



Forestry Decentralization in the Context of Global Carbon Priorities: New Challenges for Subnational Governments

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The recent emphasis on the role of tropical forests in facing climate change has made forest decentralization debates more relevant than ever. Discussions on multilevel governance, polycentricity, and nested approaches to governance surround the central question, ever more pertinent considering global environmental change, of who holds the mandate over forests. Different levels of government, as well as private and civil society actors (companies, non-governmental organizations (NGOs), indigenous peoples, and local communities), compete over the rights of ownership, administration, and management of forest landscapes—decisions with a crucial impact on land use, land use change and the future of forests. Understanding the relations among different levels of governance, and government specifically, is essential to understand how carbon forestry has engaged with decentralization and the role of subnational governments (SNGs) in developing practical land use solutions. We draw on current trends in the forestry decentralization literature to ask: (i) has carbon forestry opened new opportunities for SNGs to support the sustainable governance of forest landscapes? (ii) have meaningful powers been assigned to SNGs in support of democratic processes of decision-making over forest landscapes? and (iii) is carbon forestry influencing the relationships between levels of government in a way that challenges unequal power relations? By examining carbon forestry projects and forestry decentralization processes across five countries (Indonesia, Mexico, Peru, Tanzania and Vietnam) with carbon forestry initiatives, we demonstrate how the role of SNGs is circumscribed by existing forestry decentralization trends. Decentralization initiatives in recent decades have provided SNGs with new mandates to manage forests, but new attributions do not always imply meaningful powers. The implementation of carbon forestry projects is molded by pre-existing power relations that shape the impacts of forestry decentralization on livelihoods and forest ecosystems. We find that carbon forestry, with both centralizing and decentralizing tendencies, operates within the spaces left by existing power dynamics that mold the way transfers of power are put into practice. Jurisdictional approaches will need to negotiate with this context to be able to push forward sustainable pathways.

Keywords: decentralization, forestry, carbon forestry, governance, land use change

1. INTRODUCTION

Decentralization—and forestry decentralization in particular—was a hot topic in research and discourse in the 1990s and 2000s (Agrawal and Ribot, 1999; Colfer and Capistrano, 2005; Larson and Soto, 2008). As is common with such initiatives, decentralization in policy and practice has continued but with much less explicit attention. Decentralization was also confusing, and certainly not unidimensional, with tendencies to decentralize on paper but not in practice (Koch, 2017) or to recentralize while decentralizing (Ribot et al., 2006). Discussions on who participates in decision making nowadays focus more commonly on the concepts of multilevel governance (Di Gregorio et al., 2019) or polycentricity (Ostrom, 2010; Sunderlin et al., 2015). Yet decentralization is still highly relevant. With the current interest in “landscape” or jurisdictional approaches to mitigate emissions from land use change and support sustainable alternatives (Hsu et al., 2017; Reed et al., 2019), it is important to understand how carbon forestry¹ has engaged with and/or (re)shaped decentralization and the role of subnational governments (SNGs).

Jurisdictional approaches refer to integrated landscape initiatives that are led or overseen by government in the geographical area of a political jurisdiction (Boyd et al., 2018; Stickler et al., 2018a). This article is not based on a study of jurisdictional approaches *per se*, but it contributes to this special issue with data on government from comparative research on multilevel governance and landscape change². It asks, how do the relations between national and subnational governments support or inhibit the changes needed to address climate change?

Understanding the relations among different levels of governance, and government specifically, is essential to finding practical land use solutions (Larson and Petkova, 2011; Nagendra and Ostrom, 2012). Central governments are the legal parties to international agreements such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention for Biological Diversity (CBD), but changes in land use to support climate change mitigation need to happen in forest regions far from national capitals (Hickmann et al., 2017). Central governments often control investment policy, especially for infrastructure, subsoil resources, and the highest earning productive sectors of the economy. They set the nation’s goals for growth, alongside commitments for carbon emissions reductions.

SNGs may control or are likely to influence the implementation of national policies (Busch and Amarjargal, 2020). They may control land titling or different types of concessions, which can have important repercussions in land use. They are more likely to have a say over agriculture than protected areas (Agrawal, 2001). SNGs may push further toward

sustainable solutions than their national governments, or they may do the opposite, opposing conservation and supporting investments promoting deforestation (Gregersen et al., 2005; Gustafsson and Scurrah, 2019). Private companies have been known to charm subnational officials when they don’t get their way with national officials and, similarly, recur to national officials when they face obstacles with the locals (Ravikumar et al., 2018). Being closer to the citizens that elect them can make SNGs more responsive than central officials to local demands, but those demands may be for investment and jobs that deforest, or for sustainable livelihoods (Ribot, 2003, 2004).

Multifaceted decisions about forests are also shaped by political parties and power politics. National authorities look down on regional authorities, who look down on local authorities. Local authorities usually lack the financial and human resources of the regional authorities, who in turn lack the resources of national authorities.³ Perhaps most importantly, decisions about what to invest and where (e.g., which forests to conserve) are, additionally, decisions about *who gets to make the decision*. Importantly, researchers feared that climate change mitigation initiatives such as REDD+ (reducing emissions from deforestation and forest degradation, and increasing carbon stocks) would recentralize the forestry sector (Phelps et al., 2010; Ribot and Larson, 2012). There is some evidence to suggest that this has not happened so far (Hickmann et al., 2017; Höhne et al., 2018), but this article explores this issue further.

This article uses the lens of forestry decentralization research to ask *if and how carbon forestry has opened new opportunities for SNGs to support the decentralized and sustainable governance of forest landscapes*. Decentralization is generally understood as the transfer of powers from the central government to lower levels within a political-administrative and territorial hierarchy (Agrawal and Ribot, 1999). Researchers distinguish between (1) administrative decentralization, or deconcentration, in which attributions are passed downwards to lower levels of government that are upwardly accountable to the central government and (2) political decentralization, which refers to the transfer of powers to “representative and downwardly accountable” actors, such as elected local governments (Ribot, 2002). In theory, more sustainable outcomes are expected when decisions are made by representatives closer to the citizens who elect them (Agrawal and Ribot, 1999), but decentralization in practice has been fraught.

This article draws on current trends in the forestry decentralization literature that adopt different disciplinary priorities, as presented by Lund et al. (2018). The first trend analyzes forestry decentralization as part of historical phenomena, such as macroeconomic tendencies or internal transformations, in order to discuss decentralization as a *social process*. The second approach discusses forestry decentralization’s contribution to *democratization* by transferring powers to

¹We understand carbon forestry as forest management for climatic benefits, mainly maximizing carbon sequestration and reducing emissions from forest loss (Bellassen and Luuyssaert, 2014). An often-cited example of carbon forestry initiatives, REDD+ was the focus of our research.

²The landscapes studied included both subnational jurisdictions and smaller geographical areas, but a large part of the research focused on the role of government.

³And when this is not the case, tensions are high. For example, one respondent in our study from Indonesia was disgruntled that the district had more funds than the province (a higher level SNG) thanks to the former’s right to deliver forest permits. In fact, Indonesia is a prime example of such politics: important forest and land use authority has shifted between the province and district level several times over the past 20 years (Warman, 2016; Fatem et al., 2018).

institutions with improved accountability and that are closer to local realities. The third addresses forestry decentralization as it challenges or perpetuates *power relations*. Lund et al. (2018) identify an additional trend of predominantly quantitative studies that evaluate the outcomes of forestry decentralization for forests and livelihoods; however, due to the difficulties in establishing causality between decentralization and impacts, we omit this category from our analysis.

In spite of their disciplinary distinctions, the three selected trends are deeply interconnected. Taken together and with grounded empirical data (Lund et al., 2018), such as the data analyzed in this article, they provide a more complete understanding of decentralization across different contexts. Each approach is explained in detail in the results section below, summarized as (i) *process*, (ii) *democracy*, and (iii) *power*. We ask the following three questions:

(i) How has carbon forestry engaged with or (re)shaped decentralization and the role of SNGs?

(ii) Has meaningful authority over land or climate policy been decentralized to SNGs, in support of democratic processes and accountability?

(iii) Is carbon forestry influencing the relationships between levels of government in a way that challenges unequal power relations and engages local populations?

2. METHODS

We explore these questions based on research carried out in 2013–2017 by the Center for International Forestry Research (CIFOR) in five countries: Indonesia, Mexico, Peru, Tanzania, and Vietnam. Under the auspices of CIFOR's Global Comparative Study on REDD+ (but examining many types of land use in addition to REDD+, see below), over 800 interviews were conducted in 54 study sites in eleven subnational regions in these five countries (see **Table 1**), to understand decision-making, land-use change, and relations between levels and sectors of government and non-government actors in the context of low-emissions development strategies.

