The Peter A. Allard School of Law

Allard Research Commons

Faculty Publications

Allard Faculty Publications

2017

Transnational Carbon Contracting: Why Law's Invisibility Matters

Natasha Affolder

Allard School of Law at the University of British Columbia, affolder@allard.ubc.ca

Follow this and additional works at: https://commons.allard.ubc.ca/fac_pubs



Part of the Contracts Commons, and the Transnational Law Commons

Citation Details

Natasha Affolder, "Transnational Carbon Contracting: Why Law's Invisibility Matters" in A Claire Cutler & Thomas Dietz, eds, The Politics of Private Transnational Governance by Contract (London: Routledge, 2017) 215.

This Book Chapter is brought to you for free and open access by the Allard Faculty Publications at Allard Research Commons. It has been accepted for inclusion in Faculty Publications by an authorized administrator of Allard Research Commons.

Why law's invisibility matters

Natasha Affolder

Abstract

Contract lawyers are well aware that it is in the boilerplate, in the creation of contractual norms, forms and defaults, that power gets divided and that winners and losers are made. This analysis applies to contractual governance just as it applies to the individual contract setting. This chapter draws on the example of forest carbon contracts to illustrate the 'behind the scenes' privileging of contractual forms, norms, and defaults in action. It argues that the reductionist vision of law emerging in the literature and practice of carbon contracting is both misleading and impoverished.

Introduction

William Wordsworth captured the value of a lone ash tree in Airey-Force Valley as offering 'soft eye-music of slow-waving boughs'. Nearly two centuries later, the earth's three million trees are measured using a different metric – for their capacity to absorb humanity's ten gigatonnes of manmade emissions. Forests offer 'carbon capture and storage technology' in a cheap yet stunning way, promising biodiversity, livelihood and aesthetic benefits to boot. To harness the power of markets to preserve standing forests and prevent further deforestation the contributions of a number of scholarly fields are highlighted: science needs to deliver technology to monitor deforestation, economics needs to guide the creation of carbon markets, and finance must figure out how to pay developing countries to develop forest carbon infrastructure. Rarely mentioned is the work of law – the daily grind of contracts and the wider legal regimes within which they operate that ultimately allow these markets to function in a transnational context and across time and space.

It can be hard to conceptualize the trading of forest carbon as anything other than smoke and mirrors. This is particularly the case for certain aspects of this market, like avoided deforestation, where the 'product' being traded is *not* cutting down trees. Yet the transnational contracting regime that makes forest carbon markets possible can equally be framed as smoke and mirrors. The key actors, the dense networks of contracts, the applicable law, even the

venues of dispute resolution can all be obscured. This shielding from view is offered as a byproduct of contract law's transposition of the 'public' good of carbon sequestration into the private law sphere of contracts; and from the accompanying recalibration of the status of key actors from state/non-state to contracting party/nonparty.

Law's invisibility in much of the literature on contracting can be viewed as a gap. It is also an opportunity. By centering law in a discussion of transnational contracting, otherwise hidden dynamics of this form of governance become apparent. These concealed dimensions are both methodological and ideological. They reveal and challenge a number of the background assumptions percolating in the scholarly literature. They signal the need for awareness not only of what is unknown but of what is unknowable.

One task for this chapter is to explain why law's invisibility matters. Law's invisibility is critical because it allows the unknown dimensions of this market to remain unidentified, because it hides the ideological underpinnings of the transfers of legal forms and technologies that shape this market, and because it allows problematic assumptions to breed unchecked. Attention to the function and conception of law in transnational contracting leads one to question how well the *practice* of transnational contracting fits the theory. This chapter illuminates three particular pressure points where the practice of contracting forest carbon challenges dominant explanations of governance by contract in the scholarly literature. These include: 1. questioning the conception of private governance as 'gap filler', operating only where 'public' governance is absent or inadequate; 2. questioning the assumed dominance of multi-national enterprises in transnational contractual arrangements; and 3. questioning the assumed primacy of arbitration as a mechanism of dispute resolution for transnational contracts.

In dramatic stories of the abuses of 'carbon cowboys' and of 'The Forest Mafia' who 'Steal Millions through Carbon Markets' the media has warned of the most explicit and outrageous abuses of transnational contractual power. This chapter suggests that the less visible and pernicious privileging that occurs through contractual norm-setting is equally cause for concern. It is in the boilerplate of both contracts and the creation of contractual norms and technologies that power gets divided and that winners and losers are made. The power dynamics of standard form contracting have been well highlighted by scholars working in the domestic consumer context. What happens when 'boilerplate' moves to the transnational plane?

The chapter provides a close look at a form of transnational contracting that sits uneasily between the 'economic' and the 'environmental'. I have argued elsewhere that a 'transnational law' approach calls for particular attention to *migrations* of legal norms, processes and techniques, *interactions* of state and non-state actors in all their various guises, and *revelations* of 'hidden law'. This chapter seeks to answer that call by drawing attention to the way in which private authority is being entrenched by public regulatory developments, by documenting the entrepreneurial role of select actors in fostering the market

norms, and legal technologies, that are widely disseminated and reproduced, and by examining the vast swathe of knowledge that remains out of reach due to the insurmountable walls of privacy that surround individual contracts, and the confidentiality of private dispute resolution.

This chapter opens with a brief introduction to the forest carbon market. This introduction explains why it matters that there are two forms of forest carbon markets, reveals the hybrid and blurred identities of key actors, and introduces the normalizing force of contract law into a market that some still have trouble believing even exists. The second section explains the power and the limits of conceptualizing forest carbon deals as contracting, exploring the plural legal orders within which transnational forest carbon contracts move. This section reveals why forest carbon contracts demand both too little and too much of traditional paradigms of contract law. The third section demonstrates the transnational migrations of legal norms and practices through forest carbon contracting, delineating the ways in which contractual practices effectively entrench other forms of private authority. This section reveals the growth of private certification and verification institutions and the multiple points through which the contractual practices and norms developed in the voluntary market shape emerging compliance regimes.

The fourth and final section of this chapter steps back from a micro-level focus on individual contracts and contract chains to examine the wider ideological significance for law of transnational forest carbon contracting. Here the chapter identifies the networks of individuals, NGOs, corporations, research institutions, government agencies, and foundations that are working towards 'legal preparedness' for expanding forest carbon markets and market approaches. In the literature emerging from these organizations, contract law is not invisible. But its task is selective. Contract law's role is captured as one of facilitating rather than restraining autonomous agreements. And it comes with a warning attached - only those countries that reform their law to warmly embrace forest carbon market transactions will benefit from conservation investment in their forests. Law's role becomes redefined as market facilitation, not governance.

A market for forest carbon contracts

Carbon markets are now one of the dominant global features of climate change governance.⁶ The growth of forest carbon contracting within these markets traces to both the marketization of environmental governance and to the recognition that carbon dioxide in the atmosphere can be controlled by planting trees and protecting existing forests. The development of contracting in this sphere of environmental regulation speaks to the success of market advocates who have worked tirelessly to promote forest carbon contracting, and to the intellectual influence of the move to price nature's services.

