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Transforming land use governance: Global targets without equity miss the mark

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Abstract

A confluence of concerns about tropical forest loss, global warming, and social inequality drive calls to transform land use governance. Yet there is widespread debate about what must be transformed, by whom, and how. The increasing equation of transformation with ambitious, quantitative global targets, such as “net zero emissions” or “zero deforestation” has gained widespread appeal as a means to inspire action and hold powerful actors to account. However presenting targets themselves as the end goals of transformation, obscures both the means of achieving them and the social and environmental values that legitimate them. The escalation of targets for land use, in particular, is disconnected from targeted geographies, lacks accountability to socially diverse knowledge and priorities, and is readily appropriated by powerful actors at multiple scales. This paper argues instead, for an equity-based approach to transformation that reveals how unequal power distorts both the ends and the means of global governance. We illustrate this argument with five case-study “vignettes” in Indonesia, Ghana, Peru, and Brazil that reveal how de-contextualized, target-based thinking has reinforced state and corporate control over resources at the expense of local access, while largely failing to deliver the promised environmental outcomes. We conclude that equity-focused, case study research is critical not only to unpack the local consequences of pursuing global targets, but also to make visible alternative efforts to achieve deeper socio-environmental transformations.

KEYWORDS

case studies, equity, governance, land use, transformation, zero deforestation

1 | INTRODUCTION

Rising concern over tropical deforestation, land-based carbon emissions, and social inequality has driven an expanding array of international initiatives for sustainable land use. Yet despite decades of

effort, tropical forest cover continues to decline (Vancutsem et al., 2021) along with an increasing concentration of land ownership and the marginalization of smallholders and the rural poor (de Oliveira et al., 2020). The apparent failure of the current system to catalyze adequate responses to social-environmental challenges has spurred

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calls for “transformation”, but with conflicting perspectives on what must be transformed and for whom (Scoones et al., 2020). A fundamental point of contention, is the degree to which transformation should be more narrowly focused on achieving an explicit set of environmental outcomes or targets, such as arresting deforestation, or if it requires a “revolution in socio-political processes of development” (Few et al., 2017: 2).

Many proponents of target-setting point to the growing urgency of environmental challenges such as climate change and biodiversity loss as requiring clear international commitments and accountability (e.g. Campbell et al., 2018; Roberts et al., 2020). Target-setting concentrates attention on singular and measurable environmental criteria, such as net zero emissions, zero deforestation, 30% protected areas by 2030,¹ or planting a trillion trees. From this perspective, failure to achieve past targets increases the need for more ambitious targets in future. A striking example of this, is the recent Glasgow Forest Declaration, where over a 100 countries pledged to “halt and reverse deforestation and land degradation by 2030” (United Nations, 2021). This is an increase in ambition from the New York Declaration on Forests (NYDF) 7 years ago (Einhorn & Buckley, 2021), itself critiqued for inadequate progress (NYDF AP, 2019). Whether this escalating “Target Olympics” will lead to meaningful and transformative change, or merely detract attention from past failures and other pressing problems, remains open to question.

Others, therefore, argue for the need to look beyond uni-dimensional, physical targets, and commit to a more fundamental reorganization of social, political, and economic systems. They suggest that a focus on the “means” or “governance” of environmental challenges may be as, or more, necessary for transformation than *a priori* definitions of the “ends” (Carr, 2019; Chaffin et al., 2016; Díaz et al., 2019; Few et al., 2017; Leach et al., 2018; Pelling et al., 2014; Scoones et al., 2020).

But the call for transformation of both ends (socio-environmental outcomes) and means (social processes) creates a conundrum – in that it forces a re-consideration of the goals themselves, calling into question who decides what should be transformed, by whom, and how. We argue that equity in the balance of decision-making power across scales and diverse social contexts provides a critical rudder to navigate this conundrum.

“Equity” and the related concepts of “justice” and “fairness” have been addressed through a wide body of social science literature, in recognition of their key role in shaping social cooperation (McDermott et al., 2013). Applying an equity lens to sustainability governance has major implications; notably it affords a greater diversity of people to express their values, negotiate goals, and collectively determine the appropriate scales of decision-making (Matin et al., 2018). According to (Scoones et al., 2020: 3), an equity-based transformation to sustainability would require fundamental changes to governance structures and systems of production and consumption in ways that enable “the human agency, values, and capacities” to collectively pursue desired futures. Putting such an approach into practice would help avoid the failure of expensive target interventions where they are not understood, wanted or durable, and allow a more diverse set of actors to foster systemic change.

The context of land use change is a prime site to explore contestations over the relationship between sustainability transformations and equity, and how these concepts, in turn, relate to global targets such as zero deforestation. “Land” and “forests” constitute key physical and cultural spaces where human actions make contact with the “environment” within particular local and historical contexts (Peluso & Vandergeest, 2001), and one where inequalities are manifested in differential access to land and resources, and the risks and benefits they bring (Ribot & Peluso, 2003). Indeed, scholarship in political ecology and cognate fields has for decades highlighted the importance of “local context” and “bottom up” or “participatory” governance in tackling environmental issues. Yet, these critiques have failed to penetrate the target rhetoric, and may have even allowed participation itself to get reflexively co-opted into yet another target. Hence, we perceived an urgent need to target the targets themselves. This paper adds to past literature by asking why, despite the wide body of evidence that land is of pivotal relevance to people’s notions of justice, livelihoods and identity (Meyfroidt et al., 2022), do externally-driven, uni-dimensional targets like “zero deforestation” nevertheless continue to flourish and proliferate, and with what consequences for an equitable and environmentally responsible land use transformation?

2 | METHODOLOGY

This paper weaves together academic literature with lessons learned through empirical research conducted by its authors, across diverse contexts, and over many years of continuous field work and communication with local people. We draw on a range of literature we consider relevant to understanding the political ecology of land use-related targets. This includes literature on equity and land use governance, along with a broader array of scholarship on globalization, telecoupling, transformations to sustainability, the politics of science and knowledge, and the “translation” of the global to the local. In reference to this literature, the following Section 3 traces the emergence of dominant, target-based visions of transformation within climate, forestry, agriculture, and other land use-related negotiations, and discusses the type of research this generates. Section 4 then examines the potential for equity to serve as a mediating principle that balances concern for both the means and the ends in transformation. Section 5 situates this theoretical discussion using a set of “vignette” case studies, examining current strategies to transform land use governance in Indonesia, Ghana, Peru, and Brazil. Finally, it concludes by summarizing lessons learned from these vignettes, and reflecting on what transformative land use governance and a transformative research agenda might look like if a normative commitment to the redistribution of power and resources were taken seriously.

The vignettes included in this paper rely primarily on already published case study research. A summary of case study methodologies is included in Appendix A. All sites where we worked have been contending with external agendas to transform land use and/or land use governance. Our vignettes are supplemented with references to the broader literature, to illustrate not only the diversity of contexts

where the global is locally translated and often appropriated and changed completely, but the strikingly consistent dysfunctional results. While these findings highlight the negative effects of external, target-dominated interventions, the message is ultimately a hopeful one. Treating targets as one among a diversity of tools to achieve end goals, rather than as end goals in themselves, affords a much broader view of the knowledge, agency, and resilience of diverse actors at all scales.

3 | RETHINKING TRANSFORMATION

3.1 | Navigating among targets, ends and means

The framing of transformations to sustainability in terms of a physical target is perhaps most pronounced in the context of climate change. A need for urgent and transformative change to address global warming has generated ambitious intergovernmental commitments to limit warming to 2° above preindustrial levels, and a desire to curb warming at 1.5° (IPCC, 2018; UNFCCC, 2015), as well as a growing number of “net zero emissions” pledges by government and corporate actors. The ultimate objective or normative “ends” for these targets has been defined within the UN system as “prevent[ing] dangerous anthropocentric interference with the climate system” (UNFCCC 1992: Article 2), which is further legitimated by large expanses of normative text addressing intergenerational equity, sustainable social and economic development, biodiversity protection, and other values. However, targets such as “1.5°” and “net zero emissions” are commonly treated as technical end goals, detachable from, and unaccountable to, the normative goals that legitimate them.

Increasingly, efforts focused on addressing tropical deforestation and land use change have mirrored this approach, most notably through “zero deforestation” campaigns aimed at excluding global commodities such as palm oil from global supply chains unless their production can be verified as deforestation-free (e.g. Garrett et al., 2019). As with greenhouse gas emission reductions, these targets are often backed by a substantial body of normative, legitimating text referring to other environmental and social values, but are subsequently prioritized as end goals, irrespective of those values.

Such target-setting has also influenced how human rights and governance are treated in international processes, translating what might otherwise be understood as “means” to the desired ends of social well-being into a set of a-political, measurable indicators. This is epitomized in the 2015 UN Sustainable Development Goals (SDGs) (United Nations, 2015). The SDGs translate international commitments to “good governance” into standardized indicators, for example, the “rule of law”, and “participatory...decision-making at all levels” (United Nations, 2015). These indicators are to be measured and adjudicated by a particular set of actors empowered within the UN system (Menton et al., 2020). At the same time, the notional consensus embedded in these targets implicitly suggests an “end of politics”, after which their implementation becomes a technical affair (Löfbrand et al., 2015).

