a commitment to supporting action for change. We conclude by reflecting on the challenges and potential benefits of pursuing such an agenda.

Land-based climate change mitigation and conflict

Land-based climate mitigation strategies: biofuels and REDD+

This section reviews some of the justice concerns associated with climate change mitigation strategies in order to set up their potential interaction with land conflicts. First we identify our working definition of justice and review general arguments about the differentiated impacts of climate change interventions. Second, we critically examine two land-based mitigation strategies in more detail: producing biofuels from agricultural crops, and conserving forest carbon through REDD+ activities.

Climate change mitigation and justice

Climate change, as a biophysical phenomenon, emerged as a global political concern in the 1980s as a result of increasing scientific evidence about global warming and its potential consequences for social-ecological systems. Policy action was originally promoted through the UNFCCC and has spread over time to governments and sub-national organisations

around the world. Today, it is generally accepted that climate change has profound justice implications because its impacts are and will be experienced differently within and across social groups and across generations, and because dealing with the problem will require cooperation and solidarity across nations and individuals (Fleurbaey et al. 2014). We consider justice to have distributional, procedural and recognition components; just strategies for dealing with climate change will include equitable distribution of risks and benefits, opportunities for affected people to meaningfully participate in decision making and recognition of the diverse worldviews, values and priorities held by participants and affected communities (Schlosberg 2004; Fraser 2005; Marino and Ribot 2012). People's knowledge – both scientific and experiential – their behaviour, vulnerability, adaptive capacity, institutions and political and economic power all influence how climate change risks and consequences are perceived, felt and acted upon (Roberts and Parks 2007; Burnham et al. 2013; Ribot 2014).

Climate change mitigation strategies are thus inextricably linked with justice considerations. Any attempt to reduce greenhouse gas emissions is likely to be endorsed or experienced differently across social classes and groups and may therefore lead to both procedural and distributive conflicts. We argue that this is likely to be the case for efforts to reduce land-use related emissions, which have contributed to rising greenhouse gas emissions over the last 50 years (Le Quéré et al. 2013). Land-based mitigation approaches include policy, technology and market activities in the agricultural, livestock and forestry sectors. Such activities include, for example: policies supporting the cultivation of crops like corn, oil palm, sugarcane or soybeans that can be used to produce biofuels; global forest carbon markets to incentivise reductions in deforestation and degradation or increases in forest carbon stocks (one example being REDD+); policies supporting conservation agriculture to reduce emissions from soils; and energy infrastructure that impacts large areas of land, including hydroelectric projects, wind farms and concentrated solar power projects. While each of these options can produce environment and development trade-offs as well as social conflicts, we focus on the first two – biofuels and REDD+ – throughout this article.

Biofuels

Biofuel production from agricultural crops can be linked to a variety of social, environmental and health impacts (Robledo-Abad et al. 2016). Most major sources of biofuels are “flex crops” that can be used to make multiple end products (Borras et al. 2015). While it is difficult to trace whether the products of a particular farm are turned into biofuel, food, livestock feed or industrial products, policies designed to stimulate markets for biofuels have greatly increased demand for plantation crops that can be turned into fuels. Many impacts of crop-based biofuel production can thus be considered an extension of the impacts of growing flex crops, which are well documented, including health impacts from sugarcane production, water pollution from palm oil production, soil degradation from large-scale corn production, loss of land for plantations and financial hardships for small-scale farmers (Clancy 2013; Creutzig et al. 2013).

In some cases, increased conflicts linked to flex crops have been reported, particularly over land and water rights and rising food prices (McCarthy 2010; Duvail et al. 2012; Obidzinski et al. 2012), though conflicts, farmer displacements, gendered outcomes and impacts on specific ethnic groups remain among the most under-studied aspects of

bioenergy production (Robledo-Abad et al. 2016). Where resources that flow, such as air or water, are polluted by flex crop production and processing, it is easy to see the potential for conflicts to occur over a larger area.

But analysing the impacts of flex crops would be incomplete without paying specific attention to climate change. Discourses of climate change mitigation have been mobilised to justify the expansion of flex crops; for example, by palm oil producer associations promoting biodiesel and biomass (Hunsberger and Alonso-Fradejas 2016) and by sugar producers claiming to reduce emissions by generating electricity from bagasse (SugarCane.org 2016). We are concerned not only that flex crops may be used to produce biofuels but also that climate change discourses have been used to “green” their image; and, at times, climate change institutions have offered flex crop producers opportunities for additional capitalisation (Wittman, Powell, and Corbera 2015).

