

Global land governance: from territory to flow?

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This article reviews recent research on contemporary transformations of global land governance. It shows how changes in global governance have facilitated and responded to radical revalorizations of land, together driving the intensified competition and struggles over land observed in many other contributions to this special issue. The rules in place to govern land use are shifting from 'territorial' toward 'flow-centered' arrangements, the latter referring to governance that targets particular flows of resources or goods, such as certification of agricultural or wood products. The intensifying competition over land coupled with shifts toward flow-centered governance has generated land uses involving new forms of social exclusion, inequity and ecological simplification.

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Introduction

It might seem counterintuitive to speak of 'global land governance' when there is no global-level organization with a comprehensive mandate to govern land. Even the United Nations Food and Agriculture Organization, by statute an international organization, resorted to the development of voluntary guidelines in contrast to obligatory rules for its member states when it recently issued guidance on the governance of land tenure [1].

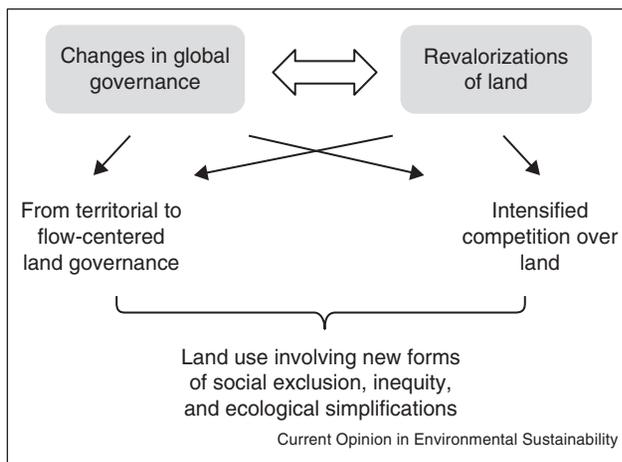
Yet global governance is not the domain of supra-national organizations alone. It involves multiple actors — governments, businesses, NGOs, social movements, and others — and goes beyond global-level rules alone. Global governance can therefore be better understood as 'systems of rule at all levels of human activity — from the family to the international organization — in which the pursuit of goals through the exercise of control has transnational repercussions' [2].

This article reviews recent research on contemporary transformations of global land governance, as understood this way. We organize the review around three interrelated propositions (see also [Figure 1](#)). First, changes in global governance have facilitated and responded to radical revalorizations of land, together driving the intensified competition and struggles over land observed in many other contributions to this special issue. Second, the rules in place to govern land use are shifting from 'territorial' toward 'flow-centered' arrangements, the latter referring to governance targeting particular flows of resources or goods, such as certification of agricultural or wood products. Third, the intensifying competition over land coupled with shifts toward flow-centered governance has generated land uses involving new forms of social exclusion, inequity and ecological simplification.

Revalorizations

Revalorization is the process whereby qualitatively or quantitatively distinct values, which differ from those previously extant or recognized, are given to specific lands. These values might be monetary — as with the creation of new commodities or shifting terms of trade —

Figure 1



Contemporary transformations of global land governance.

or political and cultural — as when new meaning and significance is given to land.

Changes in global agricultural production constitute one of the most visible revalorizations of land over the past decade in an economic (land being a necessary productive asset), political (land being a signifier of national food security) and cultural sense (land being perceived as attaining cultural value through its agricultural use). Concerns over food security have caused large-scale land acquisitions by states, transnational corporations and financial investors [3,4^{**}]. The land acquisitions have been enabled by the development of a market-driven international agricultural trade under the World Trade Organization (WTO), national policies on food, agriculture and trade among governments in the Global North and South, and the emergence of global commercial land markets and other mechanisms granting or preventing outside investors access to agricultural land [5,6,7^{*},8,9]. Likewise, demand for alternative sources of energy has driven land acquisitions for the purpose of biofuel production [10]. In addition, agriculture is now often conceived as indispensable in the provision of a set of cultural, environmental and social services from land [11]. For example, European Union and national policies have supported agriculture for the preservation of diverse or traditional landscapes in ways compatible with WTO rules [12].

Something very similar has occurred in global mineral and hydrocarbon value chains. Demand for these resources has increased as a result of: economic growth in emerging economies leading to demand for materials for buildings and consumer goods; global economic volatility driving demand for investments (such as gold) seen as more secure than currencies; and technological change that

has given increased value to some deposits (e.g. shale based hydrocarbons) [13–15]. Diverse governance mechanisms have facilitated the extension of natural resource extraction. These mechanisms range from the international to the local and include: stock markets enabling resource companies' access to investment capital; national policy reforms facilitating extractive industry acquisition of land and subsurface rights; corporate social responsibility instruments designed to secure 'social license to operate;' and fiscal reforms designed to secure local interest in resource extraction [16^{**},17–19].