The resulting array of global targets - whether focused on physical outcomes or universalized norms of “good governance” - excludes those being targeted from co-defining the problem, co-determining desirable outcomes and charting pathways to achieve them (Dimitrov, 2005; Hulme, 2020). It re-frames local actors as “global citizens” without corresponding rights or power to set their own agendas (Arora-Jonsson et al., 2015).

Target setting also shapes, and is shaped by, a particular kind of science, which prioritizes external measurements and technological interventions. This can create a “tyranny of numbers” (Boyle, 2010) that discounts less tangible social values. It prioritizes “objectivity” and “scientific rigor” as defined by the physical and medical sciences (Ferraro & Pressey, 2015) thereby obscuring the complexities, uncertainties and contested norms underlying all scientific endeavor (Funtowicz & Ravetz, 1993; Nielsen et al., 2019). Meanwhile rapid growth in monitoring and computing technologies has led to a burgeoning of “big data” approaches and the modeling of de-contextualized scenarios to serve ever-more ambitious targets (e.g. Rogelj et al., 2018; Rounsevell et al., 2020).

In contrast, scholars focused on the political ecology of environmental governance have argued that a technical and “a-political” framing of externally defined development and conservation agendas (Ferguson 1994) overlooks structural inequalities and fails to address differing knowledge, needs and interests across scales and social groups (Few et al., 2017; Neimark et al., 2019; O'Brien, 2018). It also discounts the agency of a wider range of actors to bring about systemic change (O'Brien, 2018).

Given these well-studied shortcomings, the growing dominance of high-level target setting is perhaps better understood in terms of whom it empowers rather than its effectiveness in addressing environmental and social problems. State and corporate actors based in the global North have long held a dominant position in global trade (Muradian and Martinez-Alier 2001; Hornborg & Martinez-Alier, 2016), including trade in commodities linked with tropical deforestation (Cuypers et al., 2013). Such actors may shape environmental governance in ways that secure or enhance their market dominance under a banner of political neutrality (Pichler, 2013), and even promote them as “panaceas” and “blueprints” that “should be applied to all environmental problems” (Ostrom et al., 2007:15176).

Alternative visions of sustainable transformation, in contrast, emphasize balanced attention to the design of transformation blueprints, the means of transformation, and the ends or outcomes, from the perspective of social emancipation. Rather than align success with the achievement of targets set by external actors, the focus of such transformations is on the multi-scale and multi-dimensional (horizontal as well as vertical) co-creation of governance structures, beliefs and value systems to address the underlying causes of social vulnerability and environmental degradation (Few et al., 2017; Scoones et al., 2020). Instead of setting physical targets in preestablished political forums, the first step in balancing the ends and means of transformation is to determine what power relations are appropriate to the sphere of action, and thereby redraw the boundaries of the political forums in which decisions can and should be made. The implications

for science of such approaches are also significantly different. Here, the onus on relevant research is to study the power dynamics and values driving environmental and social change and situate them in local context and, potentially, to jointly re-define the paradigms, goals and values that matter at appropriate scales (Jasanoff & Martello, 2004; Wyborn et al., 2019). Case study research that is committed to a deep understanding of specific geographies is of notable importance to such a power-informed agenda (Schreckenber, K., Mace, G., Poudyal 2018).

3.2 | Equity as a mediating principle

While visions of transformation vary in emphasis, few would argue for an exclusive focus on either ends or means. For example, many who support targets for zero deforestation would nevertheless rule out genocide as an appropriate pathway to achieve it. Likewise, the physical effects of rapid global warming pose significant threats for the poor and vulnerable. Hence those arguing for social empowerment, may also advocate reduced global emissions (Roberts & Parks, 2009), a position the “climate justice” movement embodies. There are always interacting and competing priorities across a range of issues. The questions to ask, therefore, are how to balance the ends and means, and whether and where numeric targets help or hinder that balance.

Fortunately, there is a wide body of social science literature on justice and equity available to inform our thinking on how to balance means and ends. Rawls' seminal theory of justice (Rawls, 1971) roots equity in society's obligation to better the conditions of those worst off. This suggests that a just approach to addressing deforestation, for example, requires that the measures taken must benefit those facing the greatest social disadvantage. Sen's emphasis on “capabilities” (Sen, 2004) underscores the importance of social context, including patterns of structural inequality and discrimination that prevent certain social groups from meaningful participation in land use decision-making or access to benefits. Fraser has introduced the concept of “participatory parity” as a definition of justice, calling for the removal of institutional obstacles that prevent people from participating on equal footing (Fraser, 2009). Martin et al. (2016: 254) situate justice within the global conservation agenda, arguing for a justice as recognition that grants “equality of status for local conservation stakeholders” by recognizing their rights to shape societal priorities.

All of these theorists provide different ways to grapple with both the ends of an equitable distribution of social power and benefits and the means of how it might be recognized and achieved. Fundamentally, “equity”, defined as fairness or “due process”, underscores how the “participatory parity” (Fraser, 2003) or capacity or capabilities (Nussbaum, 2011; Sen, 2004) of different actors to meaningfully participate in societal decisions depends on the relative distribution of material and substantive rights (e.g. to livelihoods, health, education, etc.) as well as their relative access to, and recognition within, decision-making processes (Pascual et al., 2014). Yet as Stirling (2009) notes, conventional approaches to international development continue to focus on measurable target-oriented outcomes such as

“poverty reduction”, rather than developing modes of governing that recognize the poor (or indeed those rendered marginal along other axes such as race, gender, sexuality, geographical location, etc.) as actors with equal rights to shape development agendas.

Land use research can either reinforce or challenge target-based thinking. Global targets, for example, to halt deforestation by 2030 (UN, 2021), generate heavy demand for remote sensing, digital technologies and “big data”. These create their own challenges for justice, given highly unequal access to, and unequal protection from, the use of these technologies (Eubanks, 2018; Massé, 2018; Taylor, 2017). They also risk devaluing other forms of non-scientific knowledge and associated cultural practices (Rodriguez, 2017).

As is clear from this diverse literature on equity, power and knowledge, ideas of precisely what equity means and whose knowledge counts is itself contested and political. Putting forward a proposition for equity-based transformations is not to advocate for singular definitions, or particular political ideologies. Rather, the question of what an equitable transformation would look like must itself be socially negotiated. In opposition to purely technocratic strategies to address socio-environmental challenges, an equity-based approach necessitates attention to systemic inequalities and differing social capacities (Scoones et al., 2020), as well as the explicit embracing of political contestation (Martin et al., 2016).

4 | WHAT DOES EQUITABLE TRANSFORMATION MEAN FOR LAND USE GOVERNANCE?

The concept of “land use”, and its linkage to climate change, tropical forest loss and expansion of commercial agriculture has been increasingly framed as a global concern. This concern has driven, and been driven by, scientific research quantifying agriculture as the world's leading driver of deforestation (Curtis et al., 2018; Hazell & Wood, 2008), and a major source of global emissions (IPCC, 2019) and biodiversity loss (Marques et al., 2019). Meanwhile advances in remote sensing technologies have rendered local changes in land use increasingly visible and quantifiable to scientists and other external actors. These expanding technological capacities together with an increasingly cross-sectoral understanding of environmental problems, have in turn legitimized an expansion in the focus of global governance from an initially more siloed concern with tropical forests (Humphreys, 2006), to include other ecosystems and their interaction with farming and food production. This is witnessed most recently, for example, in the UN pledge to “halt and reverse” “land degradation” together with “deforestation”, by 2030 (UN, 2021). Yet along with this widening of scope, comes a broadening of implications for human rights, welfare and food security.

An equity-based perspective can help take account of how the scale of decision-making and scale of research into land use dynamics interact in ways that are both self-reinforcing and exclusionary. For example, a focus on meeting global zero deforestation and land degradation targets prioritizes attention to globally “significant” and/or (seemingly) globally governable, drivers of land use change. This, in

turn, skews research and policy attention towards quantifying the direct or proximate causes of land use change associated with large-scale commodity supply chains. This belies how commodity expansion in one locale involving one set of actors is but one dimension of a broader landscape of socio-environmental change, including the direct displacement of previous local land users, social relations and economies (Maguire-Rajpaul et al., 2022) as well as indirect impacts on production and food security elsewhere through telecoupled market forces (Boillat et al., 2020; Corbera et al., 2019).

Global, single-issue targets such as zero deforestation and universalized norms of good governance obscure these complexities and provide external actors with a seeming moral imperative to act regardless of local context. This process of decontextualization is evident in several dominant trends in sustainability governance. One is a growing suite of international efforts aimed at promoting the rule of law and law enforcement, in order to reinforce the power of national governments to control access to natural resources (McDermott, Acheampong, et al., 2019). This strengthening of state power may occur alongside “decentralization” initiatives, purportedly to increase local participation in land use decisions (Lund et al., 2018). International trade-based strategies are another growing trend, focused on incentivizing large-scale, corporate actors to produce globally traceable commodities (Cashore & Nathan, 2020; McDermott, 2014). In all of these efforts, the “means”, for example, promoting the rule of law, decentralization, and product traceability, have been framed as ends based on particular assumptions about their link with sustainability. Our analysis explores the architectures of power that such approaches necessitate and presuppose.