The marketplace for forest carbon is divided into a regulatory market and a voluntary market. Regulatory, or compliance, markets are driven by investors seeking compliance with regulatory standards. These markets are frequently linked to cap-and-trade mechanisms imposed by governments, including national and sub-national schemes such as the New South Wales Greenhouse Gas Reduction Scheme, as well as Kyoto Protocol driven schemes such as the Clean Development Mechanism (CDM).⁷ Voluntary markets, or voluntary transactions, involve the activities of companies or individuals engaging in offset activities without government-mandated obligations. These over-the-counter transactions involve companies who have set voluntary compliance targets for public relations or other reasons and then purchase carbon credits to attempt to meet those targets. Retailers also lure carbon buyers with the promise of making their activities 'carbon-neutral'.⁸ The majority of carbon trading agreements pertaining to forest conservation, afforestation, and reforestation now occur within the voluntary carbon market.⁹

The distinction between voluntary and regulatory markets is important for a number of reasons. The forms of forest carbon protection (for example avoided deforestation vs. reforestation) that are recognized and can be traded in each market differ. The private standards of verification and certification that shape the transactions can also differ between the regulatory and voluntary markets. But, for this chapter, the most significant aspect of this distinction lies in the fact that the private standards and practices emerging through the voluntary market are entrenching methodologies and private authority in ways that are shaping the practices and contours of regulatory markets. These parallel markets evidence a capacity of voluntary markets to define the practices, contours, and technologies that later-developing regulatory markets will follow. Legal forms and standards are critical to explaining this transfer and entrenchment of private authority.

Forest carbon contracts can involve a number of diverse activities relating to forests, including: afforestation projects, reforestation activities, improved forest management projects involving activities to enhance carbon stocks on currently forested land, and avoided deforestation projects (also referred to as Reducing Emissions from Deforestation and Degradation or REDD). There is a growing push, however, through REDD to integrate avoided deforestation into future global emissions reductions schemes. The 2015 Paris Climate Accord included an explicit provision on REDD+ in the Paris Agreement. Analysts predict that this explicit reference to REDD+, combined with the Warsaw Framework for REDD+, will lead to further growth of REDD+ markets. This again provides an opportunity for developments in the voluntary market to shape future regulatory processes.

The market for forest carbon is diffuse. Forest carbon contracts can thus be found in every region, but their growth is uneven. In 2013, for example, more than half of all forest carbon offsets originated from Latin America. Two-thirds of all buyers were European. ¹³ These geographic realities demonstrate an inherent unevenness of contractual solutions to environmental problems – entire countries and regions can be bypassed.

Uniformity, or harmonization of contractual forms, emerges from the use of standard forms, templates, and through the requirements of third party certification and verification standards. Voluntary markets have been instrumental in shaping the legal forms and terrain of compliance markets that are still emerging. The voluntary market has achieved leverage beyond its small size by serving as a 'testing ground' for methodologies and project types. 14 South Africa's carbon tax will likely allow offsets developed under the voluntary standards VCS and the Gold Standard to be folded into its compliance program. 15 California's carbon cap-and-trade program equally has its roots in the voluntary markets. The influence of standards and methodologies developed for voluntary markets may spread further in a post-Paris Agreement context where governments feel they are under significant public and political pressure to commit to regulatory responses that purport to achieve carbon emission reductions.

Market actors

The introduction to this volume of essays places power at the center of the analysis of contracting, highlighting the role of states and transnational business corporations as central actors. Cutler and Dietz suggest that the 'unprecedented degree of party autonomy inherent in global contracting practices clearly lies in the interests of big multinational companies who, under this condition, can use their bargaining powers to unilaterally choose the governing rules of transnational contract relations'. 16 Forest carbon contracts reveal a different story. They suggest that transnational contracting now encompasses powerful non-traditional actors, apart from multinational corporations.

'Actors' may be the preferred language of legal scholars and political scientists. Investigative journalists firmly capture forest carbon's actors as 'characters', giving a fuller vision of who is engaged in this novel marketplace: the Aussie rules football player pioneering the sale of carbon credits in Papua New Guinea, the blogger who frames forest carbon markets as 'bonkers on so many levels', the former prime ministers, the entrepreneurial business students.¹⁷

Not surprisingly perhaps, traditional ways of conceptualizing and differentiating actors in climate change regimes - distinguishing state, firm, and civil society organizations¹⁸ – are of limited application in understanding the contracting parties engaged in forest carbon contracting. The same roles – as investors, contractors, and standard setters - are occupied by NGOs, forprofit business organizations, foundations and trust funds, and public agencies. Boundaries between market actors and NGOs are ever blurring. 19 Moreover, individual contracts often form part of contractual webs, implicating a diversity of public and private actors in an individual forest carbon market transaction.²⁰

Moreover, the identity of private actors engaging in forest carbon contracting is constantly evolving. Early 'pioneers' of forest carbon transactions were largely NGOs and their special-purpose market-focused subsidiaries. For-profit companies are now entering the forest carbon marketplace to a greater extent, including major financial firms such as BNP Paribas and Gazprom.²¹ The implications of this shift are yet to be fully realized. For example, certification under the Climate, Community & Biodiversity (CCB) Standards requires a forest carbon project to deliver additional benefits (beyond carbon) to the community and to biodiversity. Project-level practice on this already varies significantly, and may vary even more as conservation organizations are replaced by financial institutions and companies.

The concept of 'informal power' has been developed in diverse contexts to illuminate the 'hidden geographies' of power, that are both within and around those spaces identified as the traditional 'corridors of power'. ²² Legal scholars have noted the frequent blindness of law to the multiple identities of informal power in law,²³ and have more recently focused on the concepts of both 'formality' and 'informality' of norms²⁴ and of 'informal' international lawmaking to draw attention to spaces of informality including outputs, processes, and actors.²⁵ This literature invites a more nuanced examination of where power resides in decentralized, hybrid, and non-state or non-courtcentered legal orders. In this study, 'informal power' can be seen in the way in which networks of forest carbon contracting advocates advance contractual norms and templates that shape law and practice; in the 'informal hallways of power' of certification and verification institutions; and in the visible role adopted by the media and NGOs in publicizing and challenging particularly outrageous instances of contractual abuse. The extent to which international arbitration will in the future provide a forum for 'informal power' to be exercised is not yet known.²⁶ While arbitration clauses are included in forest carbon contracts, it is not yet clear that arbitration is a preferred avenue of dispute resolution for emerging disputes.

The plurality of actors contracting for forest carbon, and their shifting and dynamic nature, provide ground for challenging the often unquestioned assumption that any power loss on the part of the state means a necessary power gain by multi-national enterprise. This study challenges that assumption by illustrating the involvement of the many diverse actors and networks of actors other than large corporations in establishing new legal architecture governing forest carbon.