National and international efforts to regulate biofuel production by establishing sustainability criteria and compelling producers to seek third-party certification show little success when existing environmental and social protection laws were already failing (Schut, Leeuwis, and van Paassen 2013; Larsen et al. 2014; Newberry 2014). We argue that these governance measures for biofuels are not working partly because they are limited in scope to the plantation level, instead of looking across the landscape in which other initiatives (for example, REDD+) might be acting to deepen conflicts generated by flex crops. These insights raise the possibility that governance strategies targeted at biofuel production alone are less likely to address social issues, including conflicts, than integrated strategies might be if they targeted more fundamental problems and worked to address enforcement capacity constraints (Hunsberger et al. 2014).

REDD+

The UNFCCC REDD+ framework aims to promote the conservation and enhancement of forest carbon through a particular version of sustainable management of existing forests. It aims to redistribute money from countries in the Global North to countries in the Global South that have significant forest cover and hence stored carbon. It also supports efforts to extend forest cover and improve sustainable forest management. REDD+ is translating into variegated policies and projects on the ground. Governments can choose to promote programmes of Payments for Ecosystem Services (PES), increase the number and size of protected areas or provide incentives to companies and rural communities for sustainable forest management, among other options (Angelsen et al. 2009). All these initiatives have potential to recast land tenure relations and therefore induce conflict, whether or not they involve direct compensation to communities and landowners.

At the same time, REDD+ is being realised through ad hoc pilot projects supported by donor countries, international finance institutions (for example the World Bank’s Global Environment Facility), the United Nations and private actors. REDD+ projects very often include afforestation, reforestation and conservation activities, and involve contract-based and conditional payments to local communities. Some projects have already sold carbon offsets in existing voluntary carbon markets; others aim to do so if markets for REDD+ offsets are formally established in specific countries or internationally, drawing on the experience of California’s cap-and-trade programme that incorporates REDD+ offsets from the states of Chiapas in Mexico and Acre in Brazil.

Critics identify several risks in REDD+ design and implementation. REDD+ national strategies may disregard the views of rural communities, indigenous peoples and opposing actors, while failing to address the fundamental causes of deforestation and degradation (Pasgaard and Chea 2013). Local and indigenous people could lose use and access rights to forest resources through new conservation and forest management schemes (Mahanty et al. 2012); REDD+ programmes and projects can further entrench existing inequities if they do not explicitly prevent elite capture of benefits (Sikor et al. 2010; Chomba et al. 2016). Finally, assigning a price to forest carbon might reduce forests to a single commodity that can be bought and sold without regard for their myriad other values and deviate attention from people's legitimate interests in land-use management and conservation (Corbera 2012; Cromberg, Duchelle, and Rocha 2014).

REDD+ opens a complex governance space involving international, national and local institutions, each of which is likely to have layered interests that do not always coincide (Corbera and Schroeder 2011). Because its rigorous planning and monitoring requirements need significant institutional capacity, some suggest that, despite its stated focus on local participation, REDD+ may ultimately encourage centralisation of forest governance (Phelps, Webb, and Agrawal 2010). The encounter between competing interests at different scales playing out within a system that privileges top-down control has clear potential to produce conflicts, both between local users who are unevenly affected by changing forest access rules and between local actors and institutions operating at other scales.

This review of justice issues linked to biofuel production and REDD+ suggests that connections between climate change initiatives, land grabs and conflict can take many forms. Some possibilities include: (1) large-scale land deals regularly involve claims of climate change mitigation that can be used to justify and de-politicise "green grabbing" where local communities are dispossessed; (2) residents' prior experiences with land deals perceived as "grabs" may create suspicion that planned REDD+ or biofuel projects will follow the same pattern, making it harder for these initiatives to proceed in locally beneficial ways (Ghazoul et al. 2010); and (3) REDD+ areas may be subject to overlapping claims, suggesting that in particular cases, land grabbing for other purposes may in fact compete with REDD+ initiatives. Exploring such links is particularly important for climate change actors who may promote mitigation activities without considering their potential to exacerbate conflicts by interacting with other land-based activities, and the political context surrounding them.

