Unearthing the myths of global sustainable forest governance

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Non-technical summary

Despite efforts to address the global forest crisis, deforestation and degradation continue, so we need to urgently revisit possible solutions. A failure to halt the global forest crisis contributes to climate change and biodiversity loss and will continue to result in inequalities in access to, and benefits from, forest resources. In this paper, we unpack a series of powerful myths about forests and their management. By exposing and better understanding these myths and what makes them so persistent, we have the basis to make the social and political changes needed to better manage and protect forests globally.

Technical summary

There is increasing recognition in the scientific community that environmental problems such as climate change are not just technological or engineering problems, but part of an ideational crisis. One particularly dominant idea is that sustainability problems can be solved by treating them as predominantly economic problems to be solved by market-based instruments or by mobilizing enough financial resources. In this article, we suggest that ideas like these are not only challenged by available scientific evidence about the best way to tackle the global forest crisis, but also produce socio-institutional lock-ins. We examine various myths underlying these lock-ins and show how they create barriers to transformations towards global forest sustainability. In the context of the UN Sustainable Development Goals, we ask why we are stuck with seemingly ineffective and inequitable approaches to global forest governance. We examine deforestation and some of the currently discussed policy solutions such as carbon forestry, Reducing Emissions from Deforestation and Forest Degradation (REDD+) and private forest governance. We aim to unearth these myths and explore their consequences, warning that, in many contexts, their prevalence may preclude other solutions that might be more effective. Finally, we consider the transformative changes that are needed to unlock these lock-ins through a combination of 'counteractions' for sustainable forest governance.

Social media summary

Myths about the global forest crisis need to be disrupted to sustainably govern and protect forests globally.

1. Introduction

In the context of the Paris Agreement and the UN Sustainable Development Goals (SDGs), there is increasing emphasis on technologies and approaches that raise ambitions for the sustainable governance of forests. The SDGs underscore the importance of interconnectivity and holistic strategies for more sustainable forest governance. Nonetheless, conventional approaches to governing forests predominantly focus on establishing and protecting private property rights, creating markets and mobilizing private finance, and they fail to effectively – and equitably – address the underlying drivers of deforestation.

The combination of meaningful alternatives that would transform forest governance is increasingly unclear. What sustains hegemonic practices associated with forest governance and what can be done to challenge them? Given the current debates around the potential of forests to address the climate crisis (Bastin *et al.*, 2019; Lewis *et al.*, 2019; Veldman *et al.*, 2019), it is timely and necessary to reflect on what we know already and how forest governance is locked-in by discursive, institutional and material expressions of power premised upon an

historical colonial legacy that enables private investments in forest lands and the exploitation of forest resources around the world.

We identify five persistent myths in forest governance: (1) states manage forests independently for societal benefit; (2) sustainable forest management is threatened by small-scale farmers and people seeking a living on the forest margins; (3) markets are the solution to deforestation and forest degradation; (4) what is counted – through valuation – counts; and (5) sustainable forest governance initiatives currently 'include' local communities in decision-making. These five myths are associated with five types of 'lock-in' that form part of a broader ideological framework based on power dynamics. These 'lock-ins' constitute path-dependent processes supported by the alignment of actors, materialities and practices with vested interests in system preservation and growth (Arthur, 1989; Hughes, 1987). Thus, lock-ins maintain particular worldviews and the unsustainability of current practices and their governance.

Unlocking these lock-ins requires critically examination of the myths that currently inform the status quo and that dominate in problem definition and policy responses to the global forest crisis. Identifying and pointing to alternatives to these myths based on already available, yet ignored, evidence can challenge current thinking and open new debates and perspectives on transformational action. Our identification of these five myths does not mean that we consider them necessarily 'untrue', but that we consider them to be partial and incomplete, serving particular interests and political dynamics while side-lining alternative explanations or solutions that might lead to more desirable or effective outcomes. Unearthing these myths and examining how they are reflected in current policy and practice is an important first step in countering the impacts of these myths on unsustainable forms of forest governance.

2. Forest governance discourses, myths and lock-ins

Underlying the definition of a problem such as deforestation – as well as the proposal, design and practice of 'solutions' such as carbon forestry, Reducing Emissions from Deforestation and Forest Degradation (REDD+) and private forest governance – is the creation and discarding of particular meanings (Dryzek, 1997; Hajer & Versteeg, 2005). As sets of ideas, concepts or categorizations, discourses represent dominant perspectives and knowledge regimes through which meaning is given to physical and social realities (Arts *et al.*, 2010; Hajer, 1995). The dominance of certain discourses and narratives in global forest politics supports and strengthens the conditions for business as usual (Nielsen, 2014; Zelli *et al.*, 2019).

