

Introduction

Reconsidering REDD+

A INTRODUCTION

The question of how we respond to the climate crisis – or even how such a ‘we’ is configured – is perhaps the most critical legal, political and moral question of our time. The globalisation of a fossil fuel-dependent capitalism has taken the world to the brink of ecological disaster. The climate crisis makes transformation of the status quo both urgent and unavoidable. Yet, the *form* this transformation will take is not inevitable: different visions of the future remain heavily contested, and the processes of transition and their elements and speed remain the subject of high-stake debate and struggle.

The realisation that humans have so fundamentally changed our environment that we have become a ‘geological force’ raises uncomfortable questions about responsibility, culpability and what it means to live well in the ‘Anthropocene’.¹ On a theoretical level, the contemporary epoch has sparked exciting investigations about how core assumptions of many disciplines, including the doctrines, principles and processes of international law, will need to be rethought, in a context where a once presumed environmental stability no longer exists.² Similarly, the ecological crisis has led to a revitalisation of scholarship critically interrogating how international law has contributed to the production of Anthropocene conditions by perpetuating an extractivist relationship to nature. Such scholarship seeks to excavate the problematic assumptions about nature that lie at the heart of international

¹ P. J. Crutzen, ‘Geology of mankind’ *Nature* (2002) 415 *Nature* 23; a number of other terms have been proposed, such as the ‘Capitalocene’ in J. W. Moore (ed.), *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism* (PM Press, 2016); and the ‘Chthulucene’ in D. J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Duke University Press, 2016).

² D. Vidas, J. Zalasiewicz, and M. Williams, ‘What is the Anthropocene – and why is it relevant for international law?’ (2014) 25 *Yearbook of International Environmental Law* 3–23 at 23.

law, and to remake international law's relationship with the natural world.³ There is a growing chorus of scholarly voices calling for a different 'conception of law which acknowledges, and in fact emerges from, the entangled nature of existence'.⁴

Because the Anthropocene has given rise to such rich 'new' ways of thinking, some have suggested it marks a 'rupture' with the past.⁵ However, the prosaic, day-to-day developments in the field of international legal practice are arguably marked more by *continuities* than by dramatic breaks from the norm. It is these questions of how existing structural power relations and sedimented historical conditions continue to influence responses to the climate crisis that are addressed by this book. This book is concerned with how the dominant international legal responses to climate change, particularly the marketised vision of a 'green economy', replicate – and indeed further intensify – already existing legal relations of domination, exploitation and marginalisation. While climate change arguably should have been the ultimate challenge to development and growth logic, in many ways it appears to have fuelled, rather than interrupted the expansion of these rationalities.

This book directs its attention to examining a specific response to the climate crisis – the Reducing Emissions from Deforestation and Forest Degradation scheme, commonly known by its acronym, REDD+.⁶ REDD+ represents a particular way of framing and responding to the urgent challenge of addressing climate change that is not neutral in its effects, but has potential wide-ranging implications for how forests are governed and valued, both for biodiversity and for the estimated 1.6 billion people who live in and around forests and depend upon them to some degree for their livelihoods.⁷ At stake in debates over REDD+ are struggles over the shape and contours of the necessary transition towards a low-carbon future, and

³ U. Natarajan and J. Dehm (eds.), *Locating Nature: Making and Unmaking International Law* (Cambridge University Press, forthcoming); U. Natarajan and K. Khody, 'Locating nature: Making and unmaking international law' (2014) 27 *Leiden Journal of International Law* 573–93.

⁴ M. Davies, *Asking the Law Question*, Fourth edition (Thomson Reuters, 2017) p. 497.

⁵ See C. Hamilton, 'The Anthropocene as rupture' (2016) 3(3) *Anthropocene Review* 93–106.

⁶ I use the term 'REDD+' throughout this book (unless directly quoting someone using a different term). When first proposed in 2005, this scheme was initially referred to as 'RED' (Reducing Emissions from Deforestation). It was subsequently known as 'REDD' (Reducing Emissions from Deforestation in Developing Countries or Reducing Emissions from Deforestation and Forest Degradation). The '+' on the end of the 'REDD+' refers to the additional components, beyond reducing emissions from deforestation and reducing emissions from forest degradation, namely conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks endorsed in the Cancun Agreements (Decision 1/CP.16, 'The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention' FCCC/CP/2010/7/Add.1 (15 March 2011) para 70). Pursuant to this agreement these activities should receive as much emphasis as reducing emissions from deforestation and reducing emissions from forest degradation.