Contract law's normalizing effect

The above exercise of describing the forest carbon market, its growth, and its key actors is not intended to normalize or depoliticize the existence of this market. Indeed, one of the concerns created by the establishment of forest carbon markets is the normalizing of 'offsetting' rather than altering emission-generating practices in the first place. Contract law has a normalizing effect²⁷ that is evident in the extent to which forest carbon contracts mimic other forms of commercial contracts although the substance of what is being traded is radically distinct. For forest carbon contracts, as with many other

forms of transnational contracts, it is the 'spatio-temporal rhythms of financial markets'28 that ultimately set the beat.

Navigating between plural legal orders: why forest carbon contracts demand both too much and too little from contract law

The legal literature on forest carbon contracts splits along a clean divide. The first category of work includes a largely uncritical literature that conceives of forest carbon contracts as legal and commercial constructs and advances practical suggestions for resolving legal uncertainties through contractual provisions.²⁹ A distinct body of scholarship now addresses the phenomenon of contracting through a wider social and environmental justice lens, paying particular attention to the framework of REDD and issues of equity in international law.³⁰ The lack of cross-fertilization between these bodies of work is startling. This split in many ways reflects a deeper division between economic approaches to contract law and socio-political approaches.

More startling still is the large swathe of carbon market literature that ignores, obscures, and seems oblivious to the fact that law is critical in creating, and maintaining, carbon markets.³¹ This invisibility of law may be intended to depoliticize carbon markets, to suggest that markets are autonomous from law, or that contracting is primarily an issue of economic deal-making, not governance. This chapter draws attention to the way law is constituted in this literature, and the evolving contractual practice.

Part of the challenge of thoughtfully analyzing forest carbon contracts within a framework of contract law arises from the transnational commercial nature of these 'environmental' agreements. Forest carbon contracts routinely navigate between plural legal orders. This is not the traditional task of contract law.32 While international business contracts do routinely manage complex relationships between domestic and international law, public and private law, and sources of private authority, forest carbon contracts pose a new way of thinking about environmental regulation. Even though forest carbon contracts are closely linked with 'public' values, and contentious 'public' processes such as REDD, they are legally constructed as transnational commercial contracts. Both the terms and structure mimic other transnational sales agreements. As one drafting guide to Clean Development Mechanism contracts observes: 'The sale of CERs [Certified Emission Reductions] from a CDM project is similar to the sale of any commodity from a project (such as electricity under a power purchase agreement)'.33

A major challenge for forest carbon contracts is that, while their legal form speaks to the demands of commercial contractual practices, their subject matter implicates legal issues that commercial contract law cannot resolve. Agreements on sustainable forestry often deal intricately with the rights of forest-dwelling communities.³⁴ They implicate issues of uncertain land tenure, contested claims of exclusivity of rights to carbon, and forest carbon itself often lacks clear legal status. In different ways, forest carbon contracts demand both too little and too much of contract law. 35

Too little is expected of contract law as carbon contracts formalize domestic legal requirements, but fail to internalize or take up this engagement with domestic law. Carbon contracts may include choice of law clauses that apply domestic law to govern the contract and any disputes arising from it; they may include dispute resolution clauses referring disputes to the exclusive or non-exclusive jurisdiction of national courts.³⁶ Yet forest carbon contracts are not being referred to domestic courts, nor are they being routinely interpreted by judges in courtrooms applying the duly referenced applicable domestic law.

The idealized version of contracting presented in the forest carbon literature is one where contractual bargains between private actors are freed from messy judicial interventions, where the well-developed theoretical legacies of contract law are ignored in favor of 'an oversimplified, stripped-down, mechanical concept of contracting'.³⁷ In many ways the transnationalization of forest carbon contracts operates as an escape clause, allowing contracts to occupy a space outside of the social constraints posed by domestic contract law. This reductionist view of contract law can only work if private international law is equally disinterested in disciplining private power in these transnational economic interactions.³⁸

Where are contractual disputes in forest carbon contracts being played out? Is forest carbon another domain where delocalized arbitration triumphs over local courts? The most honest answer is that this remains unknown. The lack of transparency around international arbitration impedes an understanding of the extent to which forest carbon contracts might reach arbitral tribunals. The only dispute concerning emissions offset trading known to reach arbitration involved the case of a Cypriot investor claiming damages from the Ukraine due to a carbon offset investment gone awry. This was not a forest carbon case. While the case was handled by the Permanent Court of International Arbitration in the Hague, as is typical of arbitration cases, a full award has not been made public. It is also possible that disputes will be resolved by mediation – but the lack of public reporting of such mediations makes the extent of this practice equally unknown.

Contracts formally provide for resolution by arbitration yet evidence that arbitration is being used to resolve these disputes in practice has yet to emerge. Instead, unfairness is denounced in blogs, in NGO news releases, and in scholarly writing, rather than being resolved in domestic courts applying domestic contract law. ⁴¹ Allegations that specific contracts are invalid as contrary to public policy are proliferating. But these issues are not being adjudicated by national courts applying domestic contract law. For example, a US\$120 million contract between the Munduruku Peoples of Para, Brazil and Irish-based Celestial Green Ventures has been characterized as a nullity by FUNAI, the Brazilian government's indigenous affairs agency, on the grounds that the land is owned by the government, not the community. A contractual clause barring the indigenous community from using the forest in

traditional ways has also been challenged as contrary to public policy. 42 It is unclear whether these claims (which involve a mixture of property and contractual issues) will ever reach domestic courts.

Where contracts have been invalidated or cancelled due to serious problems, they have been challenged by NGOs such as Global Witness.⁴³ As is the case with some other transnational contracts such as those governing food safety, 44 monitoring happens through third party intervention, particularly through the activities of NGOs, the media, and certification and verification bodies. In removing these transnationalized disputes from explicitly legal fora, a curious alternate space for dispute resolution emerges. For commercial contracting issues, the power of domestic contract law appears available and ready to protect commercial interests. But for the 'messier' public interest issues that are equally implicated by forest carbon contracting, law and legal dispute resolution venues appear unavailable or unsuitable.

The limited, and potentially superficial, engagement of forest carbon contracts with domestic contract law is not without explanation. Forest carbon contracts highlight the limits of what contract law can and cannot do. Forest carbon contracts may expect too much of contract law. The type of issues around which forest carbon contract disputes arise – the exclusivity of title underlying a carbon sale, the overlapping ownership of forests by multiple indigenous groups, the desirability of allowing a community to restrict the future use of its forests, the corruption of public officials, the capacity of carbon credits to address climate change, and problems of 'additionality' (proving that emissions really have been avoided) and 'permanence' - transcend the scope of what contract law can deliver. The only likely remedy in breach of contract situations is to provide some form of financial compensation. Contract law does less well with orders to pollute less, to replant trees, or to restore diverse forest uses.⁴⁵

But it would be misleading to suggest that there is no room for domestic law in the interplay between multiple legal orders. There are a number of functions that only domestic law can deliver. International rules, for example, have no mechanism for verifying that carbon credit sellers can actually claim legal title to the underlying emission reductions.⁴⁶ Domestic law is also relevant in situations where, in a forward-contract to receive future credits, a party becomes insolvent and the benefits from those unrealized credits need to be apportioned.47

Forest carbon contracts move between multiple legal orders, but their construction as transnational commercial agreements is not without significance. In focusing on the purchase and sale of measurable units of carbon reduction – CERs (Certified Emission Reductions under the CDM) or VERs (Verified Emission Reductions in the voluntary market) - these agreements can obscure, or dismiss, other issues relevant to forest protection, including community benefits and biodiversity protection. Their form and content contrast sharply with other transnational environmental agreements such as conservation contracts or community benefit agreements.