As with discourses, myths assume a 'common sense', apolitical and neutral status (Essebo, 2018), which means they can be used effectively to justify particular political interventions. Myths can be understood as naturalized stories that persist over time that "reflect ideology, alleviate anxiety, and guide everyday practices" (Essebo, 2018, p. 1), representing "ideology in narrative form" (Lincoln, 1999, p. xii). Myths are not false by definition, but truth and its (complex) properties are irrelevant (Essebo, 2018; Hall, 2006). "Myths draw their power from belief, not facts, and cannot be disputed by logical arguments or syllogism. Instead, the myth relies on its own, internal logic; a taken-for-granted logic which is beyond questioning" (Essebo, 2013, p. 6), allowing for dominant beliefs and actions to permeate social order and change (Overing, 1997, p. 10; cf., Essebo, 2013). The way myths can bring some people together while excluding others, or reinforce existing hierarchies, amplifying the voice of who is

telling the story and marginalizing critical or dissenting voices, is crucial to their perpetuation. Studying myths, and the associated discourses that underpin them, sheds light on how argumentative struggles take place over the 'right' problem definition, framing and solution (Fischer & Gottweiss, 2012, p. 11). The myth, as a shared and taken-for-granted societal belief, naturalizes, legitimizes and guides the everyday perpetuation of the lock-in as it is accepted by society (Essebo, 2013).

Unearthing myths that are taken for granted helps to expose complexities and open up debate on more sustainable and equitable ways forward. In the following sections, we examine five myths and associated lock-ins and reflect on opportunities for moving beyond them. Transformations need to happen at different levels. Systems thinking explains how lock-ins are perpetuated across scale, but also helps to identify the opportunity for counteractions in between the spaces and across the scales of myth-making.

3. Where are we now? The current state of global sustainable forest governance

Various international environmental regimes seek to address deforestation, such as the UN Framework Convention on Climate Change (UNFCCC) and the UN Forum on Forests. Among the SDGs, Target 15.2 states that, by 2020, we need to "promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally" (UN General Assembly, 2015). Global sustainability governance frames forests as 'natural capital' or 'carbon sinks' (Lövbrand & Stripple, 2011; Zelli *et al.*, 2013), and interventions emphasize market-based solutions (e.g., payments for ecosystem Services (PES), certification standards, industry alliances and company pledges for sustainable sourcing) and multi-sectoral partnerships, including national and regional governments, multinational companies, civil society and indigenous peoples (e.g., the 2014 New York Declaration on Forests, the Tropical Forest Alliance 2020 (TFA 2020) and the Governors' Climate and Forests Task Force). In addition, global mechanisms such as REDD+ and TFA 2020 promise triple-win solutions that deliver forest conservation, climate mitigation and poverty alleviation.

Despite the adoption of global commitments to forest protection by public, private and civil society stakeholders in recent years, deforestation and degradation continue unabated (Curtis *et al.*, 2018). While the accuracy and methodologies used in producing global datasets is debated (Pearce, 2018), up to 12 million hectares of tropical tree cover loss was recorded in 2018, including 3.6 million hectares of primary rainforest lost (World Resources Institute, 2019). Although important initiatives for forest governance already exist at national and local levels, our analysis offers a comprehensive assessment of systemic failures that naturalize dominant ideologies and guide practices in forest governance that impede effective solutions for halting deforestation and forest degradation.

4. Dominant myths in sustainable forest governance

4.1. Myth 1 – states manage forests independently for societal benefit: institutional/legal lock-in

States are ultimately responsible for the conservation, management and use of forests, and land and natural resources are exploited under claims of action in the 'national interest', 'public good' and in the name of 'development' for societal benefit. However, states

are not wholly independent institutions autonomous from other interests, and forestlands are governed by powerful actors – often working alongside, or influencing, government agencies at different levels – who have strong interests in how they are exploited or protected, and on whose behalf (Ding *et al.*, 2016; Stevens *et al.*, 2014; Sunderlin *et al.*, 2008). Distinctions between state-owned and industry-owned, public and private, often poorly describe the everyday governance of forests by tightly knit social and economic networks of actors that transcend these categories. Work on forests in Southeast Asia (Dauvergne, 1998) and globally (Humphreys, 1996) shows a murky political economy at work where corruption, lack of transparency, violence and dispossession are the norm. This is often sustained by family-based, clientelist and patronage networks where timber industries – and agribusiness driving deforestation – are either owned by state officials ostensibly charged with their regulation and management or payments are made by private actors to those with responsibility for forestry stewardship to influence their decisions. Although these problems are often particularly acute in many developing country settings, which presents particular challenges for initiatives such as REDD+ (Kronenberg *et al.*, 2015), the concentration of land in the hands of elites is a worldwide phenomenon (e.g., in England, less than 1% of the population controls over half of the land; Shrubsole, 2019) that creates significant obstacles to the pursuit of equitable and sustainable forest governance in relation to the SDGs.