The research used a comparative case study approach to capture a diversity of multilevel governance arrangements. Two subnational jurisdictions⁴ (region, province, state) in each country⁵ were selected, where possible, to represent governance contrasts. Within each jurisdiction, we selected sites of land-use change that reflected broader regional dynamics, both of deforestation and degradation (e.g., mining, ranching, oil palm expansion) and of initiatives to reduce emissions from land use change (including REDD+ jurisdictional programs and pilot projects as well as non-REDD+ conservation or reforestation activities). Within each site, semi-structured interviews were implemented with a range of actors representing different levels and sectors of government (e.g., agriculture, environment, forest, and mining offices), as well as local communities, NGOs, private firms, researchers and activists, among others (CIFOR,

2015; Ravikumar et al., 2015a; see **Supplementary Materials** and methods documents: Saito-Jensen, 2015).

This research was not aimed at studying decentralization *per se*, but the database is rich for exploring the questions raised. The interviews focused on land use change and landscape management to understand the factors behind decisions (e.g., who participated, why one land use was chosen over another, underlying incentives). Although we emphasized drivers of deforestation, forest degradation, or conservation/afforestation, we did not quantify these trends but rather reported peoples' perspectives on these drivers, and on discourses around their history and potential futures. Interviews were processed using qualitative data analysis software NVivo[®]. Data was coded using a heuristic node tree, with each interview coded by respondent type to highlight debates ranging from relations among levels of government, to authority over planning, permits and implementation, to discussions on legitimacy and benefit sharing (Ravikumar et al., 2015b).

We complement our interview findings with the many reports and articles prepared as part of the project, including separate legal analyses which outlined attributions related to policy and law on land use change and low emissions initiatives (Ardiansyah et al., 2015; Mbwambo, 2015; Trung et al., 2015; Wieland Fernandini and Sousa, 2015; Carrillo Fuentes and Velasco Ramírez, 2016). We also draw on secondary literature when it helps fill gaps or round out our response to the questions raised.

Although the topics below overlap, we have located our results in ways to avoid repetition, with the primary goal of presenting a cross-country analysis of the relations among levels of government that explores opportunities and obstacles to change toward sustainable pathways.

3. RESULTS

3.1. Process: Carbon Forestry as Opportunity for Decentralization?

According to Lund et al. (2018, p. 20), this strand of research focuses on “contextualiz[ing] and historiciz[ing] forestry decentralization policies and thereby helps in understanding their framing and embedding in social, ecological, and economic relations.” Situating decentralization in the context of historical and political trends allows for the analysis of different strategies of environmental governance (Agrawal et al., 2018) and of the interplays between decentralization in practice and stated objectives (Lund et al., 2018).

In this section we introduce the context of forest use and land use change in the five countries studied, including the state of forestry decentralization. In particular, we ask how carbon forestry has engaged with and/or (re)shaped decentralization and the role of SNGs, based on context and history. Our five study countries are compared across key relevant features in **Table 2**. All five have taken part in private carbon forestry schemes as well as the UN-REDD+ program and the World Bank's Forest Carbon Partnership Facility (FCPF).

The question of who owns forests and forest lands is a central issue in forest decentralization. RRI (2018) found that, in spite of trends toward recognizing tenure rights of forest dwellers,

⁴Except in Tanzania, where mid-level jurisdictions only have minimal administrative responsibilities, hence we chose to focus on two contrasting ecological zones, which comprise multiple districts.

⁵Except in Peru, where we studied three regions.

TABLE 1 | Study sites and interviews per country.

Country	Subnational jurisdictions studied	Sites with increasing emissions due to land use change	Sites with decreasing emissions (REDD+ and non-REDD+)	Total sites	Total interviews
Indonesia	Central Kalimantan West Kalimantan	4	6	10	149
Mexico	Chiapas Yucatan	4	6	10	152
Peru	Madre de Dios San Martin Ucayali	5	9	14	293
Tanzania	Coastal forests Miombo woodlands	5	7	12	122
Vietnam	Dien Bien Nghe An	3	5	8	102
Total		21	33	54	818

TABLE 2 | Selected country characteristics.

	Indonesia	Mexico	Peru	Tanzania	Vietnam
Income level *	Middle income	Upper-middle income	Upper-middle income	Low income	Lower-middle income
Government	Unitary presidential constitutional republic	Federal constitutional republic	Unitary presidential constitutional republic	Unitary presidential constitutional republic	Unitary socialist republic
Type of forestry decentralization	Political	Administrative	Political	Mixed	Administrative
Population (millions, 2018)*	267.6	126.1	31.9	56.3	95.5
Total forest area (mha, 2017) **	91	66	72.3	48.1	14.4
Deforestation (average annual %, 2000-2015) #	0.6	0.2	0.2	0.8	-1.6
Land use and natural resource decentralization	Important attributions transferred to lower level governments, but periodic recentralization reforms. ^a	Natural resources fall under central government control. ^b	Important attributions transferred to lower level governments, but strict central control of SNG budgets, and of subsoil and infrastructure. ^c	Prime Minister's Office has subnational dependencies, although land management is somewhat decentralized. Zanzibar has autonomous central authority. ^d	Central government present in all subnational jurisdictions through sectoral ministries; SNGs are not elected by popular vote. ^e

*World Bank, 2019.

**RRI, 2018.

#Forest Carbon Partnership Facility, 2019.

^aArdiansyah et al., 2015; Fatem et al., 2018.

^bCarrillo Fuentes and Velasco Ramirez, 2016.

^cWieland Fernandini and Sousa, 2015.

^dMbwambo, 2015; Kijazi et al., 2017.

^eTrung et al., 2015.

most of the world's forests continue by law to be state property: 92% in Africa, 65% in Asia and 48% in Latin America. RRI (2018) classifies forest tenure into four categories according to the rights-holder and specific legal entitlements recognized by national laws and regulations: (1) government-owned and administered (including concessions on state-owned land), (2) government-owned but designated for the use of indigenous peoples and local communities (short of full ownership rights), (3) owned by indigenous peoples and local communities (full

ownership, in perpetuity and subject to compensation if rights are reversed), and finally (4) privately owned by individuals and firms (not communities).

Table 3 shows the relative proportions of forest under these different ownership regimes as well as the change over time between 2002 and 2017. The difference between countries is striking, with the most notable being the high level of forests in community-owned lands in Mexico, followed by Tanzania, and, in contrast, the concentration of forest tenure in government

TABLE 3 | Statutory forest tenure, as a percentage of country's total forest area, 2002–2017 (RRI, 2018).

	Government administered		Designated for indigenous peoples and local communities		Owned by indigenous peoples and local communities		Privately owned (individuals, firms)	
	2002	2017	2002	2017	2002	2017	2002	2017
Indonesia	98.3	93.8	0.2	0.9		0	1.5	5.3
Mexico	5	5.5			79.9	68.9	15.1	25.6
Peru	77.2	75.3	2.1	6.9	13.8	17.7	6.9	0.2*
Tanzania	67.7	35.9	0.1	11.2	32.0	45.6	0.2	7.3
Vietnam	100	92.1	0	7.9				

Empty boxes denote situations in which the tenure category in question is not legally possible under national law.

*see footnote 6.

hands in Indonesia and Vietnam, followed by Peru. Regarding change over time, in all countries except Mexico the portion of forest designated for or owned by indigenous peoples and local communities has increased between 2002 and 2017, but again with very large differences in terms of area. The portion of community-designated forests have increased in all countries except Mexico; community-owned forests have increased in Tanzania and Peru; privately owned forests have increased in Mexico, Indonesia and Tanzania and, according to 2017 data, declined in Peru.⁶

These questions of forest ownership shape the relationship between the state and forests, as well as between the state and forest communities, with regards to land use and land use change (LULUC). Although support for local ownership, or forest devolution, *can* be closely related to the powers among levels of government, this is not always the case: as we discuss below, the extent of community forest ownership does not necessarily correlate with the degree of decentralization.

3.1.1. Indonesia

The *reformasi* era that followed the fall of Suharto in 1998 brought a rapid transition from authoritarian rule to a decentralized system in which many political and administrative responsibilities, including those relating to forests and natural resources, were devolved to provincial, district, and sub-district governments (Warman, 2016). Threats of succession led to a deep experiment in decentralization known as the “big bang” (Hofman and Kaiser, 2004) in which SNGs were granted different degrees of fiscal and administrative autonomy. This nation-building decentralization played a double role by calming local demands for recognition while at the same time assuring central control over strategic regions and their natural resources (Bräuchler, 2015).