⁷ J. Eliasch, *Climate Change: Financing Global Forests. The Eliasch Review* (Earthscan, 2008) p. 9. See discussion in Chapter 1 for more details.

particularly with regards to how the burdens and benefits of any transition are distributed. REDD+ raises difficult questions about how global authority over resources, such as forests, located in the Global South should be distributed, as well as fraught questions about the present obligations arising from historical responsibility for greenhouse gas (GHG).⁸ REDD+ therefore reflects broader debates about policy responses to climate change and underlying conflicts between the increased marketisation of climate policy and imperatives of global climate justice. Implicit in these debates are moral and justice arguments about whether questions of equity and (re)distribution should be central to climate change responses, or whether considerations of aggregate efficiency should be prioritised. Moreover, these contestations foreground how the present conjuncture is one that enlivens very different imaginaries of the future: an envisioned 'green capitalism' in which nature is scripted and valued in economic terms, commodified and financialised,⁹ or alternative trajectories towards more decentralised decolonial frameworks of localised resource sovereignty.¹⁰

REDD+ is a scheme to address the contribution of GHG emissions from deforestation and forest degradation, which thereby brings together questions about the sustainable management of forests and climate mitigation. It therefore represents one part of a broader suite of 'nature-based' or 'natural' climate solutions that seek to preserve the integrity of ecosystems, improve sustainable management of ecosystems and restore degraded ecosystems.¹¹ The stated aim of REDD+ is to 'make forests more valuable standing than they would be cut down' by providing economic incentives to address tropical deforestation and forest degradation in the Global

⁸ K. Mickelson, 'Seeing the forest, the trees and the people: Coming to terms with developing country perspectives on the proposed global forests convention' in Canadian Council of International Law (ed.), *Global Forests and International Environmental Law* (Kluwer Law, 1996) pp. 239–64; K. Mickelson, 'Beyond a politics of the possible? South–North relations and climate justice' (2009) 10(2) *Melbourne Journal of International Law* 411–23. I use the term 'Global North' and 'Global South' throughout this book, although this does not reflect the terminology in the climate regime. The 1992 United Nations Framework Convention on Climate Change established two lists: Annex I, which includes the 1992 members of the Organization of Economic Co-operation and Development (OECD) as well as some economies in transition, indicated by an asterisk; and Annex II, which includes only OECD countries. The 2015 Paris Agreement refers to 'developed country Parties' and 'developing country Parties', and also makes reference to 'least developed countries' and 'small island developing States'. Although my discussion necessarily has to adopt the language of the climate regime, where possible I choose to use the term 'Global North' and 'Global South' to avoid the implicit hierarchical ordering and developmental *telos* the concept of development implies.

⁹ On this see *The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of the TEEB* (TEEB, 2010).

¹⁰ On different trajectories arising out of the present conjuncture see also J. Wainwright and G. Mann, 'Climate leviathan' (2013) 45(1) *Antipode* 1–22; J. Wainwright and G. Mann, *Climate Leviathan: A Political Theory of Our Planetary Future* (Verso Books, 2018).

¹¹ See *Nature-Based Solutions to Address Climate Change* (International Union for the Conservation of Nature, 2016).

South.¹² What has been particularly controversial is the proposal that REDD+ could operate as a carbon ‘offset’ scheme whereby countries in the Global North provide financial resources to promote the reduction of deforestation and forest degradation in the Global South, and in return can count the ‘saved’ carbon dioxide towards their own international mitigation commitments. Although at the time of writing no formal decision has been made about whether or how REDD+ would be included in international carbon markets under the United Nations Framework Convention on Climate Change (UNFCCC) or the Paris Agreement,¹³ from its history and trajectory it is evident that REDD+ has been envisioned and planned as a market-orientated flexibility mechanism. Such proposals to incorporate deforestation and forest degradation into international carbon markets have been criticised as a ‘false solution’ by social movements and non-governmental organisations (NGOs) working towards climate justice, who question both the environmental integrity and social justice of carbon offsetting.¹⁴