This murky political economy extends beyond intra-elite transactions at the national and international level. It also prevails at the local level, around the conduct of consultations and the exercise of supposedly free, prior and informed consent (FPIC) used, for example, in gaining consent for land acquisitions for plantation agriculture. Although the success of private supply chain sustainability initiatives depends upon clear property rights, including the recognition of local and customary land tenure rights (Lambin *et al.*, 2018), as instruments, they have also created new forms of land enclosures in some cases (Johnson, 2014). In the case of the Clean Development Mechanism (CDM), REDD+ specifically and carbon forestry more broadly, this has resulted in conflicts in places as diverse as Uganda (Bachram, 2004, Cavanagh & Benjaminsen, 2014; Edstedt & Carton, 2018), Mexico and Bolivia (Leach & Scoones, 2015) and Southeast Asia (Corbera *et al.*, 2017; Howson, 2018; Milne *et al.*, 2019). In contexts of high inequality, low levels of literacy and an absence of accountability to and within communities, scope for corruption, misinformation and appropriation of forest land is rife. Although REDD+ has been found to draw attention to local and customary tenure rights, interventions have been largely piecemeal and insufficient in the absence of broader land tenure reform that disrupts business as usual (Corbera & Schroeder, 2010; Larson *et al.*, 2013; Weatherley-Singh & Gupta, 2015).

Undoing this lock-in means moving away from assumptions about the neutrality and independence of the state from the forestry industries and agribusiness interests it has to regulate and an uncritical approach to property rights in forest governance. Regulatory gaps, institutional fragmentation and lack of coordination and conflicts in relation to land-use rights and responsibilities must be taken into account before agreeing and implementing multilateral tools, policies and measures. In the first instance, this implies greater scrutiny over transactions in the forest sector by following the money and over records of ownership, payment of taxation and distribution of benefits from the exploitation of forests and forest products. This would help to address the paucity of information about ownership and property

regimes. Over time, it implies addressing the far more contested and thorny politics of access and (re)distribution of forested land. Despite the rhetoric of the World Bank about the prospects of a "smooth evolution from communal to private property regimes" (World Bank, 2003, 3.22; see also Mousseau, 2019), in reality this transition has been far from 'smooth', igniting struggles – often violent – the world over (Hecht & Cockburn, 2010) whether between the Landless Workers' Movement (Movimento dos Trabalhadores Sem Terra) and the *latifundi* landowners in Brazil, or over forest clearance in Argentina for soy production (Newell, 2009), or attempts to uphold tribal rights over forests in India. Many deaths around the world of environmental defenders are of people from poorer communities defending their forests (Global Witness, 2017). Moreover, forest lands held under formal and customary communal land tenure are often better protected and have lower rates of deforestation than state-owned or private forest lands, thus questioning the effectiveness of individual property rights in addressing deforestation (Blackman *et al.*, 2017; Ding *et al.*, 2016; Garnett *et al.*, 2018).

4.2. Myth 2 – sustainability is threatened by small-scale farmers and people seeking a living on the forest margins: social lock-in

Alarmist discourses simplistically blame local people for deforestation (Boyd, 2009; Thompson *et al.*, 2011), without paying attention to the broader political economy or the complex underlying social drivers of deforestation (Agrawal & Angelsen, 2009). Such narratives have persisted for decades and are often rooted in colonial policies to control upland farmers and agrarian revolutions, despite being frequently challenged (Forsyth, 1994). These colonial policies not only relate to North–South trade and investment relations (e.g., Galaz *et al.*, 2018), but are very much implicit in national policies and institutional structures around land and forest use, tenure systems and concession models (Galudra & Sirait, 2009; Ongolo *et al.*, 2018; Peluso & Vandergeest, 2001).