A complex process of decentralization and recentralization ensued, in a “pendulum effect” (Warman, 2016, p. 40) with initial powers attributed to districts then reclaimed by provinces or even the central government. The ambiguous and at times contradictory regulations of the initial 1999 decentralization

laws left ample space for political interests to seek to influence implementation (Thung, 2019). Provinces opposed the distribution of powers to districts (Butt, 2010), whilst districts complained they lacked financial resources to exercise newly granted political and fiscal autonomy (Myers et al., 2016).

Like other sectors, forestry attributions shifted between SNGs. New powers for districts in issuing permits and licenses quickly became seen as a form of generating income for poorly financed local governments, aside from the incentive of potential bribes and political favors (Palmer, 2005; Burgess et al., 2012). In the quest for local revenue, many district governments rapidly exploited resources, including forests (Barr et al., 2006).

The transfer of powers for forestry management to districts is said to have increased deforestation (see Suwarno et al., 2015). This was used by emerging REDD+ initiatives in Indonesia to build momentum in the wake of the 13th Conference of Parties to the UNFCCC celebrated in 2007 in Bali. As such, carbon forestry projects entered the Indonesian political arena by blocking attributions transferred to districts: in 2011, the central government announced a moratorium prohibiting district-level agencies from granting concession licenses for selective logging or for the conversion of dryland forests and peatlands to palm oil or fast-growing tree plantations (Angelsen et al., 2018). This was part of Indonesia's National REDD+ Strategy, supported by a USD \$1 billion bilateral cooperation agreement with Norway (Angelsen, 2017).

The Norway-Indonesia agreement also set up a REDD+ Task Force that brought together representatives from different government ministries under a collegiate body that reported directly to the president. The Task Force was able to build incipient multisectoral collaboration and push through important reforms (Larson et al., 2018). For example, the consultative process defining the National REDD+ Strategy allowed for local NGOs to use international law and international donors' environmental and social responsibility policies (e.g., World Bank, Norway) to place the rights of indigenous peoples and local communities at the forefront of environmental debates (Jodoin, 2017). However, a government change in 2014 brought a re-organization of ministries. President Widodo created a merged Ministry of Environment and Forestry (MoEF) that assumed the REDD+ mandate and sidelined independent institutions that had been established as part

⁶This is apparently due to problems with the data: RRI (2018) states that data for 2002 in Peru refers to “private farm lots” (*predios*) and may not be entirely forested (FAO, 2005). The report also mentions a lack of updated data on private forest ownership since 2013.

of the climate change regime in the Indonesian archipelago (Larson et al., 2018).

At the time of our research, Indonesia's forests were administered by the central government's Ministry of Forestry (now the MoEF) through regional branch offices at provincial and district levels, a structure parallel to the overall government bureaucracy (Soo Bae et al., 2014). Since 2015, when field research for this paper culminated, there have been new reforms in Indonesia's complex, ongoing process of decentralization and recentralization (see Fisher et al., 2019).

3.1.2. Mexico

A federation with centralist tendencies, Mexico's history of national control over strategic natural resources (including forests, water, subsoil) has led to limited decentralization. With a constitution that establishes that natural resources are the property of the nation and managed by the federal government, Mexican "decentralization" results in a form of deconcentration, in which powers are transferred to central government appointees in the local arena (see Ribot et al., 2006).

At the same time, an extensive agrarian reform in the twentieth century distributed land rights to most of Mexico's territory. As such, over 60% of the country has been assigned to collective landholdings known as *ejidos* and agrarian communities (Madrid et al., 2009). However, the particular form of collective land tenure in Mexico includes a limited bundle of forest tenure rights: forests are the nation's property, and forestry policies and permits are the exclusive attribution of the national forestry commission, CONAFOR (Carrillo Fuentes and Velasco Ramírez, 2016). Created in 2001, this deconcentrated organism of the federal environmental ministry has state-level managers and officers; forestry policies and programs are implemented directly by national staff with forest-owners on the local level (without state or municipal participation).

REDD+ initiatives in Mexico have fallen under the exclusive attribution of CONAFOR (Trench and Libert, 2019). The REDD+ early action special program served to push forward changes to CONAFOR's historical form of working directly with forest owners. Strengthened by ties with international donors, REDD+ advocates were able to transform forestry policy within CONAFOR, creating new multi stakeholder participation mechanisms (such as scientific and technical counsels and intermunicipal councils), new support programs (including a focus on a better paid version of the payment for environmental services (PES) program), with additional funds for new priority regions and forest management activities. Accustomed to working directly with forest-owners, REDD+ early actions implied cross-sector collaboration and multilevel decision-making, obliging CONAFOR to coordinate its initiatives with SNGs and civil society representatives.

As was seen in the design of the country's Measuring, Report and Verification (MRV) system, the forestry commission welcomed participation, while at the same time placing limits onto the spheres of intervention of such participation (Deschamps and Larson, 2017).

Delays in the REDD+ process on the international level and internal struggles within the governing political party

contributed to eventually sidelining REDD+ proponents. With the fall of petrol prices in 2015, financial crisis drained federal accounts. Along with a renewed emphasis on commercial forest plantations, REDD+ advocates within CONAFOR were sacked, and the departments of environmental services and community forestry shut down at the end of the Peña Nieto presidency (2012–2018) (Chapela, 2018). Whilst carbon forestry projects implied decentralizing tendencies, with a number of middle actors contributing to the exchanges between CONAFOR on the national level and forest-dwelling communities on the local level, informants reported a recentralization backlash: "you can see the difference between governmentality and governance, when State institutions feel they will lose control if they allow for changes; they panic in the face of allowing for a wider perspective and for innovation" (forestry consultant, Yucatan, June 2015).

3.1.3. Peru

After years of centralized control in the context of an internal armed conflict and deep economic crisis, decentralization reforms after the end of the Fujimori presidency gave more power and attention to the regions further from the capital city (World Bank, 2010). Fujimori had taken Peruvian centralism to new heights by carrying out a military takeover of his own government in 1992 that dissolved Congress and replaced elected regional governments with appointed administrative councils (Dickovick, 2011). At the turn of the century, the succeeding Toledo government initiated a wave of decentralization reforms aimed at maintaining the country's stability by responding to regional demands (Barr, 2003).

Powers have been gradually transferred from the central to regional government authorities in forestry, environment and agriculture sectors. For example, in 2008, the Ministry of Agriculture (MINAGRI) transferred the authority for granting land titles and land use rights to regional governments. In addition, land-use planning powers were transferred from the Ministry of the Environment (MINAM) to regional governments, including attributions related to the development and approval of Ecological and Economic Zoning (ZEE) (Gustafsson and Scurrah, 2019).

Peru joined international REDD+ initiatives in this context (Rodríguez-Ward et al., 2018). REDD+ early actions pushed forward a tiered or nested approach, giving subnational jurisdictions a key role (Che Piu and Menton, 2014). Initial intervention areas focused on the Amazon forest, where regional jurisdictions oversee forest management. Still, the main agency responsible for REDD+ activities in Peru is the environment ministry (MINAM), which serves as the focal point for climate change considerations at the national level. MINAM hosted the COP-20 in Lima, and in the run-up to this, in 2014, Peru signed the Joint Declaration of Intent with Norway and Germany, committing to REDD+ readiness activities. At least initially, other actors with significant decision-making power over forests (such as the agriculture ministry and the private sector) were not involved in REDD+ or low emissions development discussions (Kowler et al., 2016). Nevertheless, SNGs have taken leadership, such as San Martín, known as the "green region," which stood out in Peru at the time of our research as far more committed

to sustainable alternatives than the other two regions studied (Kowler et al., 2016). San Martin has contributed to building international networks through entities such as the Governors' Climate & Forests Task Force (GCF-TF), in order to push forward low emissions development strategies (Stickler et al., 2018b).

Amid the fits and starts of changes in government administration since REDD+ hit the national agenda (with a new president in 2016 and again in 2018), one of the constants has been the push for titling of indigenous communities, mostly by donors supporting REDD+ (Blackman et al., 2017). Although the funds have come mainly through MINAM, titling is managed by the Ministry of Agriculture and the regional governments, to some extent forcing collaboration. This is one of the main arenas through which REDD+ has reconfigured relations among levels of government and between government and society. Under the current administration, the government has institutionalized roundtables among government levels and sectors, and MINAM is leading a series of dialogues with multiple actors, including regional governments.