This book argues that REDD+ needs to be analysed not just as a problematic ‘false solution’ to climate change but also as an ambitious project that is reorganising how forested land in the Global South becomes an object for international and transnational regulation. The analysis in this book is therefore not focused on the various limitations of REDD+, but rather draws attention to the productive effects of this type of international climate policy. It shows how REDD+ operates to reorganise social relations and to establish new forms of global authority over forests in the Global South in ways that benefit the interests of some actors while further marginalising others. It demonstrates how, through the creation of new legal relations, including new property rights and contractual obligations, new forms of transnational authority over forested areas in the Global South are being constituted. In doing so, it traces shifts in the location of authority to make decisions over forest resources; how this authority is actualised, enacted and materialised; and according

¹² UN-REDD Programme, *Frequently Asked Questions and Answers – REDD+ and the UN-REDD Programme* (June 2010).

¹³ *United Nations Framework Convention on Climate Change*, opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994) (‘UNFCCC’); *Paris Agreement*, opened for signature on 22 April 2016, UNTS XXVII.7.d (entered into force 4 November 2016) (‘Paris Agreement’).

¹⁴ See for example L. Lohmann, *Carbon Trading: A Critical Conversation on Climate Change, Privatisation and Power* (Dag Hammarskjöld Foundation, 2006); S. Böhm and S. Dabhi (eds.), *Upsetting the Offset: The Political Economy of Carbon Markets* (MayFly Books, 2009); S.-J. Clifton, *A Dangerous Obsession: The Evidence against Carbon Trading and for Real Solutions to Avoid a Climate Crunch* (Friends of the Earth England, Wales and Northern Ireland, 2009); R. Hall, *REDD Myths: A Critical Review of Proposed Mechanisms to Reduce Emissions from Deforestation and Degradation in Developing Countries* (Friends of the Earth International, 2008); R. Pearce and J. Dehm, in *REDD: Australia’s Carbon Offset Project in Central Kalimantan* (Friends of the Earth International, 2011); A. Dawson, ‘Climate justice: The emerging movement against green capitalism’ (2010) 109(2) *South Atlantic Quarterly* 313–38; N. Klein, *This Changes Everything: Capitalism vs. the Climate* (Simon & Schuster, 2014).

to what modalities of power it is deployed. In tracking these reconfigurations, this book focuses on how the legal arrangements constituting REDD+ not only operate to establish new forms of authority but also to rationalise and justify them.

Moreover, this book situates REDD+ as central to broader debates about the contours of and transition to a ‘green economy’. REDD+ has been presented as a key part of a ‘green economy transition’,¹⁵ with its proponents optimistic that it can contribute to a ‘virtuous cycle’ of investment that provides the catalyst for ‘green development’.¹⁶ More specifically, REDD+ proponents understand the scheme as central to post-2015 development objectives to ensure the socioeconomic benefits to be derived from forests are better ‘valued’,¹⁷ while also holding ‘transformative potential’¹⁸ to facilitate a much wider valuation, commodification and financialisation of nature. REDD+ therefore should be seen as ‘only a small and insignificant piece’ of a broader trajectory of ‘natural capital valuation’ that frames conservation as a ‘distinct “asset class” within conventional financial markets’.¹⁹ Such expansive visions are reflected in comments made in 2011 by Christiana Figueres, the former Executive Secretary of the UNFCCC, when she described REDD+ as the ‘spiritual core’ of a ‘global business plan for the planet’.²⁰ Similarly, the United Nations Environment Programme (UNEP) has ‘placed REDD+ at the heart of its climate strategy’ because of the opportunities REDD+ presents to ‘catalyse further investments in other ecosystem services from forests, thus adding further “layers” of revenue streams from standing forests’.²¹

Contestations over REDD+ are therefore both important in their own right and also emblematic of broader struggles over differing modalities of environmental governance and how the relationship between the economy, society and the natural world should be configured. Grassroots Indigenous and climate justice activists have critiqued REDD+ as a ‘land-grabbing false solution to climate change’ that has ‘privatized the air we breathe’; ‘uses forests, agriculture, and water ecosystems in the Global South as sponges for industrialised countries’ pollution’; and seeks to

¹⁵ S. Sullivan, ‘Banking nature?’ (2013) 45(1) *Antipode* 198–217 at 200.