While the focus of this section has been on the way forest carbon contracts move between domestic, transnational and international legal orders, these contracts also link together various forms of private authority, entrenching private standards and establishing them as sources of governance. Illuminating this process is the task of the next section.

Forms, norms and boilerplate: the power of contractual defaults

International policy on forest carbon issues remains fluid. National approaches are in flux. Forest carbon markets, both regulatory and voluntary, continue to evolve. In this constantly shifting environment, forest carbon contracts are, in multiple ways, preceding the wider institutional architecture — and setting precedents for the shape it will adopt. This section captures the multiple levels at which default rules and forms institutionalize forms of both contractual practice and governance. The power of default rules and standards operates at the contractual level as well as the market level.

In a climate of regulatory uncertainty, forest carbon contracts may seek to tether themselves to various sources of authority. This includes not only international and national law, but also diverse forms of private authority. The entrenching of private authority through forest carbon contracts can be observed in two ways: first, through the references in individual contracts to sources and standards of private authority, and second, through the development and reliance on private certification and standards to verify and legitimize carbon credits, and, for certain transactions, the additional requirements of community benefits and biodiversity conservation.

Private authority beyond carbon

The diverse range of issues implicated by forest carbon contracts – ranging from indigenous land rights to restrictions on community forest use, from accounting practices for measuring carbon emission reductions to distribution of carbon credits upon dissolution of a company – means that a plurality of legal orders can be invoked by a single contract. Moreover, contracting parties may view an opportunity to entrench other policy goals through a forest carbon contract. A number of these goals are advanced through contractual references to private initiatives that have little (or nothing) to do with forest carbon. Two forest carbon contracts, one between Norway and Guyana, the other between the Uganda Wildlife Authority and a Dutch non-profit, provide examples of the capacity of forest carbon contracts to entrench reliance on diverse sources of private authority. They evidence how legal contracts serve as important 'artifacts' of transnational legality – revealing complicated interactions between sites and venues of lawmaking.

In 2009, Norway and Guyana signed a Memorandum of Understanding pertaining to forest protection and 'REDD activities'. ⁴⁹ This agreement provides for payments by Norway of up to US\$250 million during a five-year

period ending in 2015 in return for Guyana's commitment to limit forestbased greenhouse gas emissions and to protect its rainforest as an asset for the world. As part of the agreement, Guyana is required to show evidence of a formal dialogue with the Extractive Industries Transparency Initiative (EITI) or an alternative mechanism that the two countries agree will advance similar aims to the EITI. The EITI is a self-described 'global standard ensuring transparency of payments from natural resources'. 50 It is a transparency standard that Norway financially supports and hosts (the International Secretariat of the EITI is in Oslo). By tying a requirement to engage with the EITI into this forest carbon contract, Norway is embedding the EITI in transnational practice.

A very different type of carbon contract, a 99-year agreement between the Ugandan Wildlife Authority and the FACE Foundation (now called the Climate Neutral Group, based in the Netherlands) for planting trees in an area of Mount Elgon National Park provides another example of how private standards are entrenched through transnational contracting.⁵¹ This contract contains the requirement that the forest in question is to be managed in accordance with the principles and criteria of the Forest Stewardship Council 'or any other set of internationally accepted standards that FACE deems appropriate'. 52 This requirement has created tensions surrounding the contract as allegations have been advanced that Principle 3 of the Forest Stewardship Council (FSC) verification standard has not been respected. 53 Principle 3 requires a forest owner or manager 'to identify and uphold indigenous peoples' rights of ownership and use of land and resources'. 54 Reconciling forest carbon contracting with the rights of indigenous peoples to use and own their forests is a critical issue in many forest carbon projects. While the project certifier in this case signed off on the required compliance with the FSC standards, the project's compliance with Principle 3 has been challenged by NGOs investigating the project and community complaints.⁵⁵

The market for standards and guidelines

While forest carbon contracts can entrench private standards that are not specific to carbon issues, in practice, forest carbon contracting has been most influenced by a number of tools, methodologies, and standards created specifically to verify, accredit, or certify forest carbon projects. As forest carbon is a conceptually unclear and intangible form of property, some form of verification is generally demanded by purchasers looking to buy a 'legitimate credit' certified by an independent party. Standards allow for the comparison and quantification of emissions reductions and have been essential to the growth of carbon markets. By 2008, third-party standards were sought for 96% of offsets.⁵⁶ While there are clear market leaders, new certifiers and registries are emerging each year, and existing certifiers are expanding their reach to include forest carbon projects.

Voluntary markets are not subject to mandatory certification requirements, but a number of competing schemes have been developed to regulate these projects. The Verified Carbon Standard (VCS, formerly the Voluntary Carbon Standard) and the Climate, Community and Biodiversity (CCB) standards now dominate the certification market. The VCS is the market leader in providing certification of forest carbon credits. The CCB standards are the dominant standards certifying 'co-benefits' from forest carbon projects.

The VCS standard was developed by the Climate Group, the International Emissions Trading Association, and the World Economic Forum in 2005. It verifies credits and records them through a registry system. VCS was created as a base carbon accounting standard, and it can be combined with other standards, such as the CCB standards. The CCB standards reflect the demand for certification of project benefits beyond carbon. These standards are managed by the Climate, Community and Biodiversity Alliance (CCBA), a consortium of international non-governmental organizations, companies such as BP, Intel, and Weyerhaeuser, and carbon consultancies. The CCB label can attach to projects to 'demonstrate good project design' and to certify 'the quality of project implementation and the delivery of multiple benefits'. The CCB standards are accepted as being more demanding than existing public legal standards, including those of the CDM. 58

While these two standards are the market leaders, there are a range of other standards competing for market share. These other standards are intriguing for this discussion due to their relationship with contracting and market expansion. The increased use of standards was attributed to the fact that uncertified projects may have a hard time finding buyers now that the application of third-party standards is demanded in the marketplace. However, the increasing use of standards imports verification costs which adds to transaction costs. This may prove a barrier to the development of small projects conceived as 'pro-poor' development projects.

