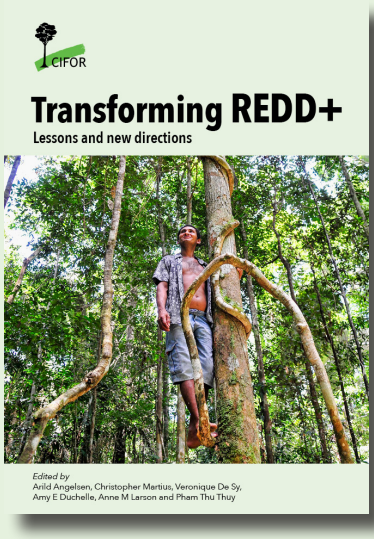
Chapter 1

Introduction

REDD+ enters its second decade

Arild Angelsen, Christopher Martius, Veronique De Sy, Amy E Duchelle, Anne M Larson and Pham Thu Thuy



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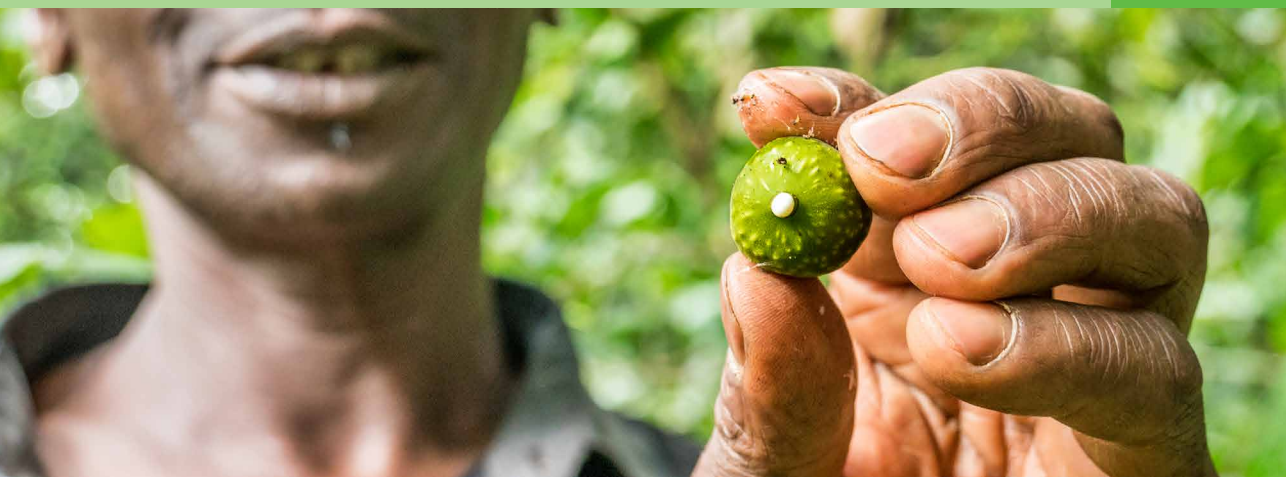

Introduction

REDD+ enters its second decade

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1.1 Climate and politics

By the next football World Cup in 2022, the world will likely have spent its 1.5°C carbon budget; if annual CO_2 emissions remain at current levels, countries will have emitted enough carbon into the atmosphere to make staying below the 1.5°C target very unlikely. By 2040, without emissions reductions, the carbon budget available to keep global warming below 2°C will have been spent (Peters n.d.; Petersen *et al.* 2018). The consequences of continued and growing greenhouse gas (GHG) concentrations in the atmosphere will potentially be disastrous (IPCC 2018).

This climate reality, unfortunately, reflects the current lack of political commitment. Yes, the Paris Agreement (2015) was a major milestone, setting the world's ambition to keep global warming below 1.5°C of pre-industrial temperature – or at least below 2°C. But *the Guardian*'s George Monbiot (2015) summarised the feelings of many observers when he wrote: "By comparison to what it could have been, it's a miracle. By comparison to what it should have been, it's a disaster." Taken together, countries' targets as reflected in their Nationally Determined Contributions (NDCs) fall far short of achieving the 1.5°C goal. In fact, the NDCs put the world on track to

Transforming REDD+

REDD+ is an important part of forest-based climate change mitigation. This book summarises lessons from REDD+ implementation at multiple scales and explores new directions in these chapters:

REDD+ finance and building blocks

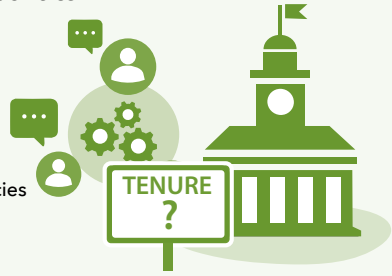
Theory of change (Chapter 2)

Financing REDD+ (Chapter 3)