¹⁶ P. Sukhdev, R. Prabhu, P. Kumar, A. Bassi, W. Patwa-Shah, T. Enters, G. Labbate, and J. Greenwalt, *REDD+ and the Green Economy: Opportunities for a Mutually Supportive Relationship* (UN-REDD Programme, 2012).

¹⁷ ‘State of the World’s Forests: Enhancing the socioeconomic benefits from forests’ (Food and Agricultural Organisation of the United Nations, 2014), www.fao.org/3/a-i3710e.pdf.

¹⁸ I. Thiaw, ‘Forward’ in Xianli Zhu et al., *Pathways for implementing REDD+: Experiences from carbon markets and communities* (UNEP Riso Centre, 2010) p. 8.

¹⁹ R. Fletcher, W. Dressler, B. Büscher, and Z. R. Anderson, ‘Debating REDD+ and its implications: Reply to Angelsen et al.’ (2017) 31(3) *Conservation Biology* 721–23 at 722.

²⁰ Transcribed by author from Center for International Forestry Research (CIFOR), ‘Closing Remarks – Forest Day 5, 2011’, blog.cifor.org/5782/countries-draft-%E2%80%99Cglobal-business-plan%E2%80%99D-for-planet-at-climate-summit-figueres-says/.

²¹ I. Thiaw, ‘Forward’, p. 8.

'bring trees, soil, and nature into a commodity trading system'.²² They have condemned REDD+ as a mechanism that 'steals your future, lets polluters off the hook and is a new form of colonialism'.²³ The Indigenous Environment Network has described REDD+ as a new form of neo-colonialism or 'CO₂lonialism'.²⁴ Indonesian villages affected by a REDD+ project have described it as the 'new face of capitalism in the shape of ecological imperialism' that is 'turning our homes into a carbon toilet'.²⁵ These groups and others have thus articulated their strong opposition to REDD+ and called for the 'defense of indigenous territories and forest dependent communities, their autonomy and control over their territories and the protection of Mother Earth'.²⁶ For some commentators, the REDD+ scheme represents a form of 'green grabbing', 'the appropriation of land and resources for environmental ends', which has been recognised as 'an emerging process of deep and growing significance'.²⁷

Taking inspiration from these criticisms, this book provides a critical reading of the logics and effects of the REDD+ scheme. It engages with, and builds upon, numerous critiques of REDD+ that have highlighted its clear limitations as a climate mitigation strategy, but the primary contribution of the book is to examine the productive effects of this type of international climate policy and to interrogate the sort of world that REDD+ assumes and looks forward to. It understands REDD+ both as a vision of market-orientated environmental governance and as a series of practices and processes directed towards actualising and implementing this ideal. This book maps how REDD+ reconfigures global authority over forested land and forest resources in the Global South, paying attention to the processes of agreement-making under the UNFCCC and the development of legal and governance frameworks for REDD+ at the national level, but also to transnational practices of agreement-making and 'capacity building'. In doing so, this book intervenes in a number of key legal debates. First, it provides a critical account of the work of international climate law and some of the implications of the turn towards

²² 'Media release: UN promoting potentially genocidal policy at World Climate Summit' (8 December 2015, Indigenous Environment Network), www.ienearth.org/un-promoting-potentially-genocidal-policy-at-world-climate-summit/

²³ Ibid.

²⁴ REDD: *Reaping Profits from Evictions, Land Grabs, Deforestation and Destruction of Biodiversity* (Indigenous Environment Network, 2009); *No to CO₂lonialism! Indigenous Peoples' Guide: False Solutions to Climate Change* (Indigenous Environment Network, 2009).

²⁵ Petak Danum Kalimantan Tengah, *Our Land Is Not a Carbon Toilet for Dirty Industries of Developed Countries* (2012), copy on file with author.

²⁶ *Call to Action: To Reject REDD+ and Extractive Industries; to Confront Capitalism and Defend Life and Territories* (December 2014), wm.org.uy/wp-content/uploads/2014/11/Call-COP-Lima_NoREDD.pdf.