Nonetheless, the voluntary market has served as an incubator for tools and methodologies. Standards are now positioned as an important mechanism for shaping not only markets, but also regulatory responses to forest carbon. Indeed, standards developed in the voluntary market have already started to influence the regulatory market. In 2010, for example, the California Air Resources Board (the body tasked with implementing that state's cap and trade system), authorized the use of forest protocols from the Climate Action Reserve (another non-profit carbon offset registry and standards-setting body active in certifying carbon in voluntary markets). 62 California's Air Resources Board is also reviewing several non-forest protocols developed by another non-profit source of standards, the American Carbon Registry. These examples show how standardization initiatives developed in the voluntary market by private actors lead to compliance rules and methodologies under regulatory schemes. The voluntary market is thus perceived as a 'methodology laboratory' producing methods that will one day shape regulatory approaches. 63

Another example of how the activities of voluntary private actors shape regulatory design arises from the now defunct Chicago Climate Exchange. Several voluntary verification bodies adopted a 'buffer pool mechanism' to address permanence concerns surrounding forest carbon credits. The buffer pool system uses an insurance concept to require projects to maintain a reserve of non-tradeable credits, which can be used to cover reversals (such as those arising from fire or pest outbreaks).⁶⁴ The first widespread application of the buffer pool methodology occurred under the Chicago Climate Exchange. Although this emissions trading scheme closed its doors in 2010, now every major standard (apart from the CDM) adopts the buffer approach.⁶⁵ Policies and methodologies adopted by private markets and exchanges can continue beyond the specific instruments and institutions of their creation by shaping norms of practice. Contracts can be the instruments of transmission of these norms, as compliance with methodologies and standards can be inserted as contractual terms.

The inclusion of references to private standards in standard form contracts leads to the spread of these standards as industry norms. Counsel experienced with carbon markets suggest that carbon contracts are moving to more standardized forms as markets mature.⁶⁶ The involvement of international financial institutions such as the World Bank can also lead to the increased use of standardized contracts, as these institutions prefer to deal with familiar documentation.67

This section has revealed an increase of private authority in transnational forest carbon contracts, as multiple layers of reliance on private standards and initiatives are introduced through contractual language and contractual practice. The movement of legal forms, practices, and technologies from regulatory to compliance markets challenges the conception of private authority as 'gap filler', operating only where 'public' governance is absent or inadequate. Public and private authority are not engaged in some zero sum game. 68 Rather forms of private authority are becoming entrenched through public regulatory developments.

Forest carbon contracts as ideological project: hidden and not-so-hidden world views

Law's invisibility in the contracting literature serves yet another function – to frame contracting as an issue of economic or market management, rather than one of governance. This helps obscure the ideological stakes in issue and the fact that the actors who are creating contractual norms, forms, and templates have some 'skin in the game'. The advance of forest carbon contracting can be credited in part to a curious network of organizations (public and private). They are not shy about advancing an instrumentalist view of law in their joint publications, suggesting that countries face a dramatic choice: either reform their law to facilitate forest carbon investments or risk losing out on this potentially significant market opportunity.

According to a report prepared by Forest Trends, the Katoomba Group, Ecosystem Marketplace, and Bio-Logical Capital, the limited funding being directed towards forest carbon projects will 'improve conditions for forest carbon opportunities only in those countries where there appears to be greatest interest'. Funds continue to be invested in 'creating supportive legal frameworks' and 'measuring, monitoring, and reporting on carbon projects'. Public funding is targeting 'readiness'. These authors note that if there is no international regulation driving the development of forest carbon projects, forest carbon projects will grow only in those countries of the world most 'primed' for forest carbon contracts by virtue of country-specific policies embracing these agreements.

To help transform law to accommodate forest carbon markets, various guides to 'supporting legal frameworks' are created, 73 model contracts are produced, 74 country-specific advice is given, and funding is directed to 'REDD-readiness' programs (reforming laws to accommodate avoided deforestation and carbon as recognized legal concepts). These legal reforms are backed up with sophisticated publications, advice, toolkits, and reported success stories. 75 The advocacy in favor of carbon markets is presented in strong sales pitch language, with reports documenting how to 'gain an advantage', 'pilot new ways', achieve 'market wins', and 'leverage' those wins. 76 The legal homogenizations 77 advanced by this advocacy work largely escape notice.

Key players and their funders include Ecosystem Marketplace, Forest Trends, the Katoomba Group, Ecosystem Marketplace, and Bio-Logical Capital. The financial support for their forest carbon contract research and publications comes from a combination of private companies, law firms, NGOs, governments, and intergovernmental organizations, including: Wildlife Works, World Bank BioCarbon Fund, ERA Ecosystem Restoration Associates, Baker & Mackenzie, Det Norske Veritas, Ecotrust, Forest Carbon Group, Face the Future, USAID, the David and Lucelle Packard Foundation, the Gordon and Betty Moore Foundation, the John D. and Catherine T. Foundation, the Global Environmental Facility, the United Nations Development Programme, and the Norwegian Agency for Development Cooperation.⁷⁸

These particular networks, or subcultures, or forest carbon 'cults' evoke studies of how business people have traditionally 'created their own law through the drafting, use and refinement of general conditions of trade, standardized contracts and other clauses as well as the development of practices and usage'⁷⁹ and more recent scholarship that reveals how global derivatives markets perpetuate 'the fantasy of a privately regulated global market [that] engenders particular kinds of practical projects, particular material artifacts'.⁸⁰ There is a sense of a community at work, busily codifying norms in standardized documents and preparing contractual templates, to assist with the task of moving to a 'green economy'.

The message given in the 'legal initiative' and legal reform publications of these networks emerges from a market environmentalism premised on the assumption that environmental protection should proceed through pricing nature's services, protecting private property rights, and trading these rights within a global market.⁸¹ Law is conceived as a mechanism or tool that can either advance or impede the development of 'innovative' environmental marketplaces.⁸² Implicit in this vision is the idea that private property rights and freedom of contract are universal values to be facilitated through law. State ownership is seen as an 'impediment' to the spread of market approaches. 83 There is little room here for more plural visions of law and its functions, visions in which addressing climate change, and protecting forests, emerge from state responsibilities and legislation.

Transnational contracting: the uncertain and the unknown

The 'shift' from public to private governance has garnered significant attention from scholars, and has resulted in a body of work on the 'gutting', 'hollowing out', and 'privatization' of the state. This chapter draws attention to a lessexplored phenomenon – the use of private initiatives and standards as models for public regulation. It captures the 'legal entrepreneurs' who are pioneering and funding legal readiness projects to have templates for contracts and legislative schemes 'shovel ready' for wider use. Concluding this chapter provides an opportunity to emphasize what remains both unknown, and unknowable. This takes us back to the beginning, and to asking 'why law's invisibility matters'.