Results-based payment (Chapter 4)

Information and policy change (Chapter 5)

National politics



NDCs and national climate policies (Chapter 6)

Multi-level governance (Chapter 7)

Land and carbon tenure (Chapter 8)

Assessing impacts

National and subnational forest conservation policies (Chapter 9)

Forests and carbon (Chapter 10)

People and communities (Chapter 11)

Evolving initiatives

Subnational jurisdictional approaches (Chapter 12)

The private sector (Chapter 13)

Climate-smart agriculture (Chapter 14)

Forest restoration (Chapter 15)

a temperature increase of 3.0–3.2°C by 2100 (UNEP 2017) – with some countries in the fast lane towards 5°C (du Pont and Meinshausen 2018). Unless countries change course, people born today will have to live on a very different planet than the one we now inhabit: higher temperatures, and more frequent and violent hurricanes, floods and wildfires (IPCC 2018) will dramatically change the global economic, social and political landscape.

But the pathways to halving emissions by 2030 are clear: end the world's dependence on fossil fuels, invest in renewable energy technologies, reduce emissions from agriculture and deforestation, and remove massive amounts of carbon from the atmosphere – in part by building sinks through restoration and reforestation (IPCC 2018).

A lot is expected from forests in this story. Protecting and restoring the world's forests, along with other land-oriented solutions, could deliver 37% of the greenhouse gas (GHG) emissions reduction needed to keep global warming below 2°C by 2030 (Griscom *et al*. 2017). Yet, only 3% of climate funding goes to such land-oriented climate solutions (WWF 2018) – less than a tenth of what could be considered a fair share.

Reducing emissions from deforestation and forest degradation and enhancing forest carbon stocks in developing countries (REDD+) debuted on the global stage more than a decade ago, generating widespread excitement and commitment of funds. Since tropical deforestation contributes around 10% of global GHG emissions (IPCC 2014), and because curbing it was expected to be "highly cost-effective" and "quick" (Stern 2007, ix), many hoped REDD+ would build a 'wooden bridge' towards a carbon-neutral economy by making live trees worth more than dead ones.

The conclusion from our 2012 book, *Analysing REDD+*, remains valid: "As an idea, REDD+ is a success story" (Angelsen *et al*. 2012). Yet a decade after being launched in the Bali Action Plan (UNFCCC 2007), broad consensus is that – in practice – REDD+ has not met the world's high expectations. Forest loss is high and, at continental level, on the rise (Box 1.1). Results-based payment was not quick and easy to implement, and REDD+ never received the funding it needed. In spite of this, a modified REDD+ has, albeit modestly, catalysed other approaches to protecting and restoring tropical forests, and has improved forest governance in many developing countries. Likewise, REDD+ has provided a platform for indigenous peoples and other marginalised groups to voice their concerns and ideas, and gain more visibility on the domestic and global stage.

In this book, we look back on 10 years of research and evidence, and ask: Has REDD+ made a difference? Why or why not? What are the critical issues? And where do we go from here?

Box 1.1 Tropical deforestation trends

Tropical continental deforestation trends in the last two decades are not encouraging. Satellite data show that annual forest cover loss[a] increased from 7.5 Mha in 2001 to 18.9 Mha in 2017 (Hansen *et al.* 2013b) (Figure 1.1). While all three continents saw a rise in forest cover loss, the increase is more pronounced for Africa (+303%) than for Asia (+166%) and Latin America (+87%). Almost half of tropical forest cover loss from 2001 to 2017 occurred in Latin America. However, the relative contribution to forest cover loss of each region changed within this period. Latin America contributed over half (56%) of forest cover loss in 2001, with both Africa and Asia equally sharing the rest. In 2017 the contribution of Latin America had decreased (to 41%) and that of Africa, increased (to 35%). Almost half (46%) of all forest cover loss occurred in just three countries: Brazil (27%), Indonesia (13%) and the Democratic Republic of the Congo (6%).