Land-based conflicts in the midst of political transitions

Several factors can affect the likelihood that conflict will increase due to the interplay of climate change policies and land deals. Here we focus on two: the convergence of competing relationships to, and interests in, the same resources; and the pre-existing structural and institutional conditions of the locale. We believe these factors are especially likely to enable conflict in countries undergoing a "political transition", understood as the transformation of a standing authoritarian regime to one characterised by free elections, a multi-party political system, the submission of the legislative power to a freely elected government and the separation of such power from the executive and judiciary and freedom of speech (Priban 2012). This section discusses the importance of converging interests and

institutional conditions to potential land and resource conflicts and illustrates these factors using examples from Myanmar and Cambodia.

Many societies in which land grabbing is occurring exhibit an inability (or unwillingness) to tackle land-based conflict (Collier and Hoeffler 2005; Deininger et al. 2011). Legal pluralism can both exert constraints on and provide opportunities for addressing competing land rights claims (Franco 2011). Perhaps especially in states undergoing political transitions, a persistent irony emerges: the institutions and processes that could prevent or transform resource conflicts are weak or absent in the places where they are most needed; a situation that is itself the outcome of past social and political conflict over land and water rights, and the strategic interactions and political choices of key actors (Franco et al. 2017). Thus, while we see potential for climate change strategies and land conflicts to intersect in any national context, we propose that their convergence is more likely to lead to intractable outcomes in states undergoing political transitions.

Resource conflicts can manifest at different scales and elicit contrasting responses by interested and affected parties. They can be a symptom of resource scarcity, but also of resource abundance. Historically, countries with abundant “point” resources such as minerals, and “diffuse” resources such as land or forests, have suffered from armed conflicts in which access to and control over resource revenue were at stake. Some conflicts have confronted state political factions and resulted in coup d’états, while others, led by peasants rebelling against the state, attempt to re-regulate or claim full control over land and other resources (Le Billon 2001). Conflicts can be a consequence of contested values over how resources should be managed, for what purpose and for whose benefit, as well as a consequence of political, economic or cultural structural violence (Montefrio 2013).

Here we are concerned not only with violent conflict but also with conflict characterised by symbolic resistance to perceived injustices by locally affected parties, often manifested in unwillingness to participate in mitigation enterprises (Mingorría et al. 2014). The latter may not be an exception in countries marked by authoritarian politics with an ongoing or recent history of armed conflict and civil repression, or in localities in which past experience leads peasants to reject state intervention and doubt the intentions of private companies (Kosoy et al. 2008).

Myanmar and Cambodia are two countries that illustrate the issues identified above. Based on research and practical experience we provide examples from these countries as a reference point for the discussion, though the research agenda we propose is equally relevant to other states experiencing a combination of land-based climate change measures and land grabbing.

Myanmar

Examples from Myanmar demonstrate how climate-related actions – particularly awarding land concessions for biofuel crops and designating new conservation areas – are aggravating existing conflicts. Since Myanmar’s recent political transition, (trans)national land- and water-based investments have increased dramatically, brokered by the military state together with Burmese companies (Buchanan, Kramer, and Woods 2013). Large land deals directly contribute to political tension, resource conflicts and violence; for example, land grabs are the issue most frequently reported to the country’s new National Human Rights Commission. The national government has recognised land conflict as one

of the country's paramount obstacles to peaceful development, and has created committees to address historical land conflicts. However, new land and investment laws and policies designed to privatise the economy have facilitated the advance of an unprecedented scale of land grabs, including those linked to climate change mitigation.

Agribusiness activities, including for biofuel production, have had major impacts on local communities. The amount of land covered by large-scale land deals reached 5.2 million acres by 2013; a 170 per cent increase since the current government took office (Woods 2015). The majority of deals have targeted resource-rich uplands where remaining forests, gemstones, minerals and dammable rivers are concentrated; the same areas that have been embroiled in over six decades of civil war over ethnic self-determination, sovereignty and resource rents (Buchanan, Kramer, and Woods 2013). The two areas most targeted for agribusiness concessions are Tanintharyi Region (oil palm) and Kachin State (mainly rubber, sugarcane and cassava). Both have entrenched and ongoing civil war and targeted ethnic violence.