²⁷ See J. Fairhead, M. Leach, and I. Scoones, 'Green grabbing: A new appropriation of nature?' (2012) 39(2) *The Journal of Peasant Studies* 237–61 at 238.

market-orientated modes of governance.²⁸ In addition, it highlights the limitations of viewing international environmental law (IEL) as concerned with developing tools to bridge the North–South divide,²⁹ and shows instead how IEL is implicated in the reproduction of difference between the Global North and the Global South and the continuation of neo-colonial relations. It also reveals the ways in which international and transnational law is complicit in forms of appropriation of land and resources, thereby contributing to the literature about ‘land grabbing’.³⁰ Further, the analysis speaks to the shifting ways in which global authority is articulated and actualised in the contemporary capitalist economy through the concurrent operations and mutual co-constitution of both public and private laws. It thus highlights the need for the standard public–private divide to be disrupted in the analysis of contemporary as well as historical relations of global domination and imperialism.³¹ Finally, given that REDD+ implementation poses distinctive challenges for coordination between the global, national and local scales, this book interrogates how the operations of global governance distributes rights, power and obligations between scales, and illuminates processes by which authority is globalised while responsibility is localised.

B ASSEMBLING REDD+

1 REDD+ As a Relation

This section provides a background to REDD+ as an assemblage of international, national and transnational laws that make it possible to include forests in international markets and shows how this assemblage holds different practices and modes by which nature is governed in different parts of the world, in relation with each other. Throughout this book, REDD+ is understood simultaneously as a legal framework, a vision of market-orientated environmental governance and a project of materialising or actualising this vision through various programs and preparatory and experimental processes which is dependent upon a particular way of seeing forests and forest resources and particular forms of representation and legibility and modes of standardisation, comparison and calculation. This book develops a

²⁸ In doing so, it builds on my earlier analysis in J. Dehm, ‘Carbon colonialism or climate justice: Interrogating the international climate regime from a TWAIL perspective’ (2016) 33 *Windsor Yearbook of Access to Justice* 129–61; J. Dehm, ‘Reflections on Paris: Thoughts towards a critical approach to climate law’ (2018) *Revue Québécoise de Droit International* 61–91.

²⁹ S. Alam, S. Atapattu, C. G. Gonzalez, and J. Razzaque (eds.), *International Environmental Law and the Global South* (Cambridge University Press, 2015).

³⁰ For a discussion of the relationship between international law and land grabbing see ‘Symposium on land grabbing’ (2019) 32(2) *Leiden Journal of International Law*.

³¹ M. Koskenniemi, ‘Expanding histories of international law’ (2016) 56(1) *American Journal of Legal History* 104–12; M. Koskenniemi, ‘Empire and international law: The real Spanish contribution’ (2011) 61 *University of Toronto Law Journal* 1–36.

framework that brings these various conceptions together in order to understand REDD+ as a configuration of multiple legal frameworks; the vision they seek to actualise; the practices of implementation and materialisation pursuant to this objective; and the knowledge practices, forms of legibility and modes of calculation necessary for materializing REDD+. In doing so, it elucidates the complex nature of transnational norm creation at multiple sites and on multiple scales and identifies how REDD+ enables the actualisation of new forms of global authority as well as the reconfiguration of relations of power.

REDD+ and the capacity of forests to operate as ‘carbon stocks’ and to sequester carbon were affirmed as key parts of international climate mitigation efforts in the Paris Agreement.³² The Paris Agreement sets ambitious objectives to hold the global average temperature increases below 2 °C and to ‘pursue efforts’ to limit temperature increases to 1.5 °C.³³ To achieve these goals countries aim to ‘reach global peaking of emissions as soon as possible’ and to undertake rapid emission reductions in order to ‘achieve a balance between anthropogenic emissions by sources and removals by sinks’,³⁴ affirming that international climate strategies are fundamentally concerned with both the reduction of GHG emissions and the intensification of carbon sequestration, through forests and other carbon sinks. The Paris Agreement specifically calls on Parties to ‘take action to conserve and enhance . . . sinks and reservoirs of greenhouse gases . . . including forests’³⁵ and to implement and support the existing framework for REDD+. This ‘potentially historic breakthrough’³⁶ has confirmed the centrality of REDD+ as a policy objective, a legal framework, a set of economic incentives and a series of practices aimed at protecting forests and promoting carbon sequestration as a climate change ‘solution’.