Forests have undergone radical revalorizations over the past decade away from a focus on wood supply and biodiversity conservation toward attention to their function in global carbon and regional water dynamics. Carbon forestry has developed steadily through thousands of small-scale reforestation and forest protection projects in the so-called voluntary sector, in which Northern buyers and Southern producers transact in a decentralized manner [20]. Forest carbon became a major topic for global negotiators only recently, when they initiated actions on Reducing Emissions from Deforestation and Forest Degradation (REDD+) [21^{**},22]. Yet even then, emergent global-level rules on REDD+ show direct influences from civil society actors outside the main negotiation room [23] as well as experience from the hundreds of demonstration projects implemented worldwide, although protests against aspects of REDD+ continue [24,25].

The emergence of REDD+ has been strongly influenced by the assertion of political and cultural values tied to land by indigenous peoples' mobilizations at local, national and transnational levels. The mobilizations have highlighted the value of land as a place of belonging, as sacred territories and/or for the exercise of political self-determination, promoting explicit recognition of a diverse array of pre-existing values within contemporary struggles over land [26]. The mobilizations have driven this ongoing process of revalorization by targeting global-level governance and international law (e.g. the UN Declaration on the Rights of Indigenous Peoples and the principle of Free, Prior and Informed Consent [27]) and the strategies of international conservation organizations [28], yet also influenced national and subnational legislation [29,30] and local-level practices, such as revenue-sharing around protected areas [31].

This brief overview is far from exhaustive. Nonetheless, it stresses how changes in governance interact with global revalorizations of land to drive land use change. It also shows that the underlying changes of governance occur at global, national and local levels. Taken together these changes assume a global dimension, contributing to the intensified competition over land [32^{*}].

From territory to flow

A second and connected trend observed in recent research is that land governance, i.e. the rules purposively put in place to facilitate socially desirable forms of land use, has gradually moved from territorial to flow-centered arrangements. Flow-centered arrangements are nothing new to governance if one considers, among others, colonial trading companies and monopolies. Yet, there is a discernible trend in land governance away from the classic territorial forms that had become dominant with the rise of the modern nation state, such as land use regulations made by central governments, land use planning conducted by local governments, and land management undertaken by local communities. New forms of land governance have emerged centered on particular flows of resources and goods.^a These forms, such as production standards in agricultural value chains, voluntary regulation in the mining sector, and forest certification, have been consciously brought into being by a range of stakeholders and coalitions, some seeking to overcome the perceived restrictions of territorially based governance, others seeking to install new forms of oversight [34].

Classic territorial arrangements continue to assume a significant role in contemporary land governance. For example, governments continue to establish protected areas for the conservation of biodiversity [35], initiate land reforms [36], and conduct land consolidation programs [37]. International conservation organizations promote Indigenous and Community Conserved Areas (ICCAs) [28]. Rural residents employ zoning ordinances to preserve desirable landscape features [11].

In addition, territorial governance makes use of new instruments, in particular novel financial mechanisms such as taxes, subsidies and payments [38]. The experience with Payments for Ecosystem Services (PES) offers particular insights in this regard. Originally conceived as a voluntary, market-based transaction [39], PES has long evolved beyond the envisioned dual relationship between willing buyers and willing sellers [40**]. Research now recognizes that PES typically require the involvement of states for their territorial powers, whether it takes the form of large-scale programs such as China's Sloping Land Conversion Program [41] or small-scale projects [42].

Nonetheless, we contend that these reinventions of territorial governance are paralleled and even eclipsed by the ascendance of flow-centered arrangements. In agriculture, concentration in global commodity chains has facilitated industry-led efforts to introduce new forms of

governance, such as production and sustainability standards [43**,44]. Other examples come from NGO and multi-stakeholder certification schemes for organic, fair, local, slow, etc. food operating at global or regional levels, which have typically preceded similar efforts by national governments [45,46]. Concentration in the minerals and hydrocarbon sector has likewise aided industry-led and multi-stakeholder efforts to create new governance instruments. For instance, the International Council on Mining and Metals, established in 2001 and bringing together 22 of the world's largest companies and 34 mining associations, produces voluntary guidelines for its members' operations, many of which affect company-level codes of Corporate Responsibility (see <http://www.icmm.com/>).