3.1.4. Tanzania

The Tanzanian central government is present at all levels of subnational jurisdictions through sectoral ministries. The Prime Minister's Office—Regional Administration and Local Government (or PMO-RALG) has its own regional and local dependencies. For its part, the island of Zanzibar has an autonomous central authority.

After years of post-independence socialist policies, Tanzania underwent a period of reform with structural adjustment programs and liberal economic policies in the 1980s. Within a broader context of decentralization, government officials, and international donors pushed forth models of community-based forest management as early as the 1990s. Land conflict and tenure insecurity led to the promulgation of new laws (the Land Act and the Village Land Act in 1999, and the Forest Act in 2002) that provide the foundations for rural communities to govern their lands and manage their forests in contemporary Tanzania (Jodoin, 2017, p. 120).

Forestry decentralization in Tanzania has been promoted through modifications to land-use classification systems. Along with each land classification comes a complex web of participating levels of government and institutes. Forest policy change in Tanzania prior to REDD+ assigned new attributions, tasks and potential revenues to different levels of government: "The forest and land law reforms have allowed district and village government to play a bigger role in making land use plans, and creating forest reserves on village lands including making village and district by-laws. That means some powers have been transferred from the central government to the districts and villages" (district officer, Kilwa, May 2014). REDD+ pilot projects took advantage of decentralized land management in order to work directly with district and village governments.

Tanzania has been the scenario of REDD+ pilot projects from a variety of financial sources, including UN-REDD+ and international cooperation from Norway as of 2008, an early period in the emergence of REDD+ on the international scene. Despite generating substantial interest from diverse

ministries that were brought together under the umbrella of a National REDD+ Task Force, the funds were to be administered by a third-party institution outside of government due to pending corruption scandals within the central government and disagreements between ministries over who would manage the funds (Jodoin, 2017). NGOs promoting REDD+ pilot projects followed suit in circumventing the central government and working directly with lower levels of government and forest dwellers in implementing community forest management projects.

Land-use classification is a contested process, and REDD+ pilot projects actively sought to favor village land allocation. Tanzania is among a limited amount of African countries with legal frameworks recognizing indigenous peoples and/or local communities as forest owners. Although government policy fails to recognize the status of indigenous peoples in Tanzania (Jodoin, 2017), the forest area owned by communities through Village Land Forest Reserves (VLFR), Non-Reserved Forests on Village Lands, Community Forest Reserves, and Wildlife Management Areas has increased from 17 million hectares (mha) (32% of Tanzania's forest area) in 2002 to 22 mha (45.6% of total forest area) in 2017 (RRI, 2018). Nevertheless, after the initial pilot period, Norway withdrew its support for REDD+ in Tanzania, which has undoubtedly lost momentum (Greene, 2018).

3.1.5. Vietnam

Vietnam has reported an increase in forest cover over the past two decades, in part associated with various national reforestation efforts as well as the distribution of forestry land to households under the 1993 Land Law (Yang et al., 2016).

The Socialist Republic of Vietnam has seen significant changes over the last 30 years in its government structure, specifically in the forestry sector. Centralized control over forests between 1975 and 1986 has been associated with extensive natural forest lost and the dismissal of claims to the forest by local communities and ethnic minorities (Pham et al., 2012). Legal reforms in 1986 fomented decentralization by transferring management responsibilities for land and forests from the central government to lower levels of government (province, district, and commune) (see Trung et al., 2015). Nevertheless, each level of government "remains under the control of the central state in a form of administrative decentralization known as 'deconcentration,' with established lower governments still largely following national directives" (Yang et al., 2016, p. 16).

Pushes for decentralization came from within the central party, under pressure from what interviewees pointed out as "the requirement for socio-economic development" (provincial officer, Dien Bien, May 2014). As one informant mentioned, "There are large changes [in the forestry sector] which are derived from various problems and requirements of national development" (district officer, Dien Bien, June 2014). However, all forests are under government administration, who holds all forest tenure rights, except for 1.1 mha in forests allocated by the Vietnamese government to communities from 2002 to 2017 (RRI, 2018).

Vietnam's central government is present at all levels of subnational jurisdictions through sectoral ministries, especially

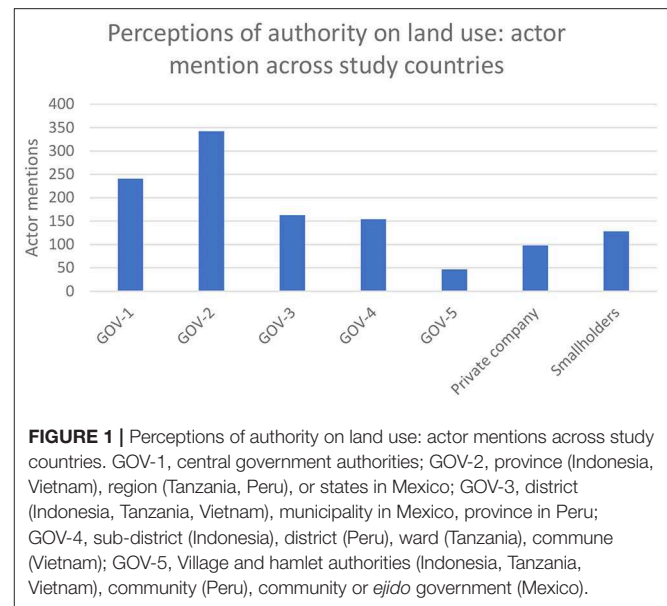
the Ministry of Natural Resources and the Environment (MONRE) and the Ministry of Agriculture and Rural Development (MARD). MONRE is responsible for managing the country's climate change programmes, and it is also the focal agency for both the UNFCCC and the CBD. MARD is the chair of the REDD+ Steering Committee, which was established under authorization of the Prime Minister to coordinate REDD+ implementation between all government agencies, private organizations, civil society, NGOs and international partners. REDD+ has been mainstreamed into Vietnam's pre-existing forestry policies, particularly its PES mechanism (Pham et al., 2012). Our research in two provinces (Dien Bien and Nghe An) in 2014–2015 brought to the forefront a general consensus among respondents that decentralization has occurred only to the extent that the central government has allowed. The Vietnamese central government has overall authority, and local governments appear mainly as implementers of central policies.

3.2. Democracy: Decentralization as Democratization?

The democracy emphasis in decentralization studies focuses on who gets which decentralized powers, if these entities are accountable to citizens and if there are effective mechanisms for holding them accountable (Lund et al., 2018). It is generally assumed that elected local governments are the appropriate entity to receive decentralized powers, as they have a mandate to be accountable to the electorate (Agrawal and Ribot, 1999). This does not mean electoral systems are necessarily all that accountable in practice, of course, but it does allow for a clear distinction between these and other entities without such mandates (such as deconcentrated central government offices, or NGOs) (Crook and Manor, 1998). In this section we ask if meaningful authority over land or climate policy has been decentralized to SNGs, in support of democratic processes and accountability?

Democratic decentralization implies the transfer to lower level authorities of discretionary powers that are “meaningful in the sense that local authorities are actually able to make or significantly influence decisions affecting the management of a natural resource in their community, without interference or outright blocking by higher authorities” (Gross-Camp et al., 2019, p. xx). We employ this characterization to analyze forestry decentralization's contributions to democratization in the context of carbon forestry projects.

Throughout our interviews, the frequent mention of SNGs as key players in land use decision and carbon management marks a new role for previously sidelined actors. **Figure 1** counts the number of mentions in all of our interviews of each level of government, private companies, and smallholders when discussing authority over land use. Each time roles, powers, and responsibilities related to LULUC were mentioned, we documented the actor who the respondent describes as having that authority (see Ravikumar et al., 2015b). In the figure GOV-1 refers to the highest level of government (central government), through to GOV-5 as the most-local level of government (community authorities or hamlet representatives). Although mentions in interviews do not necessarily translate into real powers, this exercise in discourse analysis sheds light



on perceptions of authority (see Salman, 2017). Considering that forests and forest lands have historically been almost exclusively under the authority of central governments, the extensive mention of SNGs in interviews discussing authority over land use change is remarkable.

As illustrated in **Figure 1**, the level of government that received the most references when discussing authority on land use was the second level (provinces or states). As interviews placed emphasis on areas with important land use change dynamics and, particularly, carbon forestry projects, this result contrasts with an expected recentralization in the context of REDD+ readiness activities. For their part, local level authorities—districts and sub-districts, and villages in particular—have a more marginal role in references to land use authority throughout our interviews.