In the transnational contracting sphere, law's invisibility is sometimes unavoidable. Only rarely in scholarship on transnational contracts do we see evidence of close textual analysis of specific contracts. 84 Contracting is often captured as a 'phenomenon' yet individual contract texts occupy an invisible role. This is not simply shoddy scholarship. Illuminating the politics of transnational governance by contract is necessarily limited by the reality that contracts are documents between parties. For non-parties, the texts may never be known. The identity of the contracting parties may remain unknown. The very existence of contracts can also be unknown, and unknowable.

Dispute resolution often brings no relief from our ignorance. The weight of scholarly literature on arbitration can distract from the extraordinarily thin knowledge base on which this body of law rests. Arbitration processes may not be disclosed, and reports of arbitral tribunal proceedings can be kept entirely confidential, or only released in a heavily redacted way. Court enforcement of international arbitration awards also leaves a light and partial record. These methodological constraints on studying transnational governance by contract force humility, and even more, they encourage outright disclaimers of the very partial knowledge base upon which chapters like this one are constructed. It is possible – and possibly even likely – that the practices that are captured here represent a very small sample of actual transnational carbon contracting practice, the sometimes visible tip of the iceberg.

In some transnational contractual settings, such as with stabilization clauses in investment contracts, there has been a strong move towards transparency and the public release of private contractual documents (or select clauses) of deep public significance. Forest carbon contracts, it may be argued, equally evoke issues of 'public' interest and concern.

Forest carbon is still in its infancy as an idea, a legal subject, a market, and an investment class. Its impact on shifting conceptions of law is also far from complete. This chapter contributes an understanding of the relationship between legal forms and power to this analysis. It highlights why it is important to pay attention to peripheral legal and political orders as much as central ones. What happens in side, parallel, and private legal orders can shape mainstream regulatory institutional responses. The power this chapter isolates is the power of contractual forms and norms, the power that accompanies first-mover advantage in establishing methodologies that become the 'defaults' for later regulatory regimes.

The forest carbon literature and practice suggest, in obvious and less obvious ways, that the language, methods and concepts of economics have now overpowered the traditional language, methods and constructs of law. Law appears as a handmaiden whose task becomes one of simply making the world safe – safe for contracts – and safe for money to grow on trees.

Acknowledgements

I am grateful to Sascha Paruk for his excellent research assistance.

Notes

- 1 De Selincourt and Derbishire 1952-59.
- 2 Bartlett 2012.
- 3 Jacobs 2013.
- 4 Radin 2014.
- 5 Affolder 2016, forthcoming.
- 6 Bernstein et al. 2010, p. 170.
- 7 The 1997 Kyoto Protocol of the UN Framework on Climate Change permits Annex I countries to partially meet their emission targets through funding projects in developing countries.
- 8 Offsets in the voluntary market were also developed under the Chicago Climate Exchange (CCX) markets, which ceased operations in late 2010.
- 9 Luttrell et al. 2011, p. 2.
- 10 The domain of REDD now is expanded to include REDD+ (which includes the role of conservation, sustainable management of forests and enhancement of forest stocks) and REDD++ (referencing an even broader suite of land uses including afforestation, agriculture and peat management) (Forest Trends et al., 2011, p. 3).
- 11 Article 5 of the Paris Agreement (2015).
- 12 Baker and MacKenzie 2016, p. 11.
- 13 Goldstein and Gonzalez 2014, pp. 53, 65.
- 14 Hamrick 2015: 10.
- 15 Hamrick 2015: 29.
- 16 Cutler and Dietz, this volume, pp. 15-16 emphasis mine.
- 17 Knight 2015, p. 36.

- 18 See e.g. Abbott 2011.
- 19 Hein and Garrelts 2014, p. 329.
- 20 For example, in the case of the Ulu Masen Carbon Project, an avoided deforestation project in Indonesia, the original project deal was concluded between the governor of Aceh and Dorjee Sun, owner of the company Carbon Conservation with the assistance of conservation NGO Flora & Fauna International. Investors in the project included Merrill Lynch (committing to a reported US\$9 million investment in the project) with the goal of earning profits through the eventual sale of the carbon credits. Pursuant to a Memorandum of Understanding, the carbon credits were to be purchased by the states of California, Illinois and Wisconsin (Springate-Baginski and Wollenberg 2010, p. 76).
- 21 Diaz et al., 2011, p. iv.
- 22 Anceschi et al. 2014.
- 23 Barzilai 2008.
- 24 Toope 2008.
- 25 Pauwelyn et al. 2012, p. 2.
- 26 See the more detailed discussion of the limited record of arbitration in the second section.
- 27 May, this volume.
- 28 Bond 2011, p. 685.
- 29 See Wilder and Curnow 2005; Wilder and Fitz-Gerald 2009.
- 30 See Takacs 2010.
- 31 In a thoughtful unpacking of the depiction of law in the World Bank's State and Trends of the Carbon Market 2010 Report, Julia Dehm (2011, p. 9) describes the 'particular fantasy' sustained in the Report that the carbon market is autonomous from both law and political decisions. The value chain literature, in a similar way, escapes engagement with contract law (see Cutler this volume).
- 32 Wai 2008, p. 121.
- 33 Wilder, Willis and Carmody 2004, p. 99.
- 34 Bartley 2011, p. 528.
- 35 Similar limits to what contract can do in the context of the investor-state regime are identified in the chapter by Cutler and Lark (this volume).
- 36 The Carbon Advice Group (2011), which uses a standard form contract to sell Verified Emissions Reductions, provides as a standard term that, 'Unless Otherwise agreed between us in writing these Terms are governed by and shall be construed in accordance with English law and you hereby submit to the exclusive jurisdiction of the English courts.'
- 37 Zumbansen 2013, p. 126.
- 38 Muir Watt 2011, p. 354.
- 39 Naftrac v. Ukraine. No information on the case is available on the Permanent Court of Arbitration website. For a reference to the existence of this case see Sauvant 2011,
- 40 An indicator that this might be occurring lies in a reference in Nature to a 2012 dispute between an environmental organization and an energy company. The company sought to ship wood pellets to Europe originating from mountain pine beetle-infested forests in Canada. The EU's Renewable Energy Directive sustainability criteria prohibit the use of 'primary forest' materials for bioenergy. The dispute was settled by mediation, but without public reporting (Bosch et al. 2015, p. 526).
- 41 See Bartlett 2012; Carus 2010.
- 42 Lang 2012.
- 43 Global Witness (2010) called attention to a fraudulent carbon agreement between a UK company and the Government of Liberia, leading to the arrest of the CEO of the carbon company.