The ways in which drivers of deforestation are understood have significant implications for how problems are addressed. By treating smallholders as inefficient, unproductive and backward, policy-makers allow agricultural intensification and the promotion of the large-scale production of a few 'profitable' commodities (Ravikumar *et al.*, 2016). While large-scale land conversion for agricultural commodities is a significant driver of deforestation (Curtis *et al.*, 2018), proposed policy instruments, such as within REDD+ (Salvini *et al.*, 2014; Skutsch & Turnhout, 2020) and through private governance arrangements such as TFA 2020, corporate and jurisdictional zero-deforestation commitments, sustainability roundtables, certifications and standards (Austin *et al.*, 2017; Garrett *et al.*, 2019; Gibbs *et al.*, 2016) are not matching this scale of land-use change. Targeting local communities is perhaps politically easier than tackling powerful large-scale drivers of deforestation such as the increasing contribution of large-scale commercial agriculture observed in Cameroon and anticipated in the Democratic Republic of the Congo (Tyukavina *et al.*, 2018). These drivers are often tied to ruling parties and state officials and dominant development ideologies (Cole *et al.*, 2017, Thaler & Anandi, 2017), as we see in an extreme way in Brazil today under Bolsonaro. Notwithstanding a recognition that in some contexts small- and medium-scale farmers do cause deforestation (Curtis *et al.*, 2018), the persistence of prevailing discourses by private, public and civil society actors and in private governance initiatives (Daubach, 2019; WWF International,

2017) that blame small-scale farming for forest degradation and deforestation obscures diverse drivers that require more appropriate and diverse policy responses (Curtis *et al.*, 2018; Leach & Mearns, 1996; Pendrill *et al.*, 2019). In contexts where farmers do cause deforestation, it is important to understand these dynamics in the context of persistent poverty, displacement and marginalization within national, regional and global market dynamics. Addressing the underlying drivers behind why local communities resort to deforestation requires more substantial social and economic transformation than is offered by the narrow focus of many forest and development policies.

Such political and social lock-ins are produced and reproduced by different ways of governing at different scales, including through the internalization by local communities of dominant political and economic discourses. While faced with the moral burden of the assumptions of local deforestation in REDD+, local communities also seek alignment with global carbon forestry discourses to resist land dispossession by the state for infrastructure development (Asiyanbi *et al.*, 2019), and communities are invoked both as beneficiaries and implementation agents (Skutsch & Turnhout, 2018). This opens up opportunities for participation and for communities to take advantage of dominant framings and access knowledge and resources (Erb, 2012), but it also contributes to lock-ins and the side-lining of alternatives.

Undoing political and social lock-in requires significant shifts in narratives through alternative counter-framing based on transparent and scientific analyses (e.g., for assessments of deforestation drivers), which emphasize notions of environmental justice, ecological sustainability, equity and local knowledge systems (Nielsen, 2014). These discourses are currently often dominated by powerful voices defending the status quo, and hence successful strategies to overcome these lock-ins might also require shifts in power and strategic coalition-building (Brockhaus *et al.*, 2014). Discursive diversity and complexity should be embraced rather than simplified (Arts *et al.*, 2010). New discursive spaces would accept more open and plural narratives, allow for serious consideration of alternatives to current forest governance mechanisms and ask questions that go beyond retrofitting existing approaches. This could be done by involving a wider range of forest-dependent communities in the co-production of such assessments, as well as discussions about their implications.

4.3. Myth 3 – markets are the solution to deforestation and forest degradation: economic lock-in

Contemporary approaches to forestry often demonstrate a commitment to ecological modernization, which assumes that economic growth and environmental protection are compatible and that ecological degradation can be decoupled from economic growth (Arts *et al.*, 2010; Bäckstrand & Lövbrand, 2006). Technocratic governance mechanisms and voluntary sustainability standards promise a 'win–win–win' scenario where the complexities of deforestation are managed in a 'synergetic' and 'cost-effective' way (Cashore *et al.*, 2003; Nielsen, 2014). This narrative is also prevalent in the TFA 2020, which actively promotes the idea of forests providing a 'triple win' of eliminating deforestation, boosting agricultural productivity and reducing poverty (Weber & Partzsch, 2018). Arguably, however, the 'sustainable intensification' narrative is then used to promote increased productivity of export commodities, which may exclude considerations of alternative agricultural production systems (Spann, 2017). A commitment to neoliberal governance also means that forest politics at times

seem reduced to a question of finance; to the idea that what is lacking is above all more funding, or new and innovative ways to make forest conservation pay for itself through PES. Commonly sidelined in this voluntary, financialized approach are governance tools that directly regulate offending industries or recognize the structural drivers of deforestation.

The persistence of this myth is evident in the emphasis on market mechanisms in forest politics. Since the establishment of the Kyoto Protocol's flexibility mechanisms, the promise that ecosystem markets can help deliver much-needed financial investments in forest conservation has dominated the political debate. Underlying this is the argument based on neoliberal theories in environmental economics (Carton, 2018), that simply internalizing the environmental costs and benefits of (avoided) deforestation will conserve forests and steer the sector in a more sustainable direction. By pricing forests and the ecosystem services they provide, their value can be compared and equated with other economic losses and benefits and their protection relies on demand for their services. If the gains from deforestation outweigh those of preservation, we are left with very little basis to contest their destruction.