3.2.1. Indonesia

Respondents in Indonesia reported confusion and tensions over roles and responsibilities in the context of decentralization. Diverging interests take advantage of unclear attributions, which can be used to favor SNGs' meaningful participation, or, on the contrary, to block it.

In Central and West Kalimantan, the national government was identified as the most influential actor over in land-use decision-making; nevertheless, due to decentralization policies districts also played an important role (Myers et al., 2016). District governments manage land uses by issuing permissions through memorandums of understanding or establishing location and operational permits. This means providing formal consent and establishing legal forest boundaries in conservation areas, and confirming location permits for village and community forests, as well as oil palm and REDD+ projects. The district leads in monitoring community and village forests in its jurisdiction, and it has the power to rescind permits and ensure acceptable land uses, even within forests classified as the national forest estate. For instance, in Ketapang, West

Kalimantan, the conservationist district head opposed oil palm expansion, in direct opposition with Indonesian political and economic incentives for oil palm plantations (Ibid).

Results varied by location and show how different offices within government can take advantage of unclear delimitations of attributions and authority in order to push forward particular agendas. For example, in one Central Kalimantan province, the Borneo Orangutan Survival Foundation's Mawas Conservation Program was threatened because of unclear authority over which actors had management rights over which type of forest and what kind of decisions each could make (Sanders et al., 2019). The Provincial Environmental Agency (BLH, *Badan Lingkungan Hidup*) stepped in to facilitate coordination and communication through a working group of provincial actors supporting the NGOs conservation initiative, in spite of the fact forest management rights remained formally with the national Ministry of Forestry (Myers et al., 2016).

Despite new attributions for SNGs, community members questioned what they perceived as limited decentralization, probably related to the ongoing ping-pong of attributions being transferred between provinces and districts:

“The district government is like a dead tree: the roots are dead, but you can still see the tree. The district just follows the national level and therefore nothing gets done. There are too many levels between the village and national decision makers” (village head, West Kalimantan, January 2014).

3.2.2. Mexico

Mexico is a federation with three levels of government—federal, state, and municipal—with relative autonomy and established spheres of influence (Trench et al., 2018). However, the federal budget is the main source of income for all of these, limiting decision-making capacities on the lower levels: “Mexico is a federal country, but it remains highly centralized. Everything is managed by federal budget-lines: if federal funds are available, it works. If not, then it doesn't” (NGO respondent, Yucatan, February 2015). Interviews in Mexico found that new debates around forestry decentralization are more discursive than transformative.

Despite the emergence of state forestry sub-secretaries, state forestry laws, and participative spaces, lower levels of elected government do not have the attributions, funds, or training necessary to be able to participate in forestry policies. Discussions on transferring powers to the state-level in the context of carbon forestry illustrate tensions among levels of government:

“The states want to have control over the issue and funds, but the federation has denied this. [One state] proposed to the GCF [Governor's Climate Fund] the state's jurisdiction over these matters, but CONAFOR imposed itself, saying the state must account to the federation.” (NGO respondent, Yucatan, April 2015).

The lowest level of elected government in Mexico, the municipality, has no real role in forestry at all. One notable exception, however, is the case of the Puuc Biocultural Reserve in southern Yucatan, where SNGs from different levels formed

an alliance to manage the remnants of tropical jungle in this indigenous region. Strengthened by favorable political and financial conditions created by REDD+ early actions, the state environment ministry (i.e., second level of government) brought together local municipalities (i.e., third level of government) to create an intermunicipal council with the mandate to promote community development and conservation (Libert Amico et al., 2018). REDD+ readiness funds served to set up the governance structure of the Puuc Biocultural Intermunicipal Council (JIBIOPUUC), an innovative coordination mechanism between SNGs (from the second and third levels of government), local communities, NGOs and central government authorities with the mandate to promote low emissions development strategies within the Puuc state reserve.

Nonetheless, it seems unlikely that other regions will find the same favorable conditions to replicate this example of multilevel forest co-management. The concentration of powers within CONAFOR, reported by respondents as a re-concentration of attributes in line with political party politics after the 2012 elections, is perceived as a limit to accountability and a step backwards for democracy. This failure to transfer meaningful powers is clearly linked to the history and context described in the previous section: “The main weakness is the clock of politics, which affects decision-making more than differing visions” (state agriculture ministry, Yucatan, April 2015). According to another respondent: “It is a question of political will, not faculties afforded by decentralization” (forestry commission respondent, Chiapas, October 2014).

3.2.3. Peru

Interviews on multilevel governance in Peru described new attributions for SNGs. Since 2009, regional governments have created Regional Environmental Authorities (ARA) and other decentralized governance offices, strengthening their say in land use decision-making. The ARA concentrates regional attributions regarding the environment, the forest sector and land-use planning in forested areas, whereas agriculture and land-use planning powers related to the agriculture sector remain the responsibility of other regional agencies. ARAs carry out land-use planning processes, particularly ecological-economic zoning (ZEE), and can decree conservation areas. For example, in 2006 the San Martin region promoted a ZEE stating that 65% of the region required environmental protection measures to respond to high rates of deforestation. By 2014, a total of 18 regional conservation areas had been created covering 428,800 hectares (8.3% of the region's total land area) (Kowler et al., 2016). In addition, the region created “conservation concessions” covering an area of 467,450 ha with another 283,000 ha awaiting approval at the time of our study, totaling 14.6% of the region (Kowler et al., 2016, p. 23).

Interviews in Peru often emphasized the importance of ZEE in improving land-use planning and management. However, weaker environmental offices oversee this process, and their zoning is not legally-binding. Central government policies promoting investment in Peru in the wake an economic boom and falling mineral prices undermine environmental concerns and clearly maintain the hegemony of business as usual tendencies in agricultural and subsoil investments (Kowler et al.,

2016). The multilevel and cross-sectoral division of powers, plus the complexity, and lack of transparency over certain key land-use decisions, facilitates the overriding of concerns related to forests, sustainability, and smallholders and indigenous peoples (Rodriguez-Ward et al., 2018).

In practice, regional governments face a variety of challenges that limit their ability to fulfill their responsibilities and perform effectively. One of the weakest elements in the decentralization process has been the failure to transfer the financial resources necessary to implement recently transferred attributions. Challenges have played out differently across regions due to the diversity of institutional arrangements, political will, professional expertise and capacity, external support, as well as existing natural resources and land-use activities:

“decentralization has come with a process of State modernization [...]. This hasn't been fulfilled in some regions where they received attributions, but they haven't modernized, they haven't adapted. In our case, we are still not fulfilling one hundred percent, not as much as we'd like, because it's a slow process that is incomplete, since they transferred attributions without financial resources, leaving us to do magic with what we have” (regional officer, San Martin, July 2013).

Interviews with government representatives from diverse levels led to the identification of what some deemed “half-achieved decentralization”: “The reality is that certain functions have been transferred but not the proper budget to develop those functions properly” (community organization, Madre de Dios, August 2013). Some fear that designating new attributions without new budgets risks undermining government accountability:

“now that the [central government] doesn't work here anymore, the regional government has taken over their functions, but they don't have the budget to accomplish their work. The employees must pay for their own office supplies and vehicles to go to the field. This results in corruption within the office, such as bribes that permit illegal logging” (regional officer, Madre de Dios, October 2013).

3.2.4. Tanzania

Multilevel coordination, between levels and sectors of government, is facilitated by legal and financial incentives: “It is required by law in Tanzania to involve district governments and village governments when working on land and forest related issues on village land” (international cooperation officer, Dar es Salaam, March 2014). Village land reserves have become important spaces for multilevel and cross-sectoral collaboration:

“District land-use planning teams—with officials from forestry, agriculture, land, and community development sectors—were involved during the training of villagers, negotiation of REDD benefits with villagers, preparation of village land use plans, and establishment of village forest reserves. District councils were also involved in approving forest management by-laws proposed by villages” (central government officer, Dar es Salaam, August 2014).

However, the current system of revenue generation in land classification is deemed to create perverse incentives for land use change while limiting investment in conservation (Kijazi et al., 2017). The land categories defined by the Tanzanian legal system represent classifications that give different levels of government, and different authorities within these levels, mandates to oversee them (Mbwambo, 2015). This mandate also comes with potential sources of revenue from the resources in the land category in question (e.g., timber, wildlife, water) including formal income (e.g., tourist fees, timber revenues, research, and conservation grants) and informal, rent-seeking opportunities. Disparate interests among levels and offices of government are contested in the determination of these categories, and one category can be changed into another—often through lobbying activities by the more powerful actors (Kijazi et al., 2017). Competition among governing authorities is exacerbated by the ambiguity of authority over specific land-use categories, as more than one authority may claim certain powers over a given classification.