Meanwhile, conservation by demarcation of large-scale protected areas is occurring in Myanmar, with major conservation organisations setting up offices and garnering budgets to increase the country's national parks and wildlife sanctuaries despite criticism of top-down conservation measures implemented in the 2000s (Noam 2007). As millions of dollars become available to conservation projects in Myanmar after the end of Western-led sanctions, the two regions most heavily targeted for protected areas are Kachin State and Tanintharyi Region, the same areas which are experiencing ethnic conflict and are being targeted for agribusiness, mining and hydropower schemes. Locating large-scale resource extraction, production and conservation concessions in these areas, some of which are still active war zones, has significant territorial, political and securitisation impacts (Woods 2011).

Adding conservation initiatives on the heels of ceasefires without political settlement is already aggravating historical land and resource grievances. Much like the agribusiness concessions that came before them, conservation projects show signs of being used for political and securitisation ends in territories under the authority of ethnic armed organisations. Large conservation initiatives can more easily escape the scorn directed at agribusiness land grabs: conservation is presented and perceived as an apolitical environmental good that benefits everyone, spearheaded by international NGOs seen as unequivocally good. Evidence from Myanmar thus illustrates both the analytical and political challenges of dealing with the combination of agribusiness land deals (including for bio-fuels), conservation initiatives that appeal to ideas of global environmental protection and pre-existing armed conflict.

Cambodia

Examples from Cambodia also illustrate the convergence of climate mitigation strategies with land grabbing and conflict. By 2012, the Cambodian state had reportedly granted economic land concessions (ELCs) on over 2 million hectares, approximately half of the arable land of a country in which three-quarters of people still rely on agriculture (Deininger et al. 2011). While new ELC awards have officially stopped, the ban has prompted numerous enterprises to activate previously dormant awards, particularly in the Prey Lang region. Prey Lang is one of the largest remaining lowland forests in Southeast Asia and an important biodiversity hotspot. It is the primary source of livelihood for

over 200,000 indigenous people and home to 500,000 other people who also rely on the forest for a large part of their subsistence (Cambodian Center for Human Rights 2013). It is an important location for international carbon capture projects (Delux 2013) and the site of numerous agro-business projects (Michaud 2013). These projects primarily produce rubber and acacia, but on one site a “forest restoration” company was awarded over 34,000 hectares of rich forest to “restore the forest through re-forestation activities [... and] to reduce the utilization of natural forest by increasing the productivity of artificial forests” (MAFF 2010). Local residents report that the company is clear-cutting and processing lumber, and also planting some trees. In 2013, more than 100 people protested company activities in Kratie Province (Titthara 2013) and in 2015 disputes continued with boundary encroachments and loss of community farm and forest land (NGOF 2015).

This example shows the layered complexity of land use in the Prey Lang region. Residents have been using the forests for subsistence for generations, the government is attempting to use the region for “climate-friendly” economic production and the company is using the land to extract lumber with a “replanting” clause (Work 2015). This case does not show weak institutions; rather, it shows the selective use of land tenure institutions to accommodate economic intensification (Ehrentraut 2011). The institutions that are weak in this scenario are those that represent the interests of local people: residents do not know the legal channels or government institutions that can help them stake their claims.

Experience from Cambodia suggests that an action research model of co-producing knowledge could help grapple with overlapping climate strategies and land conflicts in at least two ways. First, such an approach can help expose profit-driven economic activities engendered under the banner of climate change mitigation; second, it can help equip communities with tools to negotiate space for themselves in the face of company encroachments, possibly avoiding future protests and violent confrontations.

These examples from Myanmar and Cambodia show that, in particular places, biofuel production and conservation activities are already overlapping and interacting with instances of land grabbing. The next section proposes a research agenda to investigate resource conflicts that are entangled with responses to climate change. The aim is both to better understand the interactions between climate change interventions and land conflicts at multiple scales and to inform actions to de-escalate such conflicts, working collaboratively with affected people.

Towards a collaborative action research agenda

The research agenda we propose is based on three pillars: (1) a landscape perspective; (2) co-production of capacity by researchers and non-academic partners; and (3) supporting action for change. These were identified as necessary components of a research agenda through consultation with grassroots, NGO, advocacy and academic partners while planning a new project investigating climate change interventions and land conflicts in Myanmar and Cambodia. Thus, the pillars were selected based on the priorities of diverse participants with many years of experience.