One of the major – and still legally unresolved – controversies within the REDD+ negotiations relates to whether or not REDD+ will operate as an ‘offset’ scheme that allows parties to purchase carbon credits arising from sequestration activities in the Global South to meet their international mitigation commitments.³⁷ REDD+ is envisioned as a financial mechanism that relies upon valuing forests and the ecosystem services they provide, in economic terms, to provide incentives to address tropical deforestation by ‘mak[ing] forests more valuable standing than they would

³² *Paris Agreement*, Article 5.

³³ *Paris Agreement*, Article 2.1(a).

³⁴ *Paris Agreement*, Article 4.1.

³⁵ *Paris Agreement*, Article 5.1.

³⁶ ‘Inclusion of REDD+ in Paris climate agreement heralded as a major step forward on deforestation’ *Mongabay* 14 December 2015, news.mongabay.com/2015/12/inclusion-of-redd-in-paris-climate-agreement-heralded-as-major-step-forward-on-deforestation.

³⁷ For a discussion of country submissions and proposals see: UNFCCC Secretariat, *Financing Options for the Full Implementation of Results-Based Actions Relating to the Activities Referred to in Decision 1/CP.16, paragraph 70, Including Related Modalities and Procedures: Technical Paper*, FCCC/TP/2012/3 (26 July 2012).

be cut down'.³⁸ However, whether REDD+ finance will come primarily from carbon markets or other public and private sources remains unclear. At the time of writing no formal decision has been made that 'result-based' actions arising from REDD+ can be sold as 'carbon credits' and counted towards the compliance obligations of the purchasing country; nor has it been decided³⁹ whether REDD+ will be part of the 'new era of international carbon trading'⁴⁰ enabled by the Paris Agreement framework that could facilitate a 'much deeper world of cooperation'⁴¹ and the development of carbon markets, which together with carbon taxes could potentially be worth US\$100 billion annually.⁴²

REDD+ was initially conceived of as a market-based system,⁴³ and it was anticipated that the majority of funding would come from carbon markets.⁴⁴ However, other commentators have suggested that this 'historic vision' of REDD+ as a market-based instrument no longer reflects current realities,⁴⁵ and that REDD+ is now more akin to conditional or result-based aid programs than it is to a carbon market mechanism.⁴⁶ At present, almost all international REDD+ funding comes from bilateral and multilateral development aid budgets, rather than carbon

³⁸ UN-REDD Programme, *Frequently Asked Questions and Answers – The UN-REDD Programme and REDD+*, November 2010, www.unep.org/forests/Portals/142/docs/UN-REDD%20FAQs%20%5B11.10%5D.pdf.

³⁹ Note at COP24 in Katowice, Brazil opposed linking Article 6 of the *Paris Agreement* to REDD+ (see 'Summary of the Katowice Climate Change Conference: 2–15 December 2018' 12(747) *Earth Negotiations Bulletin* 18 December 2018, 17, although there are a number of suggestions of how such linkage could occur: P. Graham, *Cooperative Approaches for Supporting REDD+: Linking Articles 5 and 6 of the Paris Agreement* (Climate Advisors, 2017); C. Streck, A. Howard, and R. Rajão, *Options for Enhancing REDD+ Collaboration in the Context of Article 6 of the Paris Agreement* (Meridian Institute, 2017).

⁴⁰ Mike Szabo, 'Paris Agreement rings in new era of international carbon trading' *Carbon Pulse* 12 December 2015, carbon-pulse.com/13339/.

⁴¹ 'After Paris, UN's new "light touch" role on markets to help spawn carbon clubs' *Carbon Pulse* 15 December 2015, carbon-pulse.com/13415/.

⁴² *Carbon Pricing Watch 2016: An Advanced Brief from the State and Trends of Carbon Pricing 2016 Report, to be released in 2016* (The World Bank Group and ECOFYS, 2015) p. 3.

⁴³ C. Streck, 'In the market: Forest carbon rights: Shedding light on a muddy concept' (2015) 4 *Carbon & Climate Law Review* 342.

⁴⁴ M.-C. Cordonier Segger, M. Gehring, and A. Wardell, 'REDD+ instruments, international investment rules and sustainable landscapes' in C. Voigt (ed.), *Research Handbook on REDD-Plus and International Law* (Edward Elgar Publishing, 2016) p. 348.

⁴⁵ A. Angelsen, M. Brockhaus, A. E. Duchelle, A. M. Larson, C. Martius, W. D. Sunderlin, L. V. Verchot, G. Wong, and S. Wunder, 'Learning from REDD+: A Response to Fletcher et al.' (2017) 31(3) *Conservation Biology* 718–20.