The underlying complexity of land-use classification systems leads to a lack of clear attributions. Overlapping claims, contradictory legislation, and complex interactions feed into democratic failures, including conflict among levels of government, and acts of corruption. The institutions that have assumed new attributions in the context of forestry decentralization have limited accountability and pushes for transparency face serious barriers in this context of limited funds.

In mainland Tanzania, carbon forestry projects have worked directly with lower levels of government (districts and villages) to support the devolution of forest rights to local communities and villages (Kijazi et al., 2017; Gross-Camp et al., 2019). The attention given to lower levels of government by REDD+ pilot projects both strengthened their legitimacy (which supports democratization) and exacerbated tensions with central government (which does not).

3.2.5. Vietnam

Forestry decentralization in Vietnam implied a transfer of attributions from the central government to the provincial, district, and communal levels of government. Relations among government levels have been reconfigured by changes in attributions: “the decentralization process has brought out clearer duties of each level of government [which] have required the local governments to work harder” (district officer, Dien Bien, May 2014). However, new tasks do not imply meaningful decision-making powers.

One of the main attributions that has been decentralized is planning, with increased responsibilities for SNGs in developing natural resource management and forest protection plans:

“There are many changes about responsibilities and roles of different levels of government since the beginning of renovation process in 1986. Previously, [...] only provincial governments had to prepare forest protection and management plans. Nowadays, communal people's committees also have to prepare communal land-use plans. Meanwhile, the district's governments must prepare plans on forest protection and development (master plans

and annual plans). A whole sector in charge of management of natural resources and environment is being formed” (communal officer, Dien Bien, June 2014).

Many respondents in Vietnam identify a new role for the provincial level: “at the provincial level [there are] enough power and resources to [act] effectively, but at the district and commune levels [there] are not enough. This needs to be changed” (provincial officer, Nghe An, May 2014). The provincial government was recognized as one of the most influential land-use change actors. This level of government can change the classification of natural forest (which has heavy restrictions on production) in order to increase use rights and allow harvesting. A respondent from the Nghe An provincial government said that this was because it has the ability to change “approximately 20,000 hectares of forest land, converting protection forests into production forests” (NGO representative, Nghe An, May 2014). According to another respondent: “The provincial government makes instructions, while the district’s government and communal government have to carry out activities given in the instructions” (commune officer, Dien Bien, June 2014).

Interviewees identified a series of challenges for SNGs, including unclear policy guidelines, poor cooperation and coordination between government levels and sectors, limited (human and financial) resources, and a lack of political will (see Yang et al., 2016). More than one quarter of respondents in Vietnam identified limited human resources as a challenge to decentralization.

Nevertheless, the central level still has a critical role to play, as all land-use plans must be approved by the Prime Minister (Trung et al., 2015). Lower levels of local government face limited decision-making power and low technical, human and financial capacities.

Respondents considered new attributes to provinces constituted a change with regards to the past. However, Vietnam is still highly centralized, and accountability is strictly enforced upwards to the central party. There is a clear line of command in project implementation: “There is no difficulty in the implementing process because we just implement basing on guideline documents from upper level, and implement at village level complying with instructions given. If there is any inquiry, it will be proposed to the upper level” (commune officer, Nghe An, June 2014). As such, respondents defined decentralization in Vietnam as a “deconcentration of burdens”: new tasks without improvements in financial and human resources. Furthermore, powers are transferred to upwardly accountable institutions with limited incentives for transparent practices.

3.3. Power: Who Benefits, Who Loses?

Lund et al. (2018, p. 19) recognize that “forestry decentralization policies are embedded in—and become the object of—political-economic power struggles over resources.” Research in this field has discussed how decentralization tends to disfavor the poorest, since it implies new regulations from which existing elites are better positioned to benefit (Persha and Andersson, 2014; Viana et al., 2016). This is as much due to project design and

implementation as it is due to local power dynamics, in light of “the inability of [decentralization] policies, or the unwillingness of project implementing agents, to challenge pre-existing social hierarchies” (Lund et al., 2018, p. 19; see Ece et al., 2017).

Considering that carbon forestry projects have mobilized considerable international funds to pursue conservation and development initiatives in poor regions of the tropics, it is important to study whether new initiatives under REDD+ are nurturing empowerment and challenging hierarchies, or simply reproducing top-down approaches (Lund et al., 2017). In this section we ask if carbon forestry is influencing the relationships between levels of government in a way that challenges unequal power relations and engages local populations?

3.3.1. Indonesia

The implementation of REDD+ in Indonesia’s pilot region of Central Kalimantan has been highly criticized for its top-down approach. This is despite strong support from provincial officials to develop a Regional Strategy and Action Plan for REDD+ (STRADA) focused on local priorities and pushing for implementation “in accordance with local wisdom and local control” [government official quoted in Sanders et al. (2017)]. Nevertheless, provincial priorities were usurped by a top-down process, whereby “supporters of REDD+ within the national government sought to establish themselves as in-charge” (Sanders et al., 2017). One interviewee expressed discontent with decision-making from the capital by saying that “Jakarta people think that they are smarter than locals” (local researcher, Central Kalimantan, November 2013). Another said: “People from Jakarta come and start from zero instead of trusting local people and building on their local knowledge and wisdom. [...] There is also conflict over money because people in Jakarta can decide 100% and the Governor just follows the President’s hand” (local researcher, Central Kalimantan, October 2013).

Some SNGs have taken advantage of Indonesia’s decentralization “big bang” to form new autonomous regions which, in practice, tend to go against initiatives that seek to limit deforestation (Myers et al., 2016). Problems of providing basic services in large, remote regions have led to new administrative sub-divisions, as in Kalimantan. Responding to the possibility of controlling finances and natural resources, 205 new autonomous regions were established between 1999 and 2009, mainly new districts (Ibid). By the end of 2013, Indonesia had 539 autonomous regions, including 412 districts, mostly in remote, mountainous areas (Ibid; see Lele, 2019). Despite a moratorium on new autonomous regions since 2009, political pressure has led to the approval of several new provinces and districts. These include the new province of North Kalimantan and a new district dividing Kapuas Hulu in West Kalimantan, with both regions including large forest areas and national parks.

Creating new regions not only grants control over resources but also potential new areas to clear forest. Article 18 of the 1999 Law on Forestry (Law No. 41) stipulates that at least 30% of land should comprise forest cover. When districts split, forest cover in upstream areas can represent a higher proportion of newly delimited territories, and new governments are quick

to promote economic development within the limits marked by forestry legislation (Myers et al., 2016).

Conflicts among levels of government about the decentralization process lead to calls for even greater *otonomi* (autonomy): “The subdistrict is powerless against the district and have to do only what the district says and facilitate the process. [...] There is only one answer: Indonesia must split into several countries. The nation of Kalimantan would solve this issue” (subdistrict officer, West Kalimantan, February 2014).

3.3.2. Mexico

Since large portions of the country’s forests lie within collective landholdings managed by indigenous peoples and local communities, Mexico has been presented as a success story in community management (Kashwan, 2017), which is often considered an expression of forestry decentralization. However, our research in Mexico shows that although forests lie within community land tenure, access and forms of management are dictated by the central government, and SNGs are largely by-passed.

Collective landholdings with extensive forest tracts within priority regions have been strengthened by REDD+ activities in Mexico since “early actions” have implied an exponential budget increase for CONAFOR, who at the time was the only ministry to channel public funds to this particular form of collective tenure known in Mexico as “social property” (*ejidos* and agrarian communities), as opposed to individual beneficiaries. However, they have had limited influence on how those funds could be spent, since program guidelines are pre-established in “techno-bureaucratic logics” (García-López, 2019). In fact, CONAFOR sidelined community forest enterprises to favor conservation areas under PES mechanisms, which represent up to 68% of REDD special program funds executed in between 2010 and 2014 (Deschamps et al., 2015; Chapela, 2018).

Direct cash flows to forest communities for REDD+ readiness activities implied indirect community empowerment, as many communities decided to dedicate the funds to local income generation (e.g., in monitoring and maintaining conservation areas under PES) or building new infrastructure within the community (e.g., paving roads, building a new meeting house, etc.). However, since agrarian rights-owners (a small percentage of community inhabitants, mainly adult men of advanced age) are legally recognized as the sole decision makers in these collective landholdings, they have on occasion constituted a local elite that excludes women, youth, and landless local inhabitants from benefit sharing.