The pillars rest on four assumptions. First, policies that reallocate resources fundamental to livelihoods and identities are never neutral. To promote just and sustainable outcomes, they must be responsive to affected people’s understandings of justice, inclusive

in their formulation and implementation, and matched to the scale of the problem. Second, customary conflict resolution mechanisms are more likely to succeed when disputes are “internal” to the community and disputing parties have relatively equal power and status. Disputes that cut across boundaries require additional conflict management processes, such as when compensation deals between companies and communities are facilitated by grassroots organisations with intimate knowledge of local communities and political processes (Hodal 2014). Third, conventional justice mechanisms are likely to resolve conflicts between unequal parties in ways that are unfavourable to subaltern groups. Fourth, questions about control over resources are more likely to be resolved in socially just ways when collective actors attempt to make states accountable using political strategies that can shift the balance of power in favour of marginalised rural citizens. Keeping these assumptions in mind, we now explore each of the pillars in turn.

A landscape perspective

The interplay of climate change policies and land grabs can produce social and ecological spillover effects and chain reactions, which in turn can ignite new or aggravate old resource conflicts outside the original area. Two dimensions matter: the social dynamics of conflict can move or spread as people are displaced, while the nature of resources that are contested can also change due to ecological spillovers (agricultural run-off, dams, concentration of hunting and fuelwood gathering). The problem with resource conflict is therefore not simply that it can erupt or escalate in a given place, but that it can move across physical and administrative boundaries.

Focusing on a landscape scale can reveal patterns and cumulative impacts that remain invisible when smaller geographical areas are viewed separately. We hypothesise that conflict can be more effectively managed by taking the landscape as both the unit of analysis and a unit of policy intervention. The concept of a landscape can be vague; we conceptualise it as a “place” in which physical and socio-cultural elements occur in localised, spatially specific combinations and in which human actors dynamically interact. A landscape is both ecologically and socially fluid and changeable, but also holds continuities (Antrop 2005; Zimmerer 2006). A landscape is thus a space larger than a farm but smaller than a region, in which physical, ecological and human dimensions co-exist as a product of socio-ecological and cultural co-evolution (Batterbury and Bebbington 1999; Vaccaro and Norman 2008). There is no single formula for determining where a landscape “ends”; this decision depends on the processes being investigated as well as the social and ecological dynamics of the study area.

These considerations suggest, on the one hand, that the analytical boundaries of a landscape should be defined not only according to ecological units (watersheds) or political administrative units (municipalities) but using both, informed by the purpose of enquiry. On the other hand, they reveal that landscapes are heterogeneous; they include a mixture of land uses, resources and institutions at any given moment. Often they represent a “patchwork” history of land governance and culture that has changed over time. Such a landscape can also be considered three-dimensionally: “stacked” claims may be made on the same parcels of land; for example where surface and sub-surface rights are allocated separately, or where complicated property relations mean that multiple people feel entitled to the same land (Roquas 2002).

A landscape lens thus forces scholars and activists to think holistically about how and why land and its associated ecological systems are altered by mitigation activities, and what are the relevant ecological and social feedbacks within and across the landscape's ecosystems and socio-cultural domains. This entails documenting how and why climate mitigation activities modify the layered informal and formal institutions shaping the agency of different actors and individuals, both at present and historically.

Co-production of knowledge

Co-producing knowledge with affected communities is a core part of our proposed research agenda. We concur with Nowotny, Scott, and Gibbons (2001) in understanding the co-production of knowledge as a collaborative attempt involving scientists and non-scientists (in our case, activists and local communities) to generate socially robust and locally relevant knowledge that can be subsequently mobilised (in this case, for conflict transformation).

Co-production of knowledge is beneficial to both sides of this arrangement. Local NGOs and activists produce data that academics need and in turn need data produced by academics (Conde 2014). For the academic researcher, grassroots connections keep present the messiness of lived experience that is crucial to avoid the pitfalls of uninformed recommendations and ahistorical analysis. Lived experience is entwined in regional, environmental, social and historical tendrils often opaque to the outsider, but critical to informing policy and navigating justice. Academic knowledge production is often rightly critiqued for its inability to effect transformations and to ameliorate violence within the processes studied (Gururani and Vandergeest 2014). By connecting with grassroots activist partners, academic researchers can better contextualise the data gathered and contribute to on-the-ground change, which in turn influences the academic knowledge produced and the recommendations put forward.