Despite the perceived efficiency of market-based solutions to pre-empt or avoid costly or ineffective regulations (Gulbrandsen, 2004; Jones *et al.*, 2008), the implementation of market approaches is highly technical and bureaucratic. For example, in order to enact supply chain zero-deforestation initiatives, experts, consultants, third parties and review panels are enrolled into forest governance, responsible for setting technical requirements, with the promise of ensuring independence and objectivity. In this complex assemblage, new (private) actors are made responsible for forest governance. The voluntary nature of market-based forest governance initiatives presents an important challenge for accountability, and their effectiveness is strengthened in favourable institutional and governance contexts (Garrett *et al.*, 2019; Lambin *et al.*, 2014). Furthermore, supply chain initiatives could also be used by lead firms to support a "sustainability-driven supplier squeeze" whereby corporations address sustainability issues in ways that facilitate continuous capital accumulation (Ponte, 2019, p. 16).

The emergence of market-based mechanisms is often argued to result from the failings of existing state-led and regulatory initiatives. Yet, the legacy of PES or forest-based carbon offsetting projects highlights significant shortcomings and obstacles to implementation and ensuring the overall sustainability of market-based forest projects (Corbera & Schroeder, 2017; Edstedt & Carton, 2018; Fairhead *et al.*, 2012; Milne *et al.*, 2019). Real-world market mechanisms often end up looking very different from how they were originally conceived. REDD+, for example, has largely transformed from what was meant to be a market in forest carbon credits into a more institutional, nation-scale approach (Angelsen *et al.*, 2017), and PES has evolved into more hybrid forms that are not 'purely' neoliberal in nature (Van Hecken *et al.*, 2018). These shifts are in essence made by local actors (state, community, civil society), demonstrating variegated ways and degrees to which the PES model has been adapted from its original neoliberal model to fit different contexts, ontologies and purposes (Shapiro-Garza *et al.*, 2019). Despite the development of increasingly complex forms of forest governance mechanisms, as well as their shortcomings, the commitment to ecosystem markets remains alive, as illustrated in the ongoing development of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) mechanism for airline industry emissions and the establishment of a follow-up mechanism to

the Clean Development Mechanism (CDM) in the Paris Agreement. Ongoing efforts to 'fix' and resuscitate failing market-based mechanisms may distract from consideration of alternative and potentially more effective forms of forest governance.

Undoing this lock-in requires explicit acknowledgment of the political character of both deforestation drivers themselves and of the various solutions that are proposed to address them. Similar to countering the first myth, embracing the political character of forest governance would question the logic behind financializing nature and the reducibility of forest protection to a market transaction when natural resource-dependent and alternative livelihoods of many of the world's poor are at stake. Opening up discussions of valuation can potentially create spaces for engagement, negotiation, conflict and debate over how (and if) it takes place (Shapiro-Garza *et al.*, 2019; Sikor & Newell, 2014). Questions of who leads such processes, who is engaged and what is being valued are, therefore, of critical importance for avoiding the flattening of non-human nature for commodity capture, as is seen in predominantly outsider and expert-led valuations (Büscher *et al.*, 2012). It is thus critical that policy-makers, researchers and civil society call out powerful interests and prevailing business practices and question their supposed sustainability initiatives rather than seeking to accommodate them.

4.4. Myth 4 – what is counted – through valuation – counts: (a)political lock-in

Carbon accounting portrays forests as 'carbon sinks', where calculative practices turn stocks and flows of carbon into objects of governance (Lövbrand & Stripple, 2011). Although there are hundreds of definitions for forests, those used in policy mainly define forests based on lands covered by trees with a tree canopy cover of a minimum of 10–30%, or even as 'zones' in land-use planning. Thus, forests are effectively rendered a sum of trees that provide resources (e.g., timber, carbon storage or leisure spaces). Most mainstream forest definitions do not consider forests as social-ecological systems (Messier *et al.*, 2015), with few definitions referring to forests as ecosystems containing fauna. Rarer still are definitions that include people (Lund, 2014), invoking myths of an untouched wilderness or the 'Garden of Eden', effectively separating people from forests and rendering forest governance a merely technical (Li, 2007) rather than social issue.