In the context of carbon forestry programs such as Mexico’s Emissions Reduction Program (recently submitted to FCPF), forestry recentralization has even placed CONAFOR at odds with forest owners, who demand access to the benefits from avoided emissions. CONAFOR argues that forests belong to the nation, and thus refer to CONAFOR’s exclusive management (including potential payments for avoided emissions). However, forest-owners have been recognized in laws such as the General Sustainable Forestry Development Law promoted in 2012 and recently reformed, which establishes in its Article 131 that forest owners who conserve and improve environmental services, as a

result of sustainable forestry management, are entitled to receive the economic benefits that may derive from these (Ituarte-Lima and McDermott, 2017). In response to international pressures for the country to resolve the uncertainty over the entitlement of potential carbon bonds or results-based payments for avoided emissions, the central government’s legal counsel has argued that avoided emissions are not to be considered an environmental service (as per the forestry law), but rather a public good owned by the nation and managed exclusively by CONAFOR.

3.3.3. Peru

Some sectors remain more powerful than others in land-use decision making. The overall priorities for investment in Peru are set at the highest levels in Lima and supported by an ambitious economic stimulus package, while decisions over subsoil resources are concentrated in the mining and energy sector. Critical powers related to land-use classification and issuing permits remain in the agricultural sector, at the national and regional levels, respectively. The environmental sector has ostensible power over the process of territorial planning, but the outcomes of these processes are not binding. Furthermore, informants point out that some technical processes, such as the classification of land uses, are used for political ends given the national government’s interest in extractive resources such as oil palm, minerals, and petroleum.

Research in three Peruvian regions found that the process of land-use change is shaped by power dynamics between actors, including their engagement in decision-making and whether they stand to benefit from current or future land-use (Kowler et al., 2016). In two oil palm study sites in San Martín and Ucayali, the private sector proved to have substantial leverage with one level of government or another—such that they were able to get their way. Both sites were marked by a tendency toward deforestation and conflict with local communities (Ibid). In San Martín, one district representative argued that half-achieved decentralization opens the space for illegal acts: “There is a big hole here with regards to laws” (mayor of municipality, San Martín, September 2013).

On occasion, carbon forestry projects have placed SNGs at odds with local inhabitants. In San Martín, there was substantial complaint among local actors that the regional government was pushing conservation to the detriment of local livelihoods. As such, decentralized decision-making in land use governance does not necessarily imply more low emissions development strategies, since incentives for business-as-usual economic development are still dominant.

3.3.4. Tanzania

Competition among governing authorities in Tanzania is exacerbated by ambiguous delimitations of authority over specific land-use categories, as more than one authority can make claims over a given classification. Overlapping, ambiguous or conflicting attributions often lead to conflict among levels of government over the sources of funding associated with each land-use category (Kijazi et al., 2017, p. 19). One example is the conflict over general public lands, which belong to the central government, and village lands attributed to village governments.

Confusing definitions, contradictory pieces of legislation, and interests over revenue generation have led for certain village lands to be claimed by the central government.

This was one of the major challenges for REDD+ pilot projects in the Lindi and Kilosa districts of mainland Tanzania, for example. Since village lands had not yet been registered as such, and village forests were still to be gazetted, these forests could be interpreted as “general lands” attributed to the central government. In order to obtain the legal registration of these lands, pilot project implementers argued the village had a claim on the general lands due to historical occupancy and use. By doing so, these lands could be considered “village land” according to the Village Land Act (1999), and the forests thus qualify to be reclassified as village land forest reserves (VLFR).

Part of the project implementation activities involved following legal procedures, including registering the villages so that they could obtain “Certificates of Village Land,” and surveying and demarcating the forests so that they could be gazetted as VLFR. Although legal powers for villagers to manage forests on their lands and declare them as VLFR were already in place, there is a lack of knowledge of these rights, as well as a lack of resources to undertake the expensive process. In coordination with district officials, NGOs nurtured community empowerment by providing training and funding the legal process. This legal interpretation was contested by some central government officials who objected to the loss of central government territory to villages (Kijazi et al., 2017).

3.3.5. Vietnam

In Vietnam, key land-use change actors included state companies supported by the national government, such as a hydropower plant in the Chi Khe and Yen Na communes and rubber plantations in Muong Pon commune. Diverging sectors within the central government appear at odds in promoting contradictory development goals. Evidence from Dien Bien province highlighted the incompatibility between national government priorities and programs focused on economic development, on the one hand, and forest protection on the other. For example, the agriculture ministry (MARD), along with the Vietnam Rubber Corporation (VRC), proposed an increase in rubber plantations from 50,000 to 100,000 ha in northwest Vietnam (Phuc and Nghi, 2014). In Dien Bien, rubber plantations were actively promoted for their economic value, yet government respondents frequently recognized trade-offs for forests and people’s livelihoods (Yang et al., 2016). Rubber plantation expansion is contrary to government goals for promoting forest protection and development (Phuc and Nghi, 2014). Nevertheless, rubber and infrastructure development are politically supported by the central government with the aim of ensuring the country’s economic growth and prominence on the international scene. Provincial authorities in both provinces also supported these investments in order to increase revenues from taxes and private sector investment (Yang et al., 2016).

The competition among sectors was evident also in the forest land allocation (FLA) campaigns, where respondents referred that the allocation process was poorly implemented and with “valueless and meaningless” results (communal forest ranger,

Dien Bien, June 2014). One authority from the Department of Agriculture, Environment and Rural Affairs (DARD) explained that “most... forest land tenure certificates that have been given to local households and villages contain land area and location data that do not reflect the actual area and location of forest land that local households and villages have used or managed” (district officer, Dien Bien, June 2014).

In an expression of the obstacles to decentralization in the country, FLA faced limited financial and human resources for SNGs to assume new attributions. Interviews in Dien Bien and Nghe An provinces reported that FLA was implemented slower than expected, with concomitant effects on the rolling out of the PES support program (since forest owners must be legally recognized in order to be eligible to receive payments). The implementation of FLA also created pending land disputes, such as in Pu Mat National Park, where local communities accused the government of allocating prime forest land that had historically been managed by the villages to the Con Cuong district forestry company. For example, one village contested the Con Cuong Forestry Company’s claim to 400 ha within the park’s buffer zone and refused an offer of co-management, arguing that the land was unjustly taken from them (commune officer, Nghe An, June 2014).

4. DISCUSSION

This section discusses the findings from each of our study countries, considering the overarching questions raised in the introduction. Fundamentally, we explore who holds the mandate over forest landscapes in the context of carbon forestry initiatives such as REDD+, and what this means for the future of jurisdictional approaches to sustainability.

Notably, and as seen from the results above, this is not a simple question. LULUC in forests depends on several different dynamics, which are generally managed under different government institutions, divided by sectors, and topics: agriculture, forestry, land titling, protected areas, investment, and so on. In general, REDD+ and climate policies have been housed in environment offices, often isolated from deforestation drivers (De Sy et al., 2018). Each of these arenas is decentralized or centralized to differing degrees, but all of them are relevant for sustainable solutions. Together they comprise the playing field upon which the dynamics between national and subnational governments play out: as historical process, over meaningful authority, and as struggles over power.

4.1. Process: Carbon Forestry’s Engagement With Decentralization and the Role of SNGs

Carbon forestry projects came with high expectations that new approaches and additional funds may redefine decision-making on forest landscapes. Despite predictions that REDD+ might recentralize control over forests, there is little evidence of this, at least to date, in the five countries analyzed. Nor has it necessarily fostered decentralization; rather, carbon forestry has been dependent on existing contexts and trajectories.

Decentralization has emerged historically from pressures on central government for change, from international drivers (including neoliberal reforms and structural adjustment programs, favorable prices for strategic natural resources, and political pressure) and internal dynamics (state-building, conflict resolution, and local demands for recognition) (Hickmann et al., 2017). Demands for greater decentralized powers over land and forests were evident in all the study countries, from all levels of SNG. Carbon forestry was introduced onto this playing field, offering a new arena for struggle, in the sense that local actors took advantage of these new opportunities to push forward their own agendas.