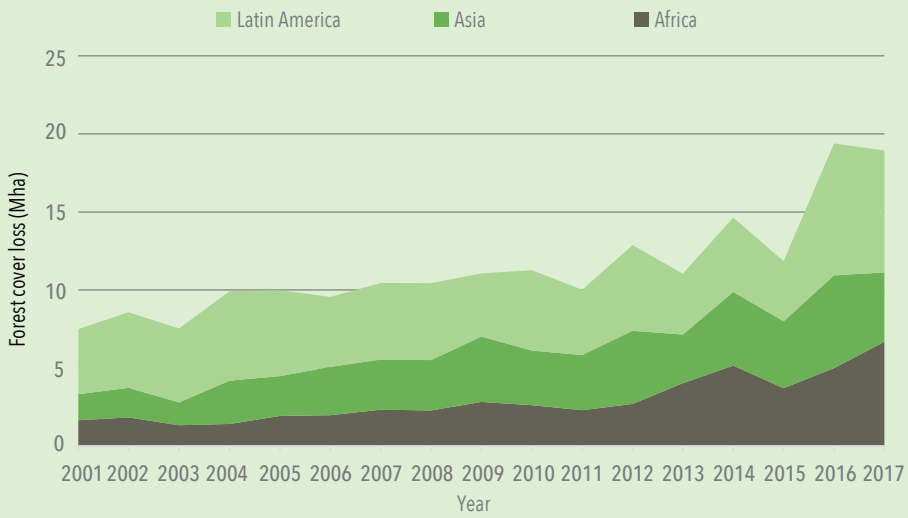


Figure 1.1 Annual tropical forest cover loss 2001–2017

Note: Forest cover is defined as more than 10% canopy cover.
Source: Hansen *et al.* (2013b)

While these continental trends are not encouraging, some trends in jurisdictions involved in REDD+ and low-emission development show a different picture (Stickler *et al.* 2018). A well-known example is the reduction of deforestation in the Brazilian Amazon post-2004 due to targeted policies and interventions in soy and beef supply chains (Nepstad *et al.* 2014).

A recent study on global land-change dynamics from 1982 to 2016 provides estimates for net forest cover change, considering the difference between forest cover loss and gain (Song *et al.* 2018). Forest cover gains in South America are small compared to the loss. Thus net forest cover loss in South America remains high with an annual net change of -1.41 Mha per year from 1982 to 2016. The three countries with the largest net tree cover loss during this period are all located in South America: Brazil, Argentina and Paraguay.

In Africa, tree cover gain almost compensated for tree cover loss, resulting in an annual net tree cover loss of only -0.19 Mha per year. Hotspots of forest cover loss in Asia can be found in Indonesia, Myanmar, Cambodia and Vietnam, also affecting primary forests. However, Asia has a net forest cover gain (+ 3.75 Mha per year) due to an increasing area of plantations in this region.

Overall, we conclude that deforestation rates are still on the rise across the tropics, with Africa becoming the most prominent region. While forest cover gains can be found, especially in Asia and to a lesser extent in Africa, this does not mean that natural primary forests are being restored. There is an ongoing decline of primary forest cover loss (Turubanova *et al.* 2018).

Note:

a Forest cover loss is not exactly the same as deforestation as it also includes changes in plantation forests and natural losses (e.g., from wildfires).

1.2 A shifting landscape

The title of this book, *Transforming REDD+*, has an intended double meaning. In 2007, REDD+ was envisioned as a catalyst for transformational change[1] towards lasting climate mitigation in the forest and land use sector. The use of direct incentives – through payments to countries, states, districts, communities and forest owners, stewards and users – was meant to be a game changer.

And yet, REDD+ itself[2], and the landscape in which it is embedded, have been transformed over the past 10 years. The world in 2018 is different than it was in 2007, and REDD+ needs to adapt to a changing reality if it is to deliver on its promise of transformational change. This reality includes:

A new global climate change architecture: The Paris Agreement (2015) represents a new framework for international efforts on climate mitigation and adaption. The Kyoto approach of a global emissions cap allocated to Annex I and possibly also middle-income countries was buried long before Paris. Nationally Determined Contributions (NDCs) – with country pledges – have taken centre stage.

This change has had several implications for REDD+ finance. The envisioned main source of funding – carbon markets – did not materialise. Funding has come mostly from development aid budgets and has not reached expected levels. Domestic funding for the forestry sector is getting scarcer, and REDD+ readiness

1 Defined by Brockhaus and Angelsen (2012) as a "shift in discourse, attitudes, power relations and deliberate policy and protest action that leads policy formulation and implementation away from business-as-usual policy approaches that directly or indirectly support deforestation and forest degradation".

2 Here, REDD+ is understood as the aggregate of the initiatives and policies aiming to achieve reduced emissions and increased removals from forests in developing countries.

funding is drying up (Olesen *et al*. 2018; Chapter 3). Private sector funding is not as forthcoming as expected (Chapter 3). REDD+ countries and communities shoulder a large share of the costs, and will most likely continue to do so.

A changing global political climate: Strong political winds are blowing in directions that were hardly imaginable a few years ago. A new political reality dominates in key emitting countries, in which climate deniers have been elected to high offices, and the legitimacy of science, experts – and to some extent democracy – is questioned. As global inequality grows, these deniers appear to be drowning out voices of reason, exacerbating the gap between the political will to meet the challenge of climate change and the required actions identified in the IPCC 1.5 degree report (IPCC 2018).

This has implications for how to think about REDD+. A strengthened narrative for climate governance is needed, one that integrates the ways forests benefit both the planet and its people, especially the rural poor (Chapter 16). Climate action in general, and REDD+ in particular, need to deliver tangible results for many objectives: not only reduced emissions through maintained and increased forest area and stored carbon, but also improved biodiversity and other environmental services, as well as enhanced livelihoods and economic development.