For the grassroots activist, there is obvious benefit to sharing the weight of their projects with academic researchers and bringing more people with diverse skill sets into the work of social transformation. Academic research can also add historical and cross-cultural perspectives to activist programmes. These can facilitate connections across regions and scales and contribute to the search for better problem-solving strategies. Academic partners can also help activist organisations stay informed of international policy frameworks to which they can tie their demands; policies that tend to be poorly communicated and rarely implemented at the grassroots. The most important components of academic research for the grassroots activist agenda are the peer-review process and access to data from diverse locations, which can add weight to their claims and help support policy change (Reyers et al. 2015). It is harder for banks, governments, international organisations and companies to discredit the data gathered by NGOs and grassroots organisations when they work with academic partners.

Co-producing knowledge comes with a number of challenges. Building trust between all parties, understanding each other's priorities and ways of thinking and achieving a mutually respectful working relationship is a delicate process that requires much time and energy. For community partners engaged in resource struggles, conducting research may take a lower priority than other day-to-day activities; a reality that scholars bound by external timelines may not sufficiently appreciate. The existing power relations and often

diverging knowledge and cultural systems of the participants, and the need to find sufficient time to collectively generate knowledge and reflect upon it, can become additional barriers to an otherwise mutually enriching process (Pohl et al. 2010). Maintaining a partnership beneficial to all involved demands considerable patience, dialogue and commitment over a sustained period of time.

Provided it overcomes these obstacles, the approach outlined here can help build capacity to address, through strategic collective action, conflicts associated with land grabbing and climate change mitigation at the landscape level. Strategic collective action begins with localised understandings of justice based on answers to the questions: Who ought to have what rights to which resources, for how long, and for what purposes? And, who ought to decide? Clearly, the knowledge and experiences of affected people provide the basis for answering these questions. Grassroots organisations that are already active in affected communities can play a central role in designing and conducting action research; and, in turn, participating in collaborative research can help local communities enhance their efforts to address conflict.

Supporting action for change

Understanding landscape dynamics and co-producing knowledge is not enough to help transform conflict situations for the benefit of the least empowered. Engaged research should also seek to use co-produced evidence to mobilise affected parties in order to influence trajectories of conflict and governance. Some policymakers are already grappling with justice issues related to climate change mitigation and land grabbing, and seeking ways to integrate policies across scales. This section briefly reviews opportunities for policy intervention that could arise from collaborative research at a landscape scale.

Policymakers and implementers of REDD+ projects have struggled to find ways to involve all stakeholders, adapt to national and local contexts and address equity issues (Corbera and Schroeder 2011; UNEP 2012). Governments including the EU and UK have likewise expressed concern over the social impacts of biofuels, including on land rights (EU 2009; Renewable Fuels Agency 2010). Alliances between academics, grassroots groups and international organisations have potential to influence policy processes such as the development of Nationally Appropriate Mitigation Action plans. However, conflict likely cannot be addressed using climate change policy frameworks alone, or on a project-by-project basis (see Franco et al. 2017). A key question is how intersecting policies can be more effectively coordinated.

The issue of land grabbing and ensuing conflicts around the world compelled the United Nations Committee on World Food Security to adopt the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security in May 2012. Human rights institutions, including the Office of the UN Special Rapporteur on the Right to Food, are actively working on this issue. Land grabbing has also prompted policy initiatives by governments, bilateral and multi-lateral agencies and the corporate sector. For example, Myanmar has recently been in heated debate over national land policy reform amidst a surge of land investments. In October 2014, the government launched what it hoped to be a short public consultation on a policy that threatened to further legalise land grabbing, ignite new land conflicts and deepen ongoing land-based ethnic conflict (TNI 2014). Activists across the country

quickly mobilised to engage with the government, leading to an unprecedented degree of public debate, which opened up new spaces for activists to link land policy and land conflict concerns with wider calls for peace, democracy and social justice, forcing the government to back away from its original plan (Franco et al. 2015). Whether this momentum is sustained remains to be seen. In Cambodia, civil protests against land deals and the government's admission of widespread related displacements have resulted in a moratorium on land concessions. These two examples demonstrate how land tenure policies may provide an opportunity to address conflicts in an integrated way, although much depends on the nature of the processes through which such policies are developed.

National and international policy processes should be analysed to identify leverage points for influencing policy and practice. Opportunities exist to feed local input “up” to international processes (such as the UNFCCC safeguards) and national processes (such as the Voluntary Guidelines implementation plans), and vice versa: to call upon these international instruments to protect local rights. Drawing on Fox (2001), we hypothesise that “vertically integrated” strategies targeting power at different levels are crucial to effect change and avoid simply displacing responsibility to another level. The Global Landscapes Forum provides an example of an initiative seeking to integrate environment and development policies at the landscape scale. Building capacity and creating action plans to help affected communities engage with governance mechanisms across scales are important steps in moving from research to informed action.