REDD+ brought with it the possibility of a new role for SNGs, blowing new winds in the sails of multi-stakeholder initiatives in favor of conservation and low emissions development (see Wright et al., 2016). However, it did not transform multilevel governance relationships. Results vary from country to country based on local processes and political and economic contexts. Based on our research, REDD+ changed very little in centralized countries (Vietnam). In democratic countries with strong centralizing tendencies, REDD+ either changed little or did so only temporarily until there was a “recentralizing” backlash (Mexico, Indonesia, Tanzania). In democratic countries such as Peru, REDD+ has contributed to an ongoing decentralization process. On a hypothetical scale of power distribution regarding decision-making on forests, with the central government on one extreme and forest-dwelling communities on the other, carbon forestry seems to have ticked the balance toward the central government in Indonesia, Mexico and Vietnam, whilst the titling processes that carbon forestry initiatives favored in Peru and Tanzania pushed the balance toward forest dwellers.

Regarding forest ownership, specifically, there has been important progress in devolution of land and forest rights to indigenous peoples and local communities in recent years (RRI, 2018; see Sunderlin et al., 2018). On the one hand, most progress was made prior to REDD+ (e.g., Mexico’s agrarian reform prior to 1992, ambitious programs to title indigenous lands in Peru from 1980 to 2000). On the other hand, carbon forestry provided new impetus to community titling. In Indonesia, REDD+ placed the discussion of the rights of *Adat* communities at the center of the climate change negotiations table (Fay and Denduangrudee, 2018). Similarly, climate change funds in Peru led to multiple new titling programs in the Amazon (Lozano Flores, 2018). REDD+ projects supported the reinterpretation of the land law to recognize village land rights in Tanzania (see Khatun et al., 2015). However, the increase in the percentage of forests under private ownership, as reported in **Table 2**, risks undermining pending claims for the recognition of customary rights to forests (RRI, 2018).

Furthermore, it is important to distinguish between devolution of land rights to local communities and decentralization to local governments, despite the two often being considered signs of increased democratic decentralization (Ribot, 1998; Dressler et al., 2010). Although both imply the transfer of some authority from central government to the local arena, these two processes are not necessarily linked, as demonstrated by two cases from our research. In Tanzania, devolution of land rights to local communities was

directly tied to REDD+ initiatives and to their engagement with district governments. This is because the district is the administrative unit in which forestry, land and other natural resource management responsibilities are managed; and districts’ decentralized attributions were enough, at least with support of key central government officials, to push forward the reclassification that REDD+ pilot projects sought. In Mexico, however, where decision-making over forests was ceded to communities since the 1986 cancellation of state logging concessions in social property, SNGs played little role (other than community-level government). That is, the central government fosters a direct relationship to forest communities, bypassing state and municipal governments.

Hence, the influence of carbon forestry initiatives on decentralization and the role of SNGs appears to depend largely on the historical context, and on the SNGs’ ability to take advantage of new opportunities and to negotiate their own interests.

4.2. Democracy: Meaningful Authority for SNGs?

Throughout our research we found new roles for SNGs in jurisdictional approaches and international commitments (Sarmiento Barletti et al., 2018). It is particularly striking how many mentions were made in our interviews of SNG influence over land use policies (see Luttrell et al., 2017). Interestingly, these results do not appear to coincide with reality under the law, in any of the countries studied: national governments have significant and overriding powers to land and forest classification, authorization of land use plans or land use change, land and forest tenure, foreign and national investment, and budgets (including the budgets SNGs receive). However, interview results clearly demonstrate a key tenet of decentralization theory: that citizens perceive that their SNGs are more relevant to their lives than the central government (Fischer and Shoab Ali, 2019).

The role of SNGs is reportedly changing, with new responsibilities in planning, zoning and categorization of land use, as discussed in the cases of provinces in Vietnam, regions in Peru, and districts in Tanzania. Nevertheless, references in our interviews to “half-achieved decentralization” (Peru), “apparent acts of decentralization” (Mexico) or the “deconcentration of burdens” (Vietnam) imply that SNGs are far from having meaningful discretionary powers.

Despite limited decentralization of attributions, the decentralization process has promoted discourses of sustainable forest management for local development, triggering pressures for a further distribution of power, resources and benefits (Andriyana and Hogl, 2019). Carbon forestry also contributed to democratic decision-making by creating new participatory spaces, particularly for land-use planning. However, new multi-stakeholder spaces are not legally binding, and participation is publicized more than practiced (Ece et al., 2017).

The distribution of attributions on paper does not imply “meaningful” powers in practice. Decentralization has led to confusion, and unclear responsibilities open the space for illegality and corruption, as found in Indonesia and Tanzania, where SNGs have been accused of transforming their authority over land use change into rent-seeking

opportunities. Decentralization has emphasized distribution of powers, participation and, occasionally, transparency, but not accountability. SNGs see modifications in their attributions, but not their accountability mechanisms: the central government tends to release certain tasks with the obligation of maintaining oversight in exchange. As such, upwards accountability is fomented, often sidelining accountability to local stakeholders, as reported in Vietnam and Mexico.

Results vary within countries thus emphasizing that it depends not only on attributions, but also political will. Sporadic results in decentralization seem to depend more on historical conditions and innovative leadership than on institutional transformations. Partial decentralization—be it only in discourse (Mexico), with the transfer of powers to upwardly accountable institutes (Vietnam), or marked by new attributions without new budgets or training (Peru, Indonesia)—risks undermining accountability. In fact, accountability remains the weakest front of both carbon forestry and forestry decentralization in general.

4.3. Power: Challenges to Unequal Power Dynamics

Challenges to forestry decentralization are the same challenges that decentralization policies face in general: political use of the ambiguous division of tasks and attributions; distribution of attributions along political party lines; lack of accountability mechanisms; insufficient budgets, training and capacity development; and conflicting interests pushing the investment agenda.

Decentralization faces existing power dynamics that mold the way transfers of authority are put into practice. Be it the economic incentive of deriving taxes or paybacks from permit-granting (Indonesia, Tanzania), or controlling potential international funds (Mexico), economic interests influence political will. Low emissions development strategies face-off with the interests of energy, agriculture and mining sectors, among others (Peru, Vietnam). Carbon forestry projects did not alter these dynamics.

Whereas, decentralization and participatory institutions have received much attention in research and practice, the relationships between forest dependent peoples and state forest management institutions have remained largely unaddressed (Moelino et al., 2017; Varsan et al., 2019). Carbon forestry projects seem to fuel existing tensions between country capitals and the periphery. Regions of high interest for emissions reductions demanded further autonomy (Indonesia), while communities fought to manage their own forests (Tanzania) and for the right to benefit from the proposed results-based payments for avoided emissions (Mexico).

By seeking to contrast business-as-usual drivers of land use change, carbon forestry has contributed to tensions between the central government and local communities (Mexico, Tanzania, Vietnam), between the central government and SNGs (Indonesia, Peru), but also between SNGs and local communities (Indonesia, Peru, Vietnam). Land use management, *per se*, puts interests at odds. Decentralization has allowed for SNGs to become players in the arena of these power struggles, to different degrees. But not only are SNGs closer to local electorates, they also have their own

interests and needs. Furthermore, they do not always have greater incentives than central governments to promote low emissions development (and may even face additional challenges).

5. CONCLUSIONS

Larson et al. (2007, p. 737) define decentralization as both a policy (“top-down measures aimed at transferring responsibilities”) and a process (“the gradual opening of spaces for participation from below, induced by [...] social movements and local governments”). The distribution of powers among levels of government is highly political, and it is negotiated. Carbon forestry entered an arena of political contestation that is country- and site-specific: as a policy, such as REDD+, it has had little to say about decentralization *per se*, but it interacts with the history and context of each country and each location, where land and forest priorities are negotiated together with the power over shaping those priorities.

In this context, the political dynamics around carbon forestry have made room for SNGs to take advantage of new opportunities. For example, some innovative leaders and coalitions have been able to promote low emissions development strategies in the face of business-as-usual policy making. Nevertheless, this is nowhere near enough. In none of the cases studied did central governments provide the substantive enabling conditions (including allocated budgets, a clear regulatory framework with regards to spatial planning, tenure and forest classification, and a complete bundle of attributions—not just piecemeal—to make for collaborative partnership, i.e., not having a central government working to opposite ends) that would make the required transformations possible at the subnational level. SNGs have demonstrated leadership and innovation, but these cases have been the exceptions rather than the rule, and steps forward under one leader are subject to pushback under another.

Fundamentally, carbon forestry has still not posed a serious challenge to business as usual, at any level of government. We depend on climate leaders, innovators and independent thinkers to challenge the *status quo*. Hence the need for a playing field that is open, at all levels of government. SNGs are key players in LULUC and have much greater incentive to be part of the solution if they are engaged as full partners in addressing the challenges of climate change.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

Authors contributed equally to the piece. AL led conception and design of the study. AL-A led data analysis and writing.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/ffgc.2020.00015/full#supplementary-material>

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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