In the next section, we examine these dominant trends in the context of five vignettes in tropical forest countries, drawing on research conducted by this paper's co-authors,² as well as other relevant literature. This begins with case studies of state-based efforts in Ghana and Indonesia to stop illegal logging and improve local governance through legality verification and decentralization, respectively. These are followed by case studies of oil palm company-community partnerships (CCPs) in the Peruvian Amazon, and corporate-state partnerships to achieve “climate smart cocoa” in Ghana. We conclude with the case of Brazil, and its widely acclaimed efforts combining state- and market-based strategies to meet a target of zero (illegal) deforestation.

5 | ROOTED IN POWER: FIVE VIGNETTES ANALYZING CONTEMPORARY LAND-USE GOVERNANCE TRENDS

5.1 | Trend 1: Reinforcing state control

5.1.1 | The “rule of law” – Enforcing legality in the timber sectors of Ghana and Indonesia, (name withheld for peer review)

“... you know, they nurtured that tree, the tree is there because of them, and yet they have to go seek permission to (cut) it”.

Ghanaian NGO on the lack of farmers' tenurial rights to native trees on their farms, Accra, Ghana, 2015.

The early 2000s saw a distinct discursive shift in international forest governance from “sustainability” to “legality” as the key to global forest conservation (McDermott, 2014). This shift has since been reinforced through international targets that prioritize the “rule of law”, for example, under SDG 16 on “Peace, Justice, and Strong Institutions” (McDermott, Acheampong, et al., 2019). Asserting the primacy of formal, state-based law has been lauded as a solution to a variety of past obstacles which prevented international agreement on forest conservation. Legality respects the sovereignty of nation-states to set their own laws and priorities. It legitimizes the tropical timber trade for legally compliant firms, and ostensibly offers environmentalists a lever to contain or curtail timber harvests (Humphreys, 2006). This reframing has been accompanied by a host of studies quantifying the extent of illegality, such as the finding that roughly half of the trees cut in five of the world's 10 most heavily forested countries were felled illegally (Lawson & MacFaul, 2010: 1). Increasingly, illegal logging is blamed for deforestation, harm to local communities and an array of other environmental and social ills.

In line with this shift, the EU in 2003 launched its forest law enforcement, governance, and trade action plan (FLEGT), with the aim of eradicating illegal wood from EU supply chains. A core mechanism within the plan is the development of voluntary partnership agreements (VPAs) between tropical wood producing countries and the EU, whereby producing countries develop a legality licensing system, after which only legally licensed wood is allowed to enter EU markets.

During the period of 2013–2018 a sub-set of the author team conducted in-depth field work on how the VPAs in Ghana and Indonesia affected the equity of access to forest resources (Hirons et al., 2018; McDermott, Acheampong, et al., 2019; Setyowati & McDermott, 2017). This included interviews with over 80 stakeholders from the EU to local levels, focus groups and field data on tree retention and harvest to better understand domestic timber markets, and to compare local, informal forest governance with state-based legal systems.

Our analysis highlights how FLEGT's narrow focus on legality has reinforced existing inequalities that favor state and private sector control over forest resources, while largely de-legitimizing domestic and local forest access. With the exception of some plantation forestry, forests in both Indonesia and Ghana are owned and/or controlled by government actors – a legal legacy of their colonial pasts. According to the Constitution of Ghana, farmers do not own the native trees that naturally occur on their farmlands, and the government may allocate rights to harvest those trees to private firms.

In both countries, rights to harvest timber are primarily allocated through concessions or timber utilization contracts that favor the production of high value timber, much of which is sold for export. These allocation frameworks are historically embedded in systems of political patronage and rent-seeking by government officials (Gellert, 2010; Teye, 2010). At the same time, regulations governing timber harvest are highly restrictive and complex, in part due to international pressure to conserve tropical forests. Indonesia, in particular, has among

the most complex and prescriptive forest practice regulations worldwide (McDermott et al., 2010). Such legal frameworks are not designed to deliver affordable forest products to local markets. This helps explain, in part, why (Kishor & Lescuyer, 2012) found roughly 50%–80% of the wood consumed domestically in both countries was produced “informally”. State and private actors in the two countries lack both financial and political incentives to replace this export-oriented concession system with one prioritizing local empowerment and benefit capture. Rather, the consensus around the legitimacy of FLEGT empowers state authorities to further restrict local access to forest resources with the international community's blessing (Myers et al., 2020).

In sum, these findings highlight the need for legal reforms to strengthen local and community forest rights. However, the VPA's focus on complex systems of legality assurance to meet international market demand reinforces the power of the central state, and disincentivizes reforms to enable local access.

5.1.2 | Decentralization? – Indonesia's village law, (name withheld for peer review)

“...(I)n a way we are practicing a kind of direct democracy like the Polis (cities) of ancient Greece. The Desas (villages) are like Polis. So we are trying to create 784,158 Polis in Indonesia.”

Proposer of the Village Law to Parliament, Jakarta, 2018.

While we see in the previous vignette that a discursive focus on “legality” may serve to centralize state power, discourse around “decentralization” prioritizes the redistribution of authority over land use. In 2014, as a result of intense civil-society activism, Indonesia adopted a new “Village Law” (heretofore referred to as “the Law”). This Law included a major national decentralization of governance to the village level aimed at increasing village autonomy, establishing new channels of accountability and direct democracy and empowering villages to pursue their own agendas and development strategies. In many ways, this agenda appears to embody this article's vision of an equitable societal transformation.

Adopting an exploratory, grounded theoretical approach (Bryant & Charmaz, 2007; Charmaz, 2006; Corbin, 2008; Glaser & Strauss, 1967), one of the authors of this article carried out a year of field work in West Kalimantan and Jakarta to assess the ways in which the village law had generated changes in governance practices on the ground. The author approached the 2014 decentralization as an ongoing process in which legal tenants, agendas and political restructurings are always open for contestation and revision (Poteete & Ribot, 2011). After delineating the dominant logics underlying its implementation, the author then applied these logics as a lens through which to examine the Law's effects on village forest governance.

Results revealed how the village law was harnessed to expand central governmental power over villages, with village government agendas being driven by centrally determined economic development goals, limited democratic empowerment and a substantial increase in top-down supervision and scrutiny. Research traced the emergence of

these grounded realities to efforts by the national bureaucracy to implement the Law's tenets in ways that aligned with their broader mandates and formal objectives. This resulted in a reframing of the Law as a “rural development” Law and a refocus on pushing villages to attain an array of new Ministry-determined village developmental targets. Governmental support for other aspects of the Law, such as community empowerment and grassroots governance, was neglected even as top-down controls rapidly proliferated to ensure villages pursued development targets legally and efficiently.

Such dynamics are replicated in village forests. Whilst villages have initiated a wide array of forest programs since the Law's adoption, these have overwhelmingly been determined by village officials based on higher bureaucratic expectations. There appears little scope for the operations of genuine community-based forest governance under present implementational logics. The side-lining of empowerment may also render villages more vulnerable to the depredations of land-grabbing agrobusiness.

Decentralization policies often serve very different agendas in practice to those articulated by policy makers. As a result, implementing “decentralization” cannot be taken as an end in itself without carefully attending to the effects of such reforms on dynamics of social and political inclusion and exclusion on the ground over time. In this case, a refocusing on developmental targets legible to the preexisting agendas and practices of central ministries over-rode the principal concern of the original law - that social change should be driven by the deliberations and activities of autonomous communities. Indeed, the Law resulted in an exactly opposite effect from what its creators envisioned - a tightening of centralized power over villages and their activities. By exploring the politics embedded within the implementation process, this analysis enabled a detailed tracing of the processes by which legislative reforms are subverted to serve the interests of entrenched elites. Moreover, by delineating the logics of these subversions, potential pathways of political activism and legal reform aimed at overcoming them are illuminated and made thinkable.

5.2 | Trend 2: Reinforcing corporate control

5.2.1 | “Company-Community partnership” approaches to “sustainable” oil palm production in Peru, (name withheld for peer review)

“Surely you don't want your children to end up like you, miss. Just one more jungle bunny living out here in the forest. No. With the (oil palm) company, you will have credit cards like a casino!”

Transcript of oil palm company representatives speaking to an indigenous community, Nueva Requena, Ucayali, Peru, July 2015.

Continuing on the topic of state decentralization as a potential eco-governance transformation, we now move to Latin America where government decentralization has long been viewed as a transformative approach to democracy. Furthermore, in Peru, the decentralization process is occurring concurrently with the floating of free market economies, meaning capitalist penetration into national and

regional markets at the same time that the central government releases many of its functions to regional entities. This capitalist penetration is accompanied by state acceptance of large donations from international donors in exchange for actionable environmental targets. One solution to this seeming clash, is to merge capitalist penetration with environmental target-setting, such as the pledges in the New York and Glasgow forest declarations to halt deforestation by 2030, through agricultural management on the Amazon frontier. This dramatically changes dynamics of land control and transformation.