An evolving REDD+: A decade of REDD+ initiatives at various scales has generated lessons about how REDD+ has evolved and the challenges it still needs to overcome. Since 2007, over 50 countries have initiated REDD+ strategies, subnational governments have experimented with jurisdictional REDD+ programmes, and more than 350 REDD+ projects have been implemented across the tropics (Simonet *et al*. 2015; Seymour and Busch 2016; Duchelle *et al*. 2018a). Although much of the initial theory of change of REDD+ was centred around the concept of payment for environmental services (PES), REDD+ implementation reflects a diverse bundle of policies, programmes and interventions that include enabling measures, disincentives and incentives. While the importance of tenure and rights remains, new ideas have come to the fore, including the need to engage the private sector and to situate REDD+ within broader jurisdictional approaches to low-emission rural development. Climate-smart agriculture and restoration have also moved up on the international agenda, providing a substantial mitigation potential (Griscom *et al*. 2017).

We have also learned that countries struggle to change the deforestation trajectory away from business as usual, coordination is weak or hampered by policy and political barriers, and the much-anticipated involvement of the private sector is still minimal. REDD+ should be integrated into countries' overall climate and development strategies, not least to better address the underlying causes (drivers) of deforestation and forest degradation.

Finally, REDD+ has to manage multiple and changing expectations from different actors. Many actors in the international community see REDD+ as an effective strategy to reduce emissions by phasing out destructive land-use practices through a transformation of underlying institutions and policies. In turn, forest-rich countries often expect REDD+ to be a complementary source of funding for investments in the forestry sector and to contribute to economic development. And local communities and civil society organisations (CSOs) in many countries expect REDD+ to transform existing forest governance so that their tenure security and rights are protected, and they are compensated for costly measures taken to address a problem they did not create.

1.3 Purpose of the book

This book aims to take stock of REDD+ progress, point to critical issues, and suggest how to move forward so that REDD+ and other, newer climate mitigation initiatives are effective, efficient and equitable. We aim to be constructive critics: *critical*, because the world cannot afford projects and policies that do not help reduce emissions; and *constructive*, because if the world fails to reduce emissions from deforestation and forest degradation it is unlikely to stay below the 1.5°C (or even 2°C) target. As we point to ways forward, we also aim to stimulate reflection and discussion.

In a previous book (Angelsen *et al*. 2012, 2–3), we proposed that REDD+ research is progressing through three generations or phases, mirroring the three phases of REDD+ itself: (i) designing REDD+ and learning from related experiences in the past; (ii) the political economy and implementation of REDD+; and (iii) assessing the impacts of REDD+. The first two edited REDD+ volumes from CIFOR were first-generation research outputs: 'Moving Ahead with REDD: Issues, options and implications' (Angelsen 2008) and 'Realising REDD+: National strategy and policy options' (Angelsen *et al*. 2009). The next volume, 'Analysing REDD+: Challenges and choices' (Angelsen *et al*. 2012), moved into second-generation research, analysing actual REDD+ design and early implementation.

The current and fourth volume includes research covering all three phases. We have data – albeit far from perfect – that enable us to make preliminary conclusions about the progress and impacts of national and subnational REDD+ initiatives. Yet, the basic design issues (e.g., of results-based payment systems) and coordination and implantation of REDD+ policies across levels and between sectors are still central to the REDD+ debate.

Research can contribute to global debate by bringing structure and clarity to issues. A major problem in public debates is the use of confusing and vague terms and concepts; problems multiply when these are used in research. But we realise that vague terms – as they are open to interpretation – have a political function

Box 1.2 The Global Comparative Study on REDD+

CIFOR's research project, the *Global Comparative Study on REDD+ (GCS REDD+)*, has accompanied REDD+ since 2008. We thus look back on 10 years of research on REDD+ policies and practices, in what is likely the largest global research programme on REDD+. We are working closely with research partners and stakeholders in forest-rich tropical countries to support REDD+ outcomes and impact by providing solid research-based evidence. We want to ensure that policy-makers and practitioner communities have access to – and use – the information, analyses and tools they need to design and implement REDD+ and other forest-based mitigation strategies in effective, efficient and equitable ways that also promote social and environmental co-benefits; and rigorously assess to what degree REDD+ has delivered.

The study has involved 22 countries so far, representing varying governance contexts, different stages of the forest transition curve, and diverse REDD+ capacities and readiness (Figure 1.2). A core set of comparative studies has been undertaken across all countries, including country profiles analysing national REDD+ strategy development. We conducted other studies in subsets of these countries, such as impact assessment of REDD+ projects, benefit-sharing mechanisms, and multilevel governance.