⁴⁶ A. Angelsen, 'REDD+ as result-based aid: General lessons and bilateral agreements of Norway' (2017) 21(2) *Review of Development Economics* 237–64; result-based aid is part of the 'second generation' approach to conditionality in aid development policy that is increasingly promoted as a 'promising approach for implementing post-2050 development goals', that 'seeks to identify quantifiable and measurable results that can be attributed as directly as possible to the effects of development cooperation'; see S. Klingebiel and H. Janus, 'Results-based aid: Potential and limits of an innovative modality in development cooperation' (2014) 5(2) *International Development Policy* | *Revue Internationale de Politique de Développement*.

markets. However, the ‘financial architecture’ underpinning REDD+ has increasingly been understood as consisting of three phases, where the first two phases are funded by public and private domestic and international investments, and the third phase is based on public and private result-based payments.⁴⁷ Going forward, ‘result-based’ payments for REDD+ could flow through both fund-based and market-based models;⁴⁸ however, there is strong evidence that suggests the latter is the more likely trajectory. Currently, REDD+ frameworks allow for market-linking,⁴⁹ and the legal framework and accounting rules in place for REDD+ could enable REDD+ credits to be used as offsets by purchasing countries.⁵⁰ Considerable regulatory and technical work has gone into making it possible for forest carbon to become a ‘fungible, compliance-grade asset’ that could be treated as equivalent to other forms of carbon.⁵¹ This market-based approach has been advocated for in key policy documents such as the 2008 *Eliasch Review*, which called for ‘well-designed mechanisms for linking forest abatement to carbon markets’ in order to access private and public finance.⁵² Moreover, the explicit objective of key players working on REDD+ implementation, such as the World Bank’s Forest Carbon Partnership Facility (FCPF), is to ‘jump-start a forest carbon market’, where provision of international finance for what has been called REDD+-readiness is a key enabling condition for the gradual construction of forest carbon markets.⁵³ Indeed, some analysts have suggested that REDD+ needs to be linked to carbon markets to be financially viable, given that a significant increase in overseas development aid would be necessary for non-market models of REDD+ to be financially viable.⁵⁴ Some analysis indicates that unless there is a strong demand for REDD+ credits such programmes ‘may fail to be developed or not continue’,⁵⁵ or even that it would not be possible to meet future emissions reduction commitments without tradeable REDD+ credits.⁵⁶

⁴⁷ See for example, Green Climate Fund, *Green Climate Fund Support for the Early Phases of REDD+*, GCF/B.17/46 (2 July 2017) p. 2.

⁴⁸ J. Isenberg and C. Potvin, ‘Financing REDD in developing countries: a supply and demand analysis’ (2010) 10(2) *Climate Policy* 216–31.

⁴⁹ Streck, ‘In the market: Forest carbon rights: Shedding light on a muddy concept’, 342.

⁵⁰ K. Dooley and A. Gupta, ‘Governing by expertise: The contested politics of (accounting for) land-based mitigation in a new climate agreement’ (2017) 17(4) *International Environmental Agreements: Politics, Law and Economics* 483–500 at 488–9.

⁵¹ W. Boyd, ‘Ways of seeing in environmental law: How deforestation became an object of climate governance’ (2010) 37 *Ecology Law Quarterly* 843–916 at 879.

⁵² J. Eliasch, *Climate Change: Financing Global Forests. The Eliasch Review* (Earthscan, 2008) p. 165.

⁵³ ‘Media Release: Forest Carbon Facility Takes Aim at Deforestation’ (World Bank, 11 December 2007), web.worldbank.org/archive/website01290/WEB/0_1493.HTM.

⁵⁴ *Emerging Compliance Markets for REDD+: An Assessment of Supply and Demand* (United States Agency for International Development, 2013).

⁵⁵ N. Linacre, R. O’Sullivan, D. Ross and L. Durschinger *REDD+ Supply and Demand 2015–2025: Forest Carbon, Markets and Communities Program* (United States Agency for International Development Forest Carbon, Markets and Communities Program, 2015) p. x.

⁵⁶ *Emerging Compliance Markets for REDD+: An Assessment of Supply and Demand*.