The CCP represents a relatively new production model for oil palm in Peru that illustrates how this merging of capitalist development with environmental targets may operate. A CCP involves two or more parties (usually a private company and a rural community or village) “partnering” to produce a product under a contractual agreement to share land, capital, management and market opportunities (Nawir & Santoso, 2005). Proponents of CCPs assert that the private sector has the unique power to bring exceptionally expensive high yield technologies, more efficient management and improved access to markets to rural areas, and that it creates a win-win for environmental sustainability, and poverty alleviation in many countries (ibid, Beekmans et al., 2014). This logic has come on the back of sustainable development rhetoric, and the pressure for oil palm companies to commit to environmental and social certification standards, such as those of the Roundtable for Sustainable Palm Oil (RSPO).

Between 2012 and 2019 the author conducted research on the socio-economic and environmental “sustainability” of the first oil palm CCP in the Amazon region of Ucayali. A foreign-owned company bought more than 12,000 hectares of forest land from a decentralized government office for oil palm expansion under non-transparent legal agreements. The company's arrival was met by fierce local resistance, with claims of dispossession of land, and local, national, and international NGOs and governments outraged by the brazen environmental damage caused. The company during this time was expelled from RSPO membership for having failed to meet the standards and targets for environmental wellbeing, but case study research revealed no meaningful repercussions for the company. Even when the company was eventually ordered by the Peruvian government to halt expansion operations in lieu of the scandals, there was no-one that could, or would, enforce cessation of activities.

Despite the appropriated sustainability rhetoric, and the piggy-backing onto the zero deforestation targets, the creation of the CCP caused major deforestation in plantations and on farmers' lands, generated unmanageable debt for farmers and social conflict, and altered local politics and power dynamics (Bennett et al., 2018). Over time, however, many farmers came to embrace CCP practically and politically, including previous opponents. The company provided basic services such as roads, infrastructure, market access, and even healthcare and education that the government had consistently failed to deliver, thus generating increased local endorsement of the CCP regardless of many clearly negative socio-environmental impacts and the divorce of the CCP from any environmental targets.

5.2.2 | Corporate stewardship of cocoa and “zero deforestation” in Ghana, (name withheld for peer review)

Whilst CCPs for oil palm in Peru have only recently taken off, smallholders in Ghana have been producing cocoa as a global commodity since the late 1870s. Ghanaian smallholders now supply >20% of cocoa to the \$120bn global chocolate industry (Zion Market Research, 2018). It is estimated that 25%–30% of Ghanaians depend on cocoa harvests for their livelihoods (Bunn et al., 2019). However, more than a century of extensive cultivation and land conversion have led to significant forest loss (Gockowski & Sonwa, 2011; Norris et al., 2010).

In response to high rates of deforestation associated with Ghanaian cocoa cultivation, climate change pressures, and low cocoa productivity, government, NGO and chocolate company representatives have begun to promote targets for “zero deforestation” within a broader agenda of “climate-smart cocoa” (CSC). The CSC agenda is defined by the twin targets of halting deforestation and guaranteeing future cocoa supplies, and promotes agricultural intensification as a primary mechanism to achieve those objectives (Krauss & Barrientos, 2021; Nasser et al., 2020). In Ghana, smallholders cultivate cocoa by intercropping shade trees with food crops grown for subsistence and local trading. By narrowly focusing on the target of zero deforestation through intensifying cocoa production, the CSC agenda overlooks the role of less intensive forms of agroforestry and intercropping in local livelihoods. Corporations thereby risk side-lining the livelihoods and concerns of already marginalized cocoa smallholders (Ahenkan & Boon, 2010). Similar to the CCP in Peru described in Section 5.2.1, the intensification narratives for the cocoa cash crop dominant in CSC have so far neither transformed trajectories of deforestation, nor markedly improved smallholder livelihoods (Krauss, 2018; Maguire-Rajpaul et al., 2016; Odijie, 2018, 2019).

There are, however, efforts being made to better empower Ghanaian smallholders through “landscape approaches” to CSC. These entail the creation of new multi-stakeholder governance mechanisms involving representatives from multiple community resource management areas (CREMAs) (NCRC et al., 2020). Under the CREMA system, communities are granted a limited set of traditionally and legally recognized rights to manage land and resources in common (Asare et al., 2013). It remains to be seen whether the involvement of CREMAs in governing cocoa landscapes can effectively counter-balance the power of multi-national companies and international demand for deforestation free cocoa with more participatory parity for local communities (Krauss & Barrientos, 2021; Maguire-Rajpaul et al., 2022; Nasser et al., 2020).

5.3 | Combining state and corporate power

5.3.1 | Deforestation in the Brazilian Amazon, (name withheld for peer review)

“We understand the importance of the Amazon for the world – but the Amazon is ours. There will not be any more of that sort of policy that we saw in the past that was terrible for everyone.”



President Jair Bolsonaro, cited in *The Guardian* July 19, 2019.

Brazil is both a success story and a cautionary tale of strategies based on state and corporate control of agricultural production to curb deforestation and to transform entrenched patterns of land-use change in the Global South. From the 1980s until 2004, substantial and escalating deforestation took place in the Brazilian Amazon. This trend was reversed from 2005 until 2012, when the rates of deforestation in the region were reduced by 70% (Nepstad et al., 2014). This achievement put Brazil in “a class of its own” among tropical countries that were able to successfully curb deforestation (Seymour & Busch, 2016: 188). Several mutually reinforcing factors contributed to the reduction - in particular, policy interventions put in place by President Lula da Silva's government from 2004, and supply chain initiatives such as a soy moratorium in 2006 and a zero deforestation cattle agreement in 2009 (Alix-Garcia & Gibbs, 2017; Assunção et al., 2015; Gibbs et al., 2015; Nepstad et al., 2014; Soares-Filho et al., 2014). These strategies relied heavily on investment in state-led command-and-control tools to achieve a reduced deforestation target, and on key actors from the soy and beef sectors to monitor their supply chains to exclude commodities linked to deforestation from domestic and international markets.

Significant progress towards reducing deforestation was achieved over the period of 2005–2012. Alarming, however, a steady increase in rates of forest loss has been observed since 2015. The increase has been attributed to changes to the Brazilian forest code in 2012, and to the economic and political crisis that led to the impeachment of Lula da Silva's successor Dilma Rousseff. This in turn resulted in executive measures that restricted funding for environmental law enforcement at the federal level (Pereira et al., 2019). The supply chain initiatives continued, but the increased focus on members of the production chain that represent the largest shares of the beef and soy production in Brazil, excludes a significant proportion of Brazilian producers, particularly smallholders, from markets that rely on these schemes as an assurance of deforestation-free products (Walker et al., 2013).

After the election of Jair Bolsonaro as president in 2018, a particularly sharp increase of 88% in deforestation was observed between 2018 and 2019 (Ferrante & Fearnside, 2019). This was linked to a surge in forest fires associated with forest clearance throughout the Amazon (Barlow et al., 2019), and to the aggressive anti-environmental agenda adopted by President Bolsonaro during his time in office so far. He has supported various legislative and executive initiatives to defund and dismantle the existing legal framework for environmental protection at the federal level (Abessa et al., 2019).

If previous success in reducing forest cover loss can be attributed mainly to law enforcement efforts developed by previous federal administrations and supply-chain management, then recent trends of political reversal and increased deforestation reveal significant limitations of such approaches. As soon as the efforts from the federal government ceased, the underlying social and economic dynamics of land-use change re-emerged to once again increase the rates of deforestation.

An equitable transformation of these trends requires solutions developed through the legitimate involvement of local people and

their concerns (Gebara et al., 2019). Given present circumstances, such strategies will likely need to avoid reliance on the will of the federal administration in power in order to succeed. Indeed, the sudden shift in the role of central governmental bodies from enforcers of forest conservation to enablers of its destruction has the potential to catalyze the invention of new governance strategies that are less reliant upon authoritarian models of control. Such solutions will need to include all of the members of the production supply chains in an even-handed way, calibrating the requirements imposed on different classes of producers in an effort to not arbitrarily exclude or marginalize them from markets.

6 | DISCUSSION

Our vignettes highlight three trends in contemporary land-use governance. First, efforts to promote the “rule of law” in Ghana and Indonesia reinforce state control, and favor corporate timber extraction for export over local and domestic production and trade, while decentralization policies have enhanced the reach of the central state. Second, the entrenchment of corporate control is illustrated by the enactment of “zero deforestation”, “climate-smart”, and sustainable development initiatives in the Peruvian palm oil and Ghanaian cocoa sectors. Finally, the combination of state and corporate power is shown in the internationally acclaimed Brazilian investments in forest law enforcement and support for corporate pacts for “zero deforestation”. These latter efforts initially slowed deforestation, but also excluded many smaller producers from major supply chains without providing them with viable alternatives. The apparent indifference of the foreign, state and corporate actors enacting zero deforestation policies in the Brazilian Amazon, and their lack of accountability to the social costs of reducing deforestation, has contributed to animosities, and Amazonian deforestation rates have begun rising again.

Several key lessons can be drawn from these trends.

1) The need to escape a “tyranny” of ends-based targets.