- 44 Cafaggi 2011, p. 49.
- 45 Peden 2010, p. 144.
- 46 Wilder and Fitz-Gerald 2009, p. 305.
- 47 Wilder and Fitz-Gerald 2009, p. 305.
- 48 Riles 2011, p. 43.
- 49 MOU 2009.
- 50 Extractive Industries Transparency Initiative 2016.
- 51 Tienhaara 2012, p. 565.
- 52 Tienhaara 2012, p. 565.
- 53 Lang 2006.
- 54 Forest Stewardship Council. n.d.
- 55 Lang 2006.
- 56 Hamrick 2015, p. 16.
- 57 Hein and Garrelts 2014, p. 323.
- 58 Takacs 2009, p. 80.
- 59 An example of this is the Gold Standard which was established in 2003 by WWF. The Gold Standard announced in 2012 that it would expand to provide a land use and forestry Gold Standard. For a more detailed overview of existing standards see Diaz, Hamilton and Johnson (2011, p. 67).
- 60 Diaz et al. 2011, p. v.
- 61 Luttrell et al. 2011, p. 4.
- 62 Diaz et al. 2011, p. v.
- 63 Diaz et al. 2011, p. 13.
- 64 Maguire 2011, pp. 111-112.
- 65 Diaz et al. 2011, p. 16.
- 66 Wilder and Curnow 2005, pp. 351-352.
- 67 Wilder and Curnow 2005, p. 363.
- 68 See Affolder 2010, p. 161.
- 69 Forest Trends et al. 2011, p. 10. 70 Forest Trends et al. 2011, p. 10.
- 71 Forest Trends et al. 2011, p. 10.
- 72 Forest Trends et al. 2011, p. 22.
- 73 See e.g. Agidee (2011, p. 1). This report is from the Katoomba Group's Legal Initiative Country Study Series, sponsored by NORAD, the Gordon and Betty Moore Foundation, UNDP and the GEF. Another report in the same series, on legal frameworks to recognize Payment for Ecosystem Services of mangroves in Vietnam, opens with a recognition of the need to send a 'price signal' on the value of standing mangroves (Hawkins et al. 2010b, p. v).
- 74 See Hawkins et al. 2010a, p. iv.
- 75 See e.g. the coverage of the 'legal initiative' for payment for ecosystem services, including forest carbon contracts, on the website of the Katoomba Group: http:// www.katoombagroup.org/regions/international/legal.php.
- 76 Hamrick 2015, p. 1.
- 77 Ferrando 2014.
- 78 Diaz et al. 2011.
- 79 Berger 1999, pp. 27-28.
- 80 Riles 2011, p. 36.
- 81 Liverman 2004.
- 82 Affolder 2012.
- 83 The Katoomba Group's Report on Vietnam frames state ownership as an impediment to the realization of private mangrove payments for ecosystem services in Vietnam (Hawkins et al. 2010b, p. v).
- 84 See Ferrando 2014, p. 83, for an excellent example of the value of close reading of standard contract provisions.

References

- Abbott, K., 2011. The Transnational Regime Complex for Climate Change. Environment and Planning C: Government and Policy, 30(4), 571-590.
- Affolder, N., 2010. The Market for Treaties. Chicago Journal of International Law, 11, 159–196.
- Affolder, N., 2012. Beyond Law As Tools Foreign Investment Projects and the Contractualization of Environmental Protection. In: Dupuy, P.-M., and Vinuales, J., eds., Harnessing Foreign Investment to Promote Environmental Protection: Incentives and Safeguards. Cambridge: Cambridge University Press, 355-381.
- Affolder, N., 2016 (forthcoming). Melting the Boundaries of Law: Transnational Climate Law and Practice. In: Zumbansen, P., ed., Oxford Handbook of Transnational Law. Oxford: Oxford University Press.
- Agidee, Y., 2011. Forest Carbon in Ghana: Spotlight on Community Resource Management Areas. Washington DC: Forest Trends.
- Anceschi, L., Teti, A. and Gervasio, G., 2014. Informal Power in the Greater Middle East. Routledge: Abingdon.
- Baker & McKenzie. 2016. The Paris Agreement: Putting the first universal climate change treaty in context [online]. Available from: http://www.bakermckenzie.com/ ALGlobalClimateChangeTreatyJan16/[Accessed 11 July 2016].
- Bartlett, L., 2012. The Carbon Cowboy. 60 Minutes Australia (TV documentary), 6 July. Bartley, T., 2011. Transnational Governance as the Layering of Rules: Intersections of Public and Private Standards. Theoretical Inquiries in Law, 12(2), 517-542.
- Barzilai, G., 2008. Beyond Relativism: Where is Political Power in Legal Pluralism? Theoretical Inquiries in Law, 9(2), 395–416.
- Berger, K.P., 1999. The Creeping Codification of the Lex Mercatoria. Boston: Kluwer Law. Bernstein, S., Betsill, M., Hoffmann, M., and Paterson, M., 2010. A Tale of Two Copenhagens: Carbon Markets and Climate Governance. Millenium – Journal of International Studies, 39(1), 161–173.
- Bond, P., 2011. Emissions Trading, New Enclosures and Eco-Social Contestation. Antipode, 44(3), 684–701.
- Bosch, R., van de Pol, M., and Philp, J., 2015. Policy: Define Biomass Sustainability. Nature, 29 July, 526-527.
- Cafaggi, F., 2011. Transnational Governance by Contract Private Regulation and Contractual Networks in Food Safety [online]. Available from: http://ssrn.com/abstra ct=1874749 [Accessed 11 July 2016].
- Carbon Advice Group, 2011. Standard Form Verified Emissions Reduction ('VER') Purchase Agreement, November, on file with author.
- Carus, F., 2010. British Deal to Preserve Liberia's Forests 'Could Have Bankrupted' Nation. The Guardian, 23 July.
- Dehm, J., 2011. Tricks of Perception and Perspective: The Disappearance of Law and Politics in Carbon Markets: Reading Alexandre Kossoy and Philippe Ambrosi, State and Trends of the Carbon Market 2010. Macquarie Journal of International and Comparative Environmental Law. 7(2), 1-18.
- De Selincourt, E., and Derbishire, H., eds., 1952-59. Poetical Works of William Wordsworth, 5 vols. Oxford: Clarendon Press.
- Diaz, D., Hamilton, K., and Johnson, E., 2011. State of the Forest Carbon Markets 2011: From Canopy to Currency [online]. Available from: http://www.forest-trends. org/documents/files/doc_2963.pdf [Accessed 11 July 2016].