These definitional issues also plague corporate-led efforts to address deforestation. The proliferation of corporate 'zero deforestation' in recent years demonstrates the growing attention and ambition of corporate actors to deforestation in their supply chains. However, such commitments are extremely complex to implement in practice (Lyons-White & Knight, 2018), and the commitments vary significantly on issues as critical as the definition of 'forests' and 'deforestation', implementation mechanisms and success metrics (Garrett *et al.*, 2019). This ambiguity makes it difficult to evaluate their efficacy in reducing deforestation in commodity supply chains. Treating the definition of forests as a technical rather than political problem has led to the emergence of increasingly complex methodologies being developed through extensive (elite) consultative processes to undertake land-use zoning for agricultural expansion and environmental protection (Rosoman *et al.*, 2017), which can then be audited against. In the palm oil sector, for example, the High Carbon Stock approach frames environmental protection as the result of conflicting land uses and the need to maximize the utility of a particular concession, thus obfuscating conflicting forms of valuations of the

environment, such as local dwellers' plural uses or attachments to place (Cheyns *et al.*, 2019).

Only recently has there been a shift towards a vision of earth stewardship that sees forests as complex adaptive systems in which resilience is linked with society (Chazdon *et al.*, 2016). Yet, forest governance at national levels, such as in Sweden (Lindahl *et al.*, 2017), often maintains a technical and bureaucratic view of forests and neglects a social-ecological systems perspective. Within REDD+, technical and bureaucratic views of forests have become more prominent, and most of the reporting, measuring and verification (MRV) methods are cases in point. Current MRV methods predominantly focus on units of carbon stored or hectares of tree cover preserved, which risks side-lining local peoples' rights to access and use of forest products, but these are also weak indicators of the ecological quality of a forest, which still constitutes a viable habitat for forest fauna (Krause & Nielsen, 2019).

Interlinkages between local populations, forests and forest biodiversity are highly contextual and anchored in the profoundly different ways in which forests are viewed, used and experienced. Forest governance is reduced to bureaucratic issues fixed by institutional coordination and the establishment of assessable socioenvironmental 'safeguards', including centralized and remotely sensed assessments of forests. The carbon storage mitigation potential of forests represents a major 'business case' for international organizations, national governments, companies and some non-governmental organizations involved in forest governance. In the quest to establish a common denominator and base value (i.e., the metric tons of carbon not emitted and stored in living and dead, above- and below-ground biomass), the multifunctionality of forest ecosystems and cultural meanings of forests risk are becoming less important to our collective understanding.

Expectations of REDD+ as a global project for environmental governance should not be consigned to this narrow view of what constitutes a forest and what makes sustainable forest governance important. Weakening the power of the myth of forests being measurable units of stored carbon or being untouched and people-free wildernesses is a first important step towards breaking the cognitive lock-in we are currently in. Global assessments such as the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services offer inspiration by adopting a plural-value lens that assesses the interdependence between nature and societies through more holistic approaches (IPBES, 2015).

4.5. Myth 5 – sustainable forest governance initiatives currently 'include' local communities in decision-making: social/procedural lock-in

Acknowledging the rights of women and indigenous and marginalized people in accessing and governing forests, REDD+ projects and supply chain sustainability initiatives often claim to involve local communities in decision-making on forest governance and land use through FPIC and community consultations. However, the ways in which such participation is conducted in practice – without being part of a wider political project – may pose new risks and exclusions and make local people responsible for the most difficult decisions and trade-offs (Airey & Krause, 2017; Collen *et al.*, 2016; Krause & Nielsen, 2014). Despite recognition of tokenistic processes of 'participation' in natural resource management, exclusions continue to occur, risking the further alienation of already marginalized communities and indigenous peoples (Airey & Krause, 2017) and social groups, foremost women (Khadka *et al.*, 2014; Larson *et al.*, 2015; Stiem & Krause, 2016; Westholm

& Arora-Jonsson, 2018). Viewing 'women' as "a homogenous and undifferentiated social category" risks depoliticizing gender (Elmhirst, 2011, p. 7), and while mainstream policy approaches focus on including more women, these emphasize the 'efficiency' of development practices that invest in women, as women are claimed to be 'closer to nature' (Leach, 2007).

Exclusions are also observed in land-use consultations in the palm oil sector in Indonesia (de Vos & Delabre, 2018), where participation practices required by supply chain sustainability initiatives interact with social and cultural norms and wider power dynamics. These are exemplary for contexts where large-scale monocrop expansion integrates the lands and resources of local and indigenous peoples into national and global markets, supported by policy narratives aligned with a pragmatic 'politics of development' that generate lucrative revenues not only for corporations, but also for politicians, bureaucrats and their allies (Cramb, 2011; Li, 2017). Participation is not just often tokenistic, but depoliticizes a political process (Cooke & Kothari, 2001) and occurs on contested grounds, responsibilizing individuals through processes of eco-governmentality (Goldman, 2001) and creating an 'eco-precariat' whereby participants take on disproportionate risks and precarious, low-wage and seasonal jobs (Neimark *et al.*, 2020).