Programs focused on achieving externally defined targets are often based on technocratic models of governance that belie how politics, values and beliefs shape the actions of both state and non-state actors. At the same time, they underestimate the potential of the non-expert to generate systemic change (O'Brien, 2018). In the cases explored by these vignettes, the outcomes of such models – even on the narrow terms of their own internal logics – have proven ambiguous, ephemeral or negative, undermining any presumptions that they represent a panacea for generating positive transformations (Ostrom et al., 2007). Their enduring dominance therefore appears to be linked less with outcomes than with the degree to which they align with pre-existing power structures and governance practices (Asyanbi and Lund 2020; Pichler, 2013), and inequalities in global trade (Hornborg & Martínez-Alier, 2016). Current leading strategies of international land use governance are frequently harnessed by powerful state and/or corporate actors to concentrate power through the construction and maintenance of architectures of top-down surveillance and control. The need for centralized recording of progress according to

scientifically “rigorous” metrics (Ferraro & Pressey, 2015) associated with numeric goals such as “zero deforestation” limits viable forms of intervention to those that are accessible, legible, and trackable to national and international authorities, policy makers, analysts and donors. Despite the countervailing international discourse around decentralization and social inclusion, these structural and knowledge hegemonies delegitimize local and indigenous knowledge and approaches to sustainable land management (Rodríguez, 2017) and/or render them dependent on external “expert” validation and legitimation. Even more abstract targets like “legality” can appear globally legible if, as is the case with FLEGT, legality is defined as an end in itself, and made measurable by a narrowly defined set of legality standards. Meanwhile the expansion of big data and surveillance technologies raises concerns for “data (in) justice”, given inequalities in both actors’ access to these technologies and their vulnerability as targets for external manipulation or control (Taylor, 2017).

2) The need to foreground equity in land use governance.

Analyzes focused on the monitoring, reporting and verification of end goals such as zero deforestation, for example, the recent report on the New York Declaration of Forests (NYDF AP, 2019), regularly conclude that failures to achieve the transformations determined by their end goals (or to maintain transformation in the case of Brazil), is evidence that states and/or companies are not trying hard enough. This might suggest, for example, the need for more strict and widespread law enforcement, and greater market-demand for global commodities verified as “zero deforestation” (ibid). In contrast, our power-informed view of transformation, with its focus on equity in process as well as outcomes, argues for the need to foreground equity in both research and action.

As evidenced by the cases of Indonesia’s decentralization and Ghana’s CSC program, the question of equity cannot simply be addressed in the early stages of programs and then set aside. Even agendas set through relatively inclusive processes can ultimately serve as shields for the reassertion or extension of entrenched power structures during their implementation (Lawless et al., 2020). Issues of inclusion similarly cannot be conclusively “solved” by any specific formula of inclusivity (Cooke & Kothari, 2001). Instead, equitable access, representation and fairness must be explicit goals of transformative change, on par with environmental priorities, and such goals require continual learning and adaptation.

3) The need to refocus land use research on local, emergent, and horizontally networked governance systems.

The disproportionate focus of current land use research on studying, measuring, and monitoring the success of global governance in arresting forest loss or reducing forest emissions reinforces the dominance of these approaches. We argue that integrating social issues into existing big data, target-focused analyzes is a necessary, but insufficient, step in developing agendas that are ecologically effective and socially beneficial. Since efforts to address concerns related to land-use will eventually “land” somewhere, their success is contingent on the social and ecological conditions at each specific site. If the decision-making processes concerning a particular project lack legitimacy, or are enacted in spaces far removed from, and/or

unaccountable to, the sites and communities where they are implemented, their prospects are unsatisfactory because they are easily co-opted by powerful actors and/or undermined by local communities, and may lead to coercive exclusions (i.e. Obura et al., 2021). We contend, therefore, that addressing social issues in land-use debates goes beyond the question of inclusivity towards social concerns; it requires a much more radical re-thinking of the processes by which environmental and development goals are developed and pursued. Such a re-think would involve a greater focus on the means of deciding on and delivering land-use interventions in specific contexts rather than on global targets.

This would require a greater shift in research attention to local and horizontally networked land users as sources of valid knowledge and alternative models of sustainability (Sherwood et al., 2016). Fortunately, a vibrant body of theory and practice already exists from which practitioners, researchers, policy makers, and activists can draw to seek inspiration for alternative paths. Examples include the pan-Asian Interreligious Climate & Ecology Network (Parry, 2019), with its focus on developing a non-industrial growth society (IGS), the Global Ecovillage Network, and the applied philosophies of sufficiency economy, E.F. Schumacher’s *Small is Beautiful* (Schumacher, 1999), *buen vivir*, Theory-U (Scharmer, 2009), *eco-swaraj*, and *Ubuntu*. Inspiration for alternative governance models can also be found in case-study collections such as “Pluriverse – A post-development dictionary” (Kothari et al., 2019).

All of these alternative theories and methods contain critiques of the structural violence of dominant, industrial-growth-driven markets, policies, and power structures. They recognize the potential power and agency of a more diverse array of actors, operating at multiple scales, to regenerate social-ecologies, build resilience against shocks, and mitigate the impacts of disasters and accompanying vulnerabilities. They create social spaces where traditional ecological knowledge of Indigenous and local cultures (including faith and interfaith cultures) may be woven together with climate and environmental science to produce collective knowledge that motivates positive action (Parry, 2019; Raworth, 2017; Wyborn et al., 2021).

7 | CONCLUSION

This paper draws on an array of literature and the authors’ own field research related to land use and equity to consider who is most likely to be empowered, how, and for what purpose, by the current proliferation and escalation of ambitious global targets to transform land use. While there is a vast and diverse literature that speaks to the importance of mainstreaming equity into strategies for sustainable land use and conservation, there has been inadequate attention to how global target-setting can serve as one of equity’s most formidable opponents. There is likewise failure to engage with how, if we take seriously the need to devolve power in setting environmental goals, we balance the need for collective responses to large-scale challenges like climate change with local empowerment to set goals based on diverse local priorities. This paper’s political ecology analysis traces the power

dynamics of target-setting to illustrate why targets often have perverse effects, and then considers how commitment to a more equitable transformation might offer a better diversity of future options.

First, we argue for the importance of distinguishing technical targets like zero deforestation, from the normative ends and means that legitimate environmental rule-making in the first place – for example, norms of biodiversity protection, social justice, fair decision-making processes, and recognition of social diversity. As extensively argued in science and technology studies (STS), this rendering of normative goals in seemingly “a-political”, technical terms is in fact highly political in effect. It favors expert, scientific knowledge over local and indigenous ways of knowing. It demands the translation of social and environmental diversity into standardized metrics, amenable to monitoring and external control.

In contrast to a technocratic framing of transformation as the achievement of physical results such as “zero deforestation”, the literatures on land use governance, equity, and transformation highlight how tropical forest loss and associated climate emissions are rooted in long-standing inequalities between the Global North and South, and between those with access to land and resources and those without. From this perspective, equitable transformations will ultimately require deep structural, systemic, and enabling changes that build the capacities of diverse societies and peoples to exercise their own agency. Foregrounding equity in land use governance and recognizing alternative models for systemic change that are already being generated by grassroots and networked actors the world over would greatly expand the potential for sustainable transformations.

AUTHOR CONTRIBUTIONS

All listed authors: Have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data. All listed authors: Been involved in drafting the manuscript or revising it critically for important intellectual content. All listed authors: Given approval for resubmission of this draft. All listed authors: Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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ENDNOTES

- ¹ The Global Deal for Nature (GDN) targets for at least 30% of the planet's lands and waters to be conserved as protected areas by 2030.
- ² See Appendix A for a table of key research methods used to inform these vignettes.