- Ferrando, T., 2014. Global Land Grabbing: A Tale of Three Legal Homogenizations. In: Muir Watt, H. and Fernandez Arroyo, D., eds., *Private International Law and Global Governance*. Oxford: Oxford University Press, 71–91.
- Forest Stewardship Council, n.d. *The Ten Principles, FSC International* [online]. Available from: https://ic.fsc.org/en/certification/principles-and-criteria/the-10-principles [Accessed 11 July 2016].
- Forest Trends, The Katoomba Group, Ecosystem Marketplace and Bio-Logical Capital, 2011. *Investing in Forest Carbon: Lessons from the First 20 Years* [online]. Available from: http://www.forest-trends.org/documents/files/doc_2677.pdf [Accessed 11 July 2016].
- Global Witness, 2010. Global Witness Investigation Leads to UK Arrest Over Carbon Deal in Liberia [online]. Available from: https://www.globalwitness.org/en/archive/global-witness-investigation-leads-uk-arrest-over-carbon-deal-liberia/ [Accessed 11 July 2016].
- Goldstein, A., and Gonzalez, G., 2014. *Turning Over a New Leaf: State of the Forest Carbon Markets 2014* [online]. Washington, DC: Forest Trends' Ecosystem Marketplace. Available from: http://www.forest-trends.org/documents/files/doc_4770.pdf [Accessed 11 July 2016].
- Hamrick, K., 2015. Ahead of the Curve: State of the Voluntary Carbon Markets 2015 [online]. Washington, DC: Forest Trends' Ecosystem Marketplace. Available from: http://forest-trends.org/releases/uploads/SOVCM2015_FullReport.pdf [Accessed 11 July 2016].
- Hawkins, S., et al., 2010a. Contracting for Forest Carbon: Elements of a Model Forest Carbon Purchase Agreement [online]. Katoomba Group, Forest Trends. Available from: http://www.foresttrends.org/documents/files/doc_2558.pdf [Accessed 11 July 2016].
- Hawkins, S., et al., 2010b. Roots in the Water: Legal Frameworks for Mangrove PES in Vietnam [online]. Katoomba Group's Legal Initiative Country Study Series. Washington, DC: Forest Trends. Available from: http://www.forest-trends.org/documents/files/doc_2561.pdf [Accessed 11 July 2016].
- Hein, J., and Garrelts, H., 2014, Ambiguous Involvement: Civil-Society Actors in Forest Carbon Offsets. In: Dietz, M., and Garrelts, H., eds., Routledge Handbook of the Climate Change Movement. Abingdon: Routledge, 319–333.
- Jacobs, R., 2013. The Forest Mafia: How Scammers Steal Millions through Carbon Markets. *The Atlantic* [online]. Available from: http://www.theatlantic.com/interna tional/archive/2013/10/the-forest-mafia-how-scammers-steal-millions-through-carbon-markets/280419/ [Accessed 11 July 2016].
- Knight, S., 2015. The Incredible Plan to Make Money Grow on Trees. *The Guardian Weekly*, December 18.
- Lang, C., 2006. Uganda: FSC Fails to Uphold Indigenous peoples' Rights at Mount Elgon. World Rainforest Movement [online]. Available from: https://chrislang.org/ 2006/12/29/uganda-fsc-fails-to-uphold-indigenous-peoples-rights-at-mount-el gon/#more-209 [Accessed 11 July 2016].
- Lang, C., 2012. Celestial Green Ventures: 20 million Hectares of REDD Carbon Offset Projects in Brazil. REDD-Monitor [online]. Available from: http://www. redd-monitor.org/2012/03/13/celestial-green-ventures-20-million-hectares-of-redd-carbon-offset-projects-in-brazil/ [Accessed 11 July 2016].

- Liverman, D.M., 2004. Who Governs, at What Scale and at What Price? Geography, Environmental Governance, and the Commodification of Nature. Annals of the Association of American Geographers, 94(4), 734-738.
- Luttrell, C., Schreckenberg, K., and Peskett, L., 2011. Forest Briefing 14: The Implications of Carbon Financing for Pro-Poor Community Forestry. London: Forest Policy and Environment Program, Overseas Development Institute.
- Maguire, R., 2011. Opportunities for Forest Finance: Compliance and Voluntary Markets. Carbon and Climate Law Review, 1, 111-112.
- Memorandum of Understanding (MOU) between the Government of the Cooperative Republic of Guyana and the Government of the Kingdom of Norway regarding Cooperation on Issues related to the Fight against Climate Change, the Protection of Biodiversity and the Enhancement of Sustainable Development. Guy.-Nor., Nov. 9, 2009 [online]. Available from: https://www.regjeringen.no/globalassets/upload/md/vedlegg/ klima/klima_skogprosjektet/the-memorandum-of-understanding-guyana-norway-onredd-081109-signed-091109.pdf [Accessed 11 July 2016].
- Muir Watt, H., 2011. Private International Law Beyond the Schism. Transnational Legal Theory, 2(3), 347-427.
- Paris Agreement, Art. 5, UNFCCC/CP/2015/L.9/Rev.1, Dec. 12, 2015 [online]. Available from: http://unfccc.int/files/essential_background/convention/application/pdf/ english_paris_agreement.pdf [Accessed 11 July 2016].
- Pauwelyn, J., Wessel, R., and Wouters, J., eds, 2012. Informal International Lawmaking, Oxford: Oxford University Press.
- Peden, E., 2010. Contractual Perspective of Climate Change Issues. In: Law, R. L., ed., In the Wilds of Climate. Brisbane: Australian Academic Press, 143-154.
- Radin, M., 2014. Boilerplate: The Fine Print, Vanishing Rights, and the Rule of Law. Princeton: Princeton University Press.
- Riles, A., 2011. Collateral Knowledge: Legal Reasoning in the Global Financial Markets. Chicago: University of Chicago Press.
- Sauvant, K.P., 2011. Yearbook on International Investment Law and Policy 2010-2011. Oxford: OUP.
- Springate-Baginski, O. and Wollenberg, E., 2010. REDD, Forest Governance and Rural Livelihoods: The Emerging Agenda. Bogor, Indonesia: Center for International Forestry Research.
- Takacs, D., 2009. Carbon Into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law. Hastings West-Northwest Journal of Environmental Law and Policy. 15(39).
- Takacs, D., 2010. Forest Carbon Offsets and International Law: A Deep Equity Legal Analysis. Georgetown International Environmental Law Review, 22, 521.
- Tienhaara, K., 2012. The Potential Perils of Forest Carbon Contracts for Developing Countries: Cases from Africa. The Journal of Peasant Studies, 39(2), 551-572.
- Toope, S., 2008. Formality and Informality. In: Bodansky, D., et al., eds., Oxford Handbook of International Environmental Law, Oxford: OUP 107-124.
- Wai, R., 2008. The Interlegality of Transnational Private Law, Law and Contemporary Problems 71, 107-127.
- Wilder, M., and Curnow, P., 2005. Trading Carbon as a Commodity: Sale and Purchase Agreements for Carbon Credits. Australian Mining and Petroleum Law Association Yearbook 25, 351-367.
- Wilder, M., and Fitz-Gerald, L., 2009. Carbon Contracting. In: Freestone, D., and Streck, C., eds., Legal Aspects of Carbon Trading. Oxford: OUP, 295–309.

Wilder, M., Willis, M., and Carmody, J., 2004. *Legal Issues Guidebook to the Clean Development Mechanism* [online]. Roskilde, Denmark: UNEP Risø Centre. Available from: http://www.cd4cdm.org/Publications/CDM%20Legal%20Issues%20Guidebook. pdf [Accessed 11 July 2016].

Zumbansen, P., 2013. Transnational Private Regulatory Governance: Ambiguities of Public Authority and Private Power. *Law and Contemporary Problems* 76, 117–138.