A human rights approach can help protect and guarantee respect for democratic access and control of land where it exists, and promoting redistribution (or restitution) of such access and control where it is required (Franco, Monsalve, and Borrás 2015). States have basic obligations to respect, protect and fulfil human rights, offering a powerful instrument towards securing democratic land control. Land is inextricably connected to fulfilling various human rights, including the right to food, housing, work and self-determination. Human rights – as expressed in international conventions or treaties – give political legitimacy to marginalised land claim-makers. Where national land laws fall short, rural people can mobilise international human rights law and principles to remedy their situation. This strategy can also offer a political “shield” against retribution from those opposed to land policy change.

We recognise that, especially in countries in transition, political mobilisation may be suppressed by powerful actors. Competition over resource control, especially land, has dominated political change and regime transitions historically in many states, leading to fluid and uncertain outcomes for the rural poor. Currently national land policies (land reform, restitution, forest management) are critical components of the conflict transformation and national political transition processes, as shown here for Cambodia and Myanmar. Research that engages with land issues and policies can help influence (inter)national policies with the aim of promoting socially just and ecologically sustainable outcomes.

Challenges and contributions of the proposed agenda

Investigating conflicts involves challenges and risks. Protecting research participants from harm requires careful planning and monitoring; power differences within affected communities based on ethnicity, class, gender and generation must be anticipated at all stages. Grassroots partners can provide crucial insight into this planning, keeping in mind that they are also situated within local social relations. A second challenge,

particularly for the goal of informing improved policies, is that government actors may not be open to receiving advice on how to more effectively manage land conflicts. Navigating relationships with authorities, particularly when there is an uneasy history between government and civil society, requires nuance and flexibility.

While the challenges are great, we believe that the proposed research agenda can make unique contributions. First, systematic research on the intersection between climate change mitigation, land grabbing and conflict can produce knowledge of policy relevance. This approach can generate insights on how the political economy of flex crops plays out in the context of both climate change mitigation and land grabbing. Second, instead of treating climate change initiatives and land grabbing separately, we can treat them as intertwined phenomena, but not in a cynical way that automatically equates one with the other, for example presuming that REDD+ or biofuel projects always result in “green grabbing”. This approach offers new potential for understanding these clusters of development issues, and accordingly may influence both policy and practice. Finally, working with grassroots networks is likely to enhance autonomy and build capacity (Fox 1993) for these actors, focused on building institutional spaces for pro-reform state-society interactions around resource conflict transformation.

Conclusion

The intersection of climate change strategies and land deals can produce social and ecological spillover effects that change both the social dynamics of conflict and the nature of the resources that are contested. While the existence of multiple, competing interests and power struggles across scales would complicate this scenario under any circumstances, in settings in which political transitions are underway there is an extra layer of challenge: the institutions that might be able to help avoid or resolve conflicts tend to be weak or absent. We have proposed a research agenda based on collaborative, engaged research to better understand patterns of land and resource conflict and to support the strategic actions needed to manage these conflicts and promote more just and sustainable outcomes.

The examples mentioned, drawn from research in Myanmar and Cambodia, feature multiple climate change mitigation initiatives and land deals within the same landscape that overlap, compete and run in parallel. Such cases are relatively large (spatially) and complex (institutionally); they encompass policies, land classification, land claims, community social dynamics and mechanisms for settling disputes. We argue that research interested in understanding the intersections of climate change mitigation with land conflict should: (1) adopt the landscape as the unit of analysis, rather than individual projects or land concessions; (2) co-produce knowledge with affected communities and grassroots organisations; and (3) coordinated responses that target policies at multiple scales to help transform conflicts. Together, these pillars can contribute to better understanding the character of land and resource conflicts as well as to transforming them through processes sensitive to ideals of social and environmental justice.

Note

1. This agenda has guided the design of the Mosaic project, titled “Climate change mitigation policies, land grabbing and conflict in fragile states: understanding intersections, exploring

transformations in Myanmar and Cambodia” (www.iss.nl/mosaic). The examples from Myanmar and Cambodia draw on fieldwork conducted for the Mosaic project.

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