REFERENCES

- Abessa, D., Fama, A., & Buruaem, L. (2019). The systematic dismantling of Brazilian environmental laws risks losses on all fronts. *Nature Ecology and Evolution*, 3(4), 510–511. <https://doi.org/10.1038/s41559-019-0855-9>
- Ahenkan, A., & Boon, E. (2010). Assessing the impact of forest policies and strategies on promoting the development of non-timber forest products in Ghana. *Journal of Biodiversity*, 1(2), 85–102.
- Alix-Garcia, J., & Gibbs, H. K. (2017). Forest conservation effects of Brazil's zero deforestation cattle agreements undermined by leakage. *Global Environmental Change*, 47, 201–217. <https://doi.org/10.1016/j.gloenvcha.2017.08.009>
- Arora-Jonsson, S., Westholm, I., Temu, B. J., & Petitt, A. (2015). Carbon and cash in climate assemblages: The making of a new global citizenship. *Antipode*, 48, 74–96.
- Asare, R. A., Kyei, A., & Mason, J. J. (2013). The community resource management area mechanism: A strategy to manage African forest resources for REDD+. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 368(1625), 20120311. <https://doi.org/10.1098/rstb.2012.0311>
- Asiyani, A., & Lund, J. (2020). Policy Persistence: REDD+ between Stabilization and Contestation. *Journal of Political Ecology*, 27(1). <https://doi.org/10.2458/v27i1.23493>
- Assunção, J., Gandour, C., & Rocha, R. (2015). Deforestation slowdown in the Brazilian Amazon: Prices or policies? *Environment and Development Economics*, 20(6), 697–722. <https://doi.org/10.1017/S1355770X15000078>
- Barlow, J., Berenguer, E., Carmenta, R., & França, F. (2019). Clarifying Amazonia's burning crisis. *Global Change Biology*, 26, 319–321. <https://doi.org/10.1111/gcb.14872>
- Beekmans, A., Dalling, J., & Molenaar, J. W. (2014). *Fair company-community partnerships in palm oil development*. Oxfam Report.
- Bennett, A., Ravikumar, A., & Paltán, H. (2018). The Political Ecology of Oil Palm Company-Community Partnerships in the Peruvian Amazon: Deforestation Consequences of the Privatization of Rural Development. *World Development*, 109(9), 29–41. <https://doi.org/10.1016/j.worlddev.2018.04.001>
- Boillat, S., Martin, S., Adams, T., Daniel, D., Llopis, J., Zepharovich, E., Oberlack, C., Sonderegger, G., Bottazzi, P., Corbera, E., Ifejika Speranza, C., & Pascual, U. (2020). Why Telecoupling research needs to account for environmental justice. *Journal of Land Use Science*, 15(1), 1–10. <https://doi.org/10.1080/1747423x.2020.1737257>
- Boyle, D. (2010). *The tyranny of numbers: Why counting can't make us happy*. Harper Collins.
- Bryant, A., & Charmaz, K. (Eds.). (2007). *The Sage handbook of grounded theory*. SAGE.
- Bunn, C., Fernandez-Kolb, P., Asare, R., & Lundy, M. (2019). *Climate Smart cocoa in Ghana towards climate resilient production at scale*. CCAFS Info Note. <https://cgspace.cgiar.org/handle/10568/103770>
- Campbell, B., Hansen, J., Rioux, J., Stirling, C. M., Stephen, T., & Wollenberg, E. (2018). Urgent action to combat climate change and its impacts (SDG 13): Transforming agriculture and food systems. *Current Opinion in Environmental Sustainability*, 34, 13–20. <https://doi.org/10.1016/j.cosust.2018.06.005>
- Carr, E. R. (2019). Properties and projects: Reconciling resilience and transformation for adaptation and development. *World Development*, 122, 70–84. <https://doi.org/10.1016/j.worlddev.2019.05.011>

- Cashore, B. W., & Nathan, I. (2020). Can finance and market driven (FMD) interventions make "weak states" stronger? Lessons from the good governance norm complex in Cambodia. *Ecological Economics*, 177, 1–23.
- Chaffin, B. C., Garmestani, A. S., Gunderson, L. H., Benson, M. H., Angeler, D. G., Arnold, C. A. (T.), Cosens, B., Craig, R. K., Ruhl, J. B., & Allen, C. R. (2016). Transformative environmental governance. *Annual Review of Environment and Resources*, 41(1), 399–423. <https://doi.org/10.1146/annurev-environ-110.615-085817>
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. SAGE.
- Cooke, B., & Kothari, U. (2001). *Participation: The new tyranny?* Zed Books.
- Corbera, E., Busck-Lumholt, L. M., Mempel, F., Rodriguez-Labajos, B. (2019). "11 environmental justice in telecoupling research." 213–32. doi:https://doi.org/10.1007/978-3-030-11,105-2_11.
- Corbin, J. M. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). SAGE.
- Curtis, P. G., Slay, C. M., Harris, N. L., Tyukavina, A., & Hansen, M. C. (2018). Classifying drivers of global forest loss. *Science*, 361(6407), 1108–1111.
- Cuyppers, D. et al. 2013. The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation. Technical report 063 to the European Union. 348
- de Oliveira, G. L. T., McKay, B. M., & Liu, J. (2020). Beyond land grabs: New insights on land struggles and global agrarian change. *Globalizations*, 18(3), 1–18. <https://doi.org/10.1080/14747731.2020.1843842>
- Díaz, S., Settele, J., Brondizio, E. S., Ngo, H. T., Agard, J., Arneeth, A., Balvanera, P., Brauman, K. A., Butchart, S. H. M., Chan, K. M. A., Garibaldi, L. A., Ichii, K., Liu, J., Subramanian, S. M., Midgley, G. F., Miloslavich, P., Molnár, Z., Obura, D., Pfaff, A., ... Zayas, C. N. (2019). Pervasive human-driven decline of life on earth points to the need for transformative change. *Science*, 366, eaax3100.
- Dimitrov, R. S. (2005). Hostage to norms: States, institutions and global Forest politics. *Global Environmental Politics*, 5(4), 1–24.
- Einhorn, C., & Buckley, C. (2021). *Global leaders pledge to end deforestation by 2030*. The New York Times.
- Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.
- Ferguson, J. (1994). The Anti-Politics Machine: "Development", Depoliticization and Bureaucratic Power in Lesotho. *The Ecologist*.
- Ferrante, L., & Fearnside, P. M. (2019). Brazil's new president and "ruralists" threaten Amazonia's environment, traditional peoples and the global climate. *Environmental Conservation*, 46(4), 261–263. <https://doi.org/10.1017/s0376892919000213>
- Ferraro, P. J., & Pressey, R. L. (2015). Measuring the difference made by conservation initiatives: Protected areas and their environmental and social impacts. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 370(1681), 20140270. <https://doi.org/10.1098/rstb.2014.0270>
- Few, R., Morchain, D., Spear, D., Mensah, A., & Bendapudi, R. (2017). Transformation, adaptation and development: Relating concepts to practice. *Palgrave Communications*, 3, 17092–17099. <https://doi.org/10.1057/palcomms.2017.92>
- Fraser, N. (2009). *Scales of justice; reimagining political space in a globalising world*. Columbia University Press.
- Fraser, N. (2003). Chapter 5: Recognition without ethics? In C. McKinnon & D. Catiglione (Eds.), *The culture of toleration in diverse societies* (pp. 86–108). University Of Manchester.
- Fukuda-Parr, S., & McNeill, D. (2019). Knowledge and politics in setting and measuring the SDGs: Introduction to special issue. *Global Policy*, 10(S1), 5–15. <https://doi.org/10.1111/1758-5899.12604>
- Funtowicz, S. O., & Ravetz, J. R. (1993). Science for the post-Normal age. *Futures*, 25(7), 739–755. [https://doi.org/10.1016/0016-3287\(93\)90022-I](https://doi.org/10.1016/0016-3287(93)90022-I)
- Garrett, R. D., Levy, S., Carlson, K. M., Gardner, T. A., Godar, J., Clapp, J., Dauvergne, P., Heilmayr, R., le Polain de Waroux, Y., Ayre, B., Barr, R., Døvre, B., Gibbs, H. K., Hall, S., Lake, S., Milder, J. C., Rausch, L. L., Rivero, R., Rueda, X., ... Villoria, N. (2019). Criteria for effective zero-deforestation commitments. *Global Environmental Change*, 54, 135–147.
- Gebara, M. F., Sills, E., May, P., & Forsyth, T. (2019). Deconstructing the polycscape for reducing deforestation in the eastern Amazon: Practical insights for a landscape approach. *Environmental Policy and Governance*, 29, 185–197.
- Gellert, P. K. (2010). Rival transnational networks, domestic politics and Indonesian timber. *Journal of Contemporary Asia*, 40(4), 539–567. <https://doi.org/10.1080/00472336.2010.507041>
- Gibbs, H. K., Rausch, L., Munger, J., Schelly, I., Morton, D. C., Noojipady, P., Soares-Filho, B., Barreto, P., Micol, L., & Walker, N. F. (2015). Brazil's soy moratorium. *Science*, 347(6220), 377–378. <https://doi.org/10.1126/science.aaa0181>
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Pub.
- Gockowski, J., & Sonwa, D. (2011). Cocoa intensification scenarios and their predicted impact on CO 2 emissions, biodiversity conservation, and rural livelihoods in the Guinea rain forest of West Africa. *Environmental management*, 48(2), 307–321.
- Hazell, P., & Wood, S. (2008). Drivers of change in global agriculture. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1491), 495–515.
- Hirons, M., McDermott, C. L., Asare, R., Morel, A., Robinson, E., Mason, J., Boyd, E., Malhi, Y., & Norris, K. (2018). Illegality and inequity in Ghana's cocoa-forest landscape: How formalization can undermine farmers' control and benefits from trees on their farms. *Land Use Policy*, 76, 405–413.
- Hornborg, A., & Martínez-Alier, J. (2016). Ecologically unequal exchange and ecological debt. *Journal of Political Ecology*, 23, 1–6.
- Hulme, M. (2020). One earth, many futures, No Destination. *One Earth* 2(4), 309–311.
- Humphreys, D. (2006). *Logjam: Deforestation and the crisis of global governance, the Earthscan forestry library*. Earthscan.
- IPCC. (2018). Global warming of 1.5°C. An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H.O. Pörtner, D. Roberts, J. Skea, P.R. Shukla...T. Waterfield (eds.)].
- IPCC. (2019). Summary for policymakers. In: Climate change and land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E.C. Buendia, V. Masson-Delmotte, H.O. Pörtner, D.C. Roberts...J. Malley, (eds.)].
- Jasanoff, S., & Martello, M. L. (2004). *Earthly politics: Local and global in environmental governance*. MIT Press.
- Kishor, N., & Lescuyer, G. (2012). Controlling illegal logging in domestic and international markets by harnessing multi-level governance opportunities. *International Journal of the Commons*, 6(2), 255–270.
- Kothari, A., Salleh, A., Escobar, A., Demaria, F., & Acosta, A. (2019). *Pluri-verse: A post-development dictionary*. Tulika books and authorsupfront (first publisher).
- Krauss, J. (2018). Representing environment and development—tracing links between drivers, representations and power dynamics in cocoa sustainability and beyond. *Journal of Political Ecology*, 25(1), 426–445.
- Krauss, J. E., & Barrientos, S. (2021). Fairtrade and beyond: Shifting dynamics in cocoa sustainability production networks. *Geoforum*, 120, 186–197.
- Lawless, S., Song, A. M., Cohen, P. J., & Morrison, T. H. (2020). Rights, equity and justice: A diagnostic for social meta-norm diffusion in environmental governance. *Earth System Governance*, 6, 100052.
- S. Lawson & Larry MacFaul. (2010). Illegal logging and related trade: Indicators of the global response. Chatham house.