The TFA 2020 and the 2014 New York Declaration on Forests, as transnational multi-stakeholder initiatives with strong goals around stopping deforestation, indigenous and local participation and protection of environmental rights defenders, may counteract this myth through the empowerment of new alliances of actors, bringing new possibilities for sustainability governance. Importantly, these initiatives help to raise awareness of the importance of inclusive governance. At the same time, these initiatives risk reinforcing existing inequalities, granting power over marginalized actors to secure consent for development projects and bringing about new conflicts and contestations as new complexities emerge. For example, global sustainability standard-setting fora that emphasize 'multi-stakeholder participation' risk legitimizing powerful groups that can exclude or suppress actors deemed 'too radical', 'too emotional' or non-technical (Cheyns, 2014; Von Geibler, 2013).

Unlocking this myth requires serious reflection on the invisible contributions of peoples' forest-based work, the different identities of groups and how peoples' roles intersect with social structures and the distribution of power (Stiem & Krause, 2016). It also requires a move away from framing women or indigenous peoples as either vulnerable or virtuous in relation to climate change and thus denying the possibility of agency (Arora-Jonsson, 2011; Lima *et al.*, 2020). Such reflection may require a lens of intersectionality as part of understanding underlying power relations within forest governance and discrimination against women and indigenous peoples (Colfer *et al.*, 2018; Djoudi *et al.*, 2016), as well as understanding that vulnerabilities change over time. A focus on intersectionality looks towards emerging proactive collaboration and movements (Colfer *et al.*, 2018), available institutions and support for challenging the myth that there are indeed equal opportunities for all. Progressive regulation, quotas, juries and access to education, which tackle prevailing discriminatory norms and rules, may help counteract these dimensions. There is a need to recognize the political nature of participatory processes as sites of knowledge production – rather than 'add-on' processes – and their important effects. Careful attention is needed to consider who is responsible for undertaking participatory practices, how and what options, futures and benefits are discussed. When isolated from a wider political project of empowerment, participation in forest governance at the local level risks strengthening historical and current exclusion and leading to erasures of complexities and diverse ways of knowing.

5. Unlocking transformations in forest governance

In attempting to address complex problems with 'simple' solutions, it is clear that all of these myths focus on specific aspects of what constitutes environmental forest and land-use problems and provide an isolated, inaccurate or insufficient answer to these. There is a need to analyse – more holistically – the problem and the outcomes of the responses, rather than ignoring, or attempting to simplify, the complexity of problems and solutions and the trade-offs that particular solutions imply for specific aspects of sustainability in complex and diverse contexts. Hence, the myths result in marginalizing or distracting efforts to understand the effects and outcomes of these particular myths on local people dealing with these complexities.

Unearthing these five myths raises the question of how to address and counter them. We reflect on how the myths generate a particular mind-set around forests and shape the nature of proposed solutions, and we then propose how understanding these can support the kinds of transformations needed.

The five myths demonstrate a particular set of lock-ins with effects including: lack of transparency; delegation of the burden of responsibility; persistence of dominant economic perspectives; undervaluation of complexity; and inequality between experts and non-experts or locals and outsiders (see Table 1). The myths reveal the construction and constitution of power and the dialectical relationship of the objective and subjective reality of power (Dreher, 2016) based on both material realities and subjective beliefs about forests and through actions of the actors in their governance. Power is a universal element of human existence, and it is present in all forms of social relationships, underpinning the formation of institutions and compliance to rules and norms. Institutions create forms of social control through patterns of conduct and sanctions that come with social rules and norms (Dreher, 2016). The five myths illustrate a mind-set of power focused on short-term gain and reveal the lack of reward for accountability or shared responsibility, lack of investment in alterative economic opportunities and lack of belief in complexity as a valued currency, or recognition of equality as a condition for successful collective solutions. Given that power is constructed, we also suggest that there is an opportunity to redress power imbalances through counteractions, thus also rebalancing the five myths in both material and subjective reality.

From our analysis, we provide a set of bullet points and proposed actions that would more likely bring about alternatives and a potential basis for transformation – although these are not to be misunderstood as representing a set of silver bullet recommendations. In isolation, none of these can deliver the required and desired change for sustainable forests and forestry. Taken together, they offer a way of challenging the status quo and changing the way we see and talk about forests to a more accurate picture and, thus, move beyond narrow definitions of the problem and towards solutions to global deforestation and forest degradation.