Land governance of tropical forests is currently at an important crossroads. If the global REDD+ initiative develops into a global financing mechanism focused exclusively on the reduction of carbon emissions, much of future forest governance may broadly resemble the certification programs formed to promote responsible management of forests worldwide [47]. However, if REDD+ comes to embrace a sustainable forestry or landscape-based low emissions approach, classic territorial instruments such as tenure reforms and management planning may be more important, thereby re-centralizing control in the hands of central governments [48,49].

Overall, there is a discernible shift in land governance from territorial toward flow-centered arrangements. This shift plays out in geographically uneven ways, extending from situations dominated by flow-centered arrangements such as in East Africa's cut flower industries [50] to places and countries with strong territorial governance such as in Vietnam [51].

Effects on land use

The dominance of governance arrangements centered on particular flows of resources has material effects on the provision of other resources or ecosystem services. For example, increases in agricultural prices or yields can cause deforestation [32,52]. The expansion of global food production or changes in European diets may raise global greenhouse gas emissions or cause other environmental effects [53,54]. Increases in carbon stocks facilitated by REDD+ can have detrimental effects on biodiversity, agricultural production, freshwater provision and traditional resource-based livelihoods, revalorizations and mobilizations by indigenous/local peoples notwithstanding [55]. Similarly, the production of biofuel crops for the reduction of green house gas emissions in the energy sector can increase land use-related carbon emissions, reduce biodiversity or cause soil erosion [56,57].

The tendency of flow-based governance arrangements to privilege industrial interests can lead to the exclusion of

^a These new forms of governance have also been called private regulations on the basis of the central involvement of non-governmental actors, yet this term is problematic considering that private actors act publicly when they develop such regulations [33].

smallholder producers and those that depend on land for their livelihoods in the Global South [58**]. Exclusion may come about as an effect of unfavorable terms of trade within commodity and input markets [59], the predatory practices of state officials on land owners [60,61], or production standards [62,63]. However, much attention in research has focused on smallholders' straight dispossession from land, often captured under the term 'land grabbing' [4**,64].

Similarly, the universalizing elements of flow-based governance can lead to the marginalization of ethnic minorities and other people outside the cultural mainstream. For example, research on the benefit-sharing agreements commonly employed by transnational mining companies shows that they can cause unintended cultural changes, such as the monetization of indigenous economies and individualization of property rights previously held in common [65]. Certification schemes have problems accommodating local forms of resources management even if they are designed to promote sustainable production [66].

These effects are related to more general features of flow-centered governance. Flow-centered governance tends to be dominated by powerful actors, such as Northern industry and transnational corporations and more recently new players from the Global South such as Brazil and China [67,68]. Moreover, flow based governance mechanisms related to trade and investment have been used to weaken or prevent efforts to institute territorially based land and environmental governance mechanisms on the grounds that they compromise investor rights or introduce trade advantages to particular resource users [69]. Thus, the shift toward flow-based governance has often been connected to intense political struggles, as illustrated by demands made around the 'right to food' at local, national and global levels. Increasing food prices have resulted in 'food riots' [70] as well as civil society resistance to the promotion of biofuels under the theme 'food versus fuel' at local and national level [71]. The resistance has also caused efforts to institutionalize food as a human right at international and national levels, as most visibly illustrated by the work of the UN Special Rapporteur on the Right to Food [72].

Implications for research in land change science

We conclude that recent insights on global land governance have clear implications for research in land change science. Contemporary transformations of global governance are a significant cause, central dynamic and important effect of the intensifying competition over land observed in many contributions to this special issue. Wider changes in global governance both facilitate and are brought into being by the radical revalorizations of land underlying the competition. The shift from

territorial to flow-centered rules governs land competition in ways that favor some land uses (and users) over others. The intensifying competition over land and shifts in governance affect land use in ways that introduce new injustices and ecological simplifications. Among others, one of the tasks land change scientists may tackle first is to analyze the geographical spread of the ongoing shift from territorial to flow-centered land governance and relate its spatial pattern to the distribution of changes in land use, struggles over land, and dispossession from land, which are already being mapped.

The insights synthesized here also hold direct relevance for land policy. They caution against the belief that the establishment of a global-level organization with a comprehensive mandate on land would lead to better land management worldwide. Future land governance will most likely need to combine territorial and flow-centered arrangements at multiple levels. The key challenges are to strengthen the democratic accountability of flow-centered arrangements and to better calibrate their synergies and complementarities with territorial governance.

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