- Leach, M., Meyers, B., Bai, X., Brondizio, E. S., Cook, C., Díaz, S., Espindola, G., Scobie, M., Stafford-Smith, M., & Subramanian, S. M. (2018). Equity and sustainability in the Anthropocene: A social-ecological systems perspective on their intertwined futures. *Global Sustainability*, 1, 84–13. <https://doi.org/10.1017/sus.2018.12>
- Lövbrand, E., Beck, S., Chilvers, J., Forsyth, T., Hedrén, J., Hulme, M., Lidskog, R., & Vasileiadou, E. (2015). Who speaks for the future of earth? How critical social science can extend the conversation on the Anthropocene. *Global Environmental Change*, 32, 211–218.
- Lund, J. F., Rutt, R. L., & Ribot, J. (2018). Trends in research on forestry decentralization policies. *Current Opinion in Environmental Sustainability*, 32, 17–22.
- Maguire-Rajpaul, V. A., Galuchi, T., Pinto, H., McDermott, C., (2016). How Brazil's sustainable cattle schemes could beef up to conserve forests and sustainable rural livelihoods. CCAFS Working Paper No. 148. CCAFS Publications, p.1–43
- Maguire-Rajpaul, V. A., Sandbrook, C., McDermott, C., & Hirons, M. A. (2022). Climate-smart cocoa governance risks entrenching old hegemonies in Côte D'ivoire and Ghana: A multiple environmentality analysis. *Geoforum*, 130, 78–91.
- Marques, A., Martins, I. S., Kastner, T., Plutzer, C., Theurl, M. C., Eisenmenger, N., Huijbregts, M. A. J., Wood, R., Stadler, K., Bruckner, M., Canelas, J., Hilbers, J. P., Tukker, A., Erb, K., & Pereira, H. M. (2019). Increasing impacts of land use on biodiversity and carbon sequestration driven by population and economic growth. *Nature ecology & evolution*, 3(4), 628–637.
- Martin, A., Coolsaet, B., Corbera, E., Dawson, N. M., Fraser, J. A., Lehman, I., & Rodriguez, I. (2016). Justice and conservation: The need to incorporate recognition. *Biological Conservation*, 197(May), 254–261. <https://doi.org/10.1016/j.biocon.2016.03.021>
- Massé, F. (2018). Topographies of security and the multiple spatialities of (conservation) power: Verticality, surveillance, and space–time compression in the bush. *Political Geography*, 67, 56–64.
- Martin, N., Forrester, J., & Ensor, J. (2018). What is equitable resilience? *World Development*, 109, 197–205. <https://doi.org/10.1016/j.worlddev.2018.04.020>
- McDermott, C. L., Hirons, M., & Setyowati, A. (2019). The interplay of global governance with domestic and local access: Insights from the FLEGT VPAs in Ghana and Indonesia. *Society and Natural Resources*, 33, 1–20. <https://doi.org/10.1080/08941920.2018.1544679>
- McDermott, C., Cashore, B., & Kanowski, P. (2010). *Global environmental Forest policies: An international comparison*. Earthscan.
- McDermott, C. L. (2014). REDDuced: From sustainability to legality to units of carbon—The search for common interests in international forest governance. *Environmental Science and Policy*, 35, 12–19. <https://doi.org/10.1016/j.envsci.2012.08.012>
- McDermott, C. L., Acheampong, E., Arora-Jonsson, S., Asare, R., de Jong, W., Hirons, M., Khatun, K., Menton, M., Nunan, F., Poudyal, M., & Setyowati, A. (2019). Chapter 16 SDG 16: Peace, justice and strong institutions – A political ecology perspective. In P. Katila, C. J. P. Colfer, W. de Jong, G. Galloway, P. Pacheco, & G. Winkel (Eds.), *Sustainable Development Goals: Their Impacts on Forests and People* (pp. 510–540). Cambridge University Press.
- McDermott, M., Mahanty, S., & Schreckenberger, K. (2013). Examining equity: A multidimensional framework for assessing equity in payments for ecosystem services. *Environmental Science and Policy*, 33, 416–427. <https://doi.org/10.1016/j.envsci.2012.10.006>
- Menton, M., Larrea, C., Latorre, S., Martínez-Alier, S., Peck, M., Temper, L., & Walter, M. (2020). Environmental justice and the SDGs: From synergies to gaps and contradictions. *Sustainability Science*, 43(4), 686–616. <https://doi.org/10.1007/s11625-020-00789-8>
- Meyfroidt, P., de Bremond, A., Ryan, C. M., Archer, E., Aspinall, R., Chhabra, A., Camara, G., Corbera, E., DeFries, R., Díaz, S., Dong, J., Ellis, E. C., Erb, K. H., Fisher, J. A., Garrett, R. D., Golubiewski, N. E., Grau, H. R., Grove, J. M., Haberl, H., ... zu Ermgassen, E. K. H. J. (2022). Ten facts about land systems for sustainability. *Proceedings of the National Academy of Sciences*, 119, e2109217118.
- Muradian, R., & Martínez-Alier, J. (2001). Trade and the Environment: From a 'Southern' Perspective. *Ecological Economics*, 36(2), 281–297. [https://doi.org/10.1016/S0921-8009\(00\)00229-9](https://doi.org/10.1016/S0921-8009(00)00229-9)
- Myers, R., Rutt, R., McDermott, C. L., Maryudi, A., Acheampong, E., Camargo, M., & Cam, H. (2020). Imposing legality: Hegemony and resistance under the EU Forest law enforcement, governance, and trade (FLEGT) Initiative. *Journal of Political Ecology*, 3, 1–22.
- Nasser, F., Maguire-Rajpaul, V. A., Dumenu, W. K., & Wong, G. Y. (2020). Climate-smart cocoa in Ghana: How ecological modernisation discourse risks side-lining cocoa smallholders. *Frontiers in Sustainable Food Systems*, 4, 73.
- Nawir, A. A., & Santoso, L. (2005). Mutually beneficial company-community partnerships in plantation development: Emerging lessons from Indonesia. *International Forestry Review*, 7(3), 117–192. <https://doi.org/10.1505/for.2005.7.3.177>
- NCRC, IUCN, World cocoa foundation, & partnerships for forests, (2020). Learning about cocoa landscape approaches: Ghana guidance document & toolbox.
- Neimark, B., Childs, J., Nightingale, A. J., Cavanagh, C. J., Sullivan, S., Benjaminsen, T. A., & Harcourt, W. (2019). Speaking power to “post-truth”: Critical political ecology and the new authoritarianism. *Annals of the American Association of Geographers*, 109(2), 613–623.
- Nepstad, D., McGrath, D., Stickler, C., Alencar, A., Azevedo, A., Swette, B., ... Hess, L. (2014). Slowing Amazon deforestation through public policy and interventions in beef and soy supply chains. *Science*, 344(6188), 1118–1123.
- Nielsen, J., de Bremond, A., Roy Chowdhury, R., Friis, C., Metternicht, G., Meyfroidt, P., Munroe, D., Pascual, U., & Thomson, A. (2019). Toward a normative land systems science. *Current Opinion in Environmental Sustainability*, 38(June), 1–6. <https://doi.org/10.1016/j.cosust.2019.02.003>
- Norris, K., Asase, A., Collen, B., Gockowski, J., Mason, J., Phalan, B., & Wade, A. (2010). Biodiversity in a forest-agriculture mosaic - the changing face of West African rainforests. *Biological Conservation*, 143, 2341–2350. <https://doi.org/10.1016/j.biocon.2009.12.032>
- Nussbaum, M. C. (2011). *Creating capabilities*. Harvard University Press.
- NYDF AP (Assessment Partners). (2019). Protecting and restoring forests: A story of large commitments yet limited progress. New York declaration on forests five-year assessment report. Edited by climate focus.
- O'Brien, K. (2018). Is the 1.5°C target possible? Exploring the three spheres of transformation. *Current Opinion in Environmental Sustainability*, 31, 153–160.
- Obura, D. O., Katerere, Y., Mayet, M., Kaelo, D., Msweli, S., Mather, K., Harris, J., Louis, M., Kramer, R., Teferi, T., Samoilys, M., Lewis, L., Bennie, A., Kumah, F., Isaacs, M., & Nantongo, P. (2021). Integrate biodiversity targets from local to global levels. *Science*, 373, 746–748.
- Odijie, M. (2019). Environmental change and normalization of cash crop systems in Africa: Preventing agrarian change in West Africa cocoa. *International Journal of Sustainable Development & World Ecology*, 26(7), 597–611.
- Odijie, M. E. (2018). Sustainability winners and losers in business-biased cocoa sustainability programmes in West Africa. *International Journal of Agricultural Sustainability*, 16(2), 214–227.
- Ostrom, E., Janssen, M. A., & Anderies, J. M. (2007). Going beyond panaceas. *Proceedings of the National Academy of Sciences*, 104, 15176–15178.
- Parry, E. (2019). Unity through diversity: A study of a pan-Asian interfaith climate change network. Dissertation, University of Oxford.
- Pascual, U., Phelps, J., Garmendia, E., Brown, K., Corbera, E., Martin, A., Gomez-Baggethun, E., & Muradian, R. (2014). Social equity matters in payments for ecosystem services. *BioScience*, 64(11), 1027–1036. <https://doi.org/10.1093/biosci/biu146>