In redressing power, cross-cutting counteractions include combinations of the following empowerment and agency mechanisms:

- Regulation, law and legal frameworks based on the twin needs of sustainability and social justice. The SDGs such as SDG 15

Table 1. Summary of dominant myths in sustainable forest governance and counteractions.

Myth	Lock-in	Effects	(Counter)actions
'States manage forests independently for societal benefit'	Institutional/ legal lock-in	Corruption, collusion, nepotism, lack of transparency, violence, dispossession, state/ elite capture, privatization, access rights and decision-making power over forests and forestlands by local forest stewards are undermined	Scrutiny and transparency over forest sector transactions; registries of commercial links of state officials; defending environmental justice activists; engagement with broader politics of forest and land distribution and access
'Sustainability is threatened by small-scale farmers and people seeking a living on the forest margins'	Political/social lock-in	Delegation of burden of responsibility from powerful actors; inappropriate/simplistic policy measures; market exclusion	Nuanced analyses of deforestation drivers; encouraging discursive diversity and complexity; serious consideration of alternatives by involving forest dwellers in the co-production of assessments and decisions about their implications
'Markets are the solution to deforestation and forest degradation'	Economic lock-in	Persistence of market-based approaches; 'innovations' based on neo-classical economic assumptions; belief in 'win–win–win' neglects tensions and trade-offs	Development and enforcement of progressive laws and regulatory frameworks suited to context; dismantling of perverse incentives; diverse science-based and equitable policy responses that include non-economic values and criteria; strengthen business and government accountability for the Sustainable Development Goals; open up discussions of alternative livelihoods
'What is counted – through valuation – counts'	(A)political lock-in	Characteristics of forests, other than carbon or those that can be 'measured', are undervalued and/or 'added-on'; system complexity and forest governance rendered technical; lack of attention to other climate mitigation measures	Understanding forests as social-ecological systems; analyses of non-economic values of forests; plural lenses recognizing diverse indigenous and scientific knowledge and experiential knowledge
'Sustainable forest governance initiatives currently "include" local communities in decision-making'	Social/ procedural lock-in	Technical 'participatory' practices interact with existing inequalities, norms and power dynamics; risk further disempowerment of marginalized peoples	Law and legal frameworks that uphold rights of indigenous peoples, women and marginalized peoples; participatory practices forming part of a wider political project or empowerment; shift focus from 'the community' to heterogeneous communities

(life on land), SDG 10 (equality), SDG 5 (gender) and SDG 17 (partnership) aligned and holistically integrated could facilitate this. These are vital to the rights protection of vulnerable communities and to regulating the power of corporate actors and associated trade and finance regimes driving deforestation.

- Inclusive knowledge to generate more accurate and nuanced analyses of drivers of deforestation. This unity between science, indigenous knowledge, gendered understandings of forest politics and other alternative voices in proactive (counter)action provides opportunities for weakening the perpetuation of dominant myths by allowing for a variety of values, knowledges and cultures to inform forest policy.
- A more nuanced understanding of the myths, lock-ins and underlying fallacies surrounding forest politics can help inform activist strategies, private governance initiatives and demand-side policies in countries importing timber and commodities associated with deforestation (such as soya, palm oil and beef) that are sensitive to unintended consequences and complex drivers of deforestation.

6. Conclusion

Strengthening global forest governance for the more sustainable management and protection of forests is an urgent priority. Conventional policy approaches and framings, which often ignore the complex underlying causes of deforestation, are clearly not working. We have set out the limitations of dominant approaches to forest governance framed around a set of myths and lock-ins. These sets of myths and lock-ins continuously obscure complexities in forest governance, local realities and the heterogeneity in approaches and solutions needed for more sustainable forest governance. Furthermore, they close down debates on other potentially useful solutions. In an attempt to open up debate, for each lock-in we identified potentials for unlocking the current impasse. A combination of incorporating diversity, respecting different knowledges and actors, supporting resistance and bold institutional reform aimed at enhanced regulation and dealing with conflicts of interest when those driving deforestation are also charged with regulating it will lead to more sustainable and socially just global forest governance.

Conflicts of interest. The authors declare no conflict of interest.

Publishing ethics. The manuscript is our own original work and does not duplicate any other previously published work. The manuscript has been submitted only to the journal – it is not under consideration, accepted for publication or in press elsewhere. Manuscripts may be deposited on pre-print servers. All listed authors know of and agree to the manuscript being submitted to the journal; and the manuscript contains nothing that is abusive, defamatory, fraudulent, illegal, libellous or obscene.

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