- Pelling, M., O'Brien, K., & Matyas, D. (2014). Adaptation and transformation. *Climatic Change*, 133(1), 113–127. <https://doi.org/10.1007/s10584-014-1303-0>
- Peluso, N. L., & Vandergeest, P. (2001). Genealogies of the political forest and customary rights in Indonesia, Malaysia, and Thailand. *Journal of Asian Studies*, 60, 761–812.
- Pereira, E., Ferreira, P. J., Ribeiro, L. C., Carvalho, T., & Pereira, H. B. (2019). Policy in Brazil (2016–2019) threaten conservation of the Amazon rainforest. *Environmental Science & Policy*, 100, 8–12. <https://doi.org/10.1016/j.envsci.2019.06.001>
- Pichler, M. (2013). People, Planet & Profit: Consumer-oriented hegemony and power relations in palm oil and Agrofuel certification. *The Journal of Environment & Development*, 22(4), 370–390. <https://doi.org/10.1177/1070496513502967>
- Poteete, A. R., & Ribot, J. C. (2011). Repertoires of domination: Decentralization as process in Botswana and Senegal. *World Development*, 39(3), 439–449.
- Rawls, J. (1971). *A theory of justice*. Harvard University Press.
- Raworth, K. (2017). *Doughnut economics: seven ways to think like a 21st-century economist*. Random House. ISBN 978-184794138-1.
- Ribot, J. C., & Peluso, N. L. (2003). A theory of access. *Rural Sociology*, 68(2), 153–181. <https://doi.org/10.1111/j.1549-0831.2003.tb00133.x>
- Roberts, C. M., O'Leary, B. C., & Hawkins, J. P. (2020). Climate change mitigation and nature conservation both require higher protected area targets. *Philosophical Transactions of the Royal Society B*, 375(1794), 20190121. <https://doi.org/10.1098/rstb.2019.0121>
- Roberts, J. T., & Parks, B. C. (2009). Ecologically unequal exchange, ecological debt, and climate justice: The history and implications of three related ideas for a new social movement. *International Journal of Comparative Sociology*, 50(3–4), 385–409. <https://doi.org/10.1177/0020715209105147>
- Rodriguez, I. (2017). Linking well-being with cultural revitalization for greater cognitive justice in conservation: Lessons from Venezuela in Canaima National Park. *Ecology and Society*, 22(4), 24. <https://doi.org/10.5751/es-09758-220424>
- Rogelj, J., Popp, A., Calvin, K. V., Luderer, G., Emmerling, J., Gernaat, D., Fujimori, S., Strefler, J., Hasegawa, T., Marangoni, G., Krey, V., Kriegler, E., Riahi, K., van Vuuren, D. P., Doelman, J., Drouet, L., Edmonds, J., Fricko, O., Harmsen, M., ... Tavoni, M. (2018). Scenarios towards limiting global mean temperature increase below 1.5 °C. *Nature Climate Change*, 8(4), 325–332.
- Rounsevell, M. D., Harfoot, M., Harrison, P. A., Newbold, T., Gregory, R. D., & Mace, G. M. (2020). A biodiversity target based on species extinctions. *Science*, 368(6496), 1193–1195.
- Scharmer, C. O. (2009). Theory U: Leading from the future as it emerges: The social technology of presencing. (S. for O. Learning & SoL, Eds.). San Francisco, CA: San Francisco: Berret-Koehler.
- Schreckenberg, K., Mace, G., and Poudyal, M. (2018). *Ecosystem Services and poverty alleviation: Trade-offs and governance*. <https://www.taylorfrancis.com/books/e/9780429016295>
- Schumacher, E. F. (1999). *Small is beautiful: Economics as if people mattered*. Hartley & Marks Publishers.
- Scoones, I., Stirling, A., Abrol, D., Atela, J., Charli-Joseph, L., Eakin, H., Ely, A., Olsson, P., Pereira, L., Priya, R., van Zwanenberg, P., & Yang, L. (2020). Transformations to sustainability: Combining structural, systemic and enabling approaches. *Current Opinion in Environmental Sustainability*, 42, 1–11. <https://doi.org/10.1016/j.cosust.2019.12.004>
- Sen, A. (2004). Elements of a theory of human rights. *Philosophy & Public Affairs*, 32(4), 315–356.
- Setyowati, A., & McDermott, C. L. (2017). Commodifying legality? Who and what counts as legal in the Indonesian Wood trade. *Society and Natural Resources*, 30(6), 750–764. <https://doi.org/10.1080/08941920.2016.1239295>
- Seymour, F. & Busch, J. (2016). Why forests? Why now?: The science, economics, and politics of tropical forests and climate change, Ebook central. Washington, District of Columbia: Center for Global Development.
- Sherwood, S., van Bommel, S., & Paredes, M. (2016). Self-organization and the bypass: Re-imagining institutions for more sustainable development in agriculture and food. *Agriculture*, 6(4), 66.
- Soares-Filho, B., Rajão, R., Macedo, M., Carneiro, A., Costa, W., Coe, M., Rodrigues, H., & Alencar, A. (2014). Cracking Brazil's Forest code. *Science*, 344, 363–364.
- Stirling, A. (2009). Direction, distribution and diversity! Pluralising progress in innovation, sustainability and development. STEPS working paper 32, Brighton: STEPS Centre.
- Taylor, L. (2017). What is data justice? The case for connecting digital rights and freedoms globally. *Big Data & Society*, 4(2), 2053951717736335. <https://doi.org/10.1177/2053951717736335>
- Teye, J. K. (2010). Policy networks and Forest resource Management in Ghana. *Ghana Journal of Geography*, 2, 137–161.
- United Nations. (2015). Sustainable development goals. <https://sdgs.un.org/goals>
- United Nations. (2021). Glasgow Leaders' declaration on forests and land use. UN Climate Change Conference (COP26) at the SEC. Glasgow, UK.
- UNFCCC. (2015). *Adoption of the Paris agreement, 21st conference of the parties*. United Nations Framework Convention on Climate Change.
- UNFCCC. (1992). *United nations framework convention on climate change*.
- Vancutsem, C., Achard, F., Pekel, J. F., Vieilledent, G., Carboni, S., Simonetti, D., Gallego, J., Aragão, L. E. O. C., & Nasi, R. (2021). Long-term (1990–2019) monitoring of Forest cover changes in the humid tropics. *Science Advances*, 7(10), eabe1603. <https://doi.org/10.1126/sciadv.abe1603>
- Walker, N. F., Patel, S. A., Kalif, K. A. B., Chow, J., Doria, G., Kramer, R., & Stoike, J. (2013). From Amazon pasture to the high street: Deforestation and the Brazilian cattle product supply chain. *Tropical Conservation Science*, 6(3), 446–467.
- Wyborn, C., Datta, A., Montana, J., Ryan, M., Leith, P., Chaffin, B., Miller, C., & van Kerkhoff, L. (2019). Co-producing sustainability: Re-ordering the governance of science, policy, and practice. *Annual Review of Environment and Resources*, 44, 3.1–3.28.
- Wyborn, C., Montana, J., Kalas, N., Clement, S., Davila, F., Knowles, N., Louder, E., Balan, M., Chambers, J., Christel, L., Forsyth, T., Henderson, G., Izquierdo Tort, S., Lim, M., Martinez-Harms, M. J., Merçon, J., Nuesiri, E., Pereira, L., Pilbeam, V., ... Ryan, M. (2021). An agenda for research and action towards diverse and just futures for life on earth. *Conservation Biology*, 35, 1086–1097.
- Zion Market Research. (2018). *Chocolate market by type of chocolate (dark, milk, and white) and by sales category (everyday chocolate, premium chocolate, and seasonal chocolate): Global industry perspective, comprehensive analysis, and forecast, 2017–2024*. <https://www.zionmarketresearch.com/report/chocolate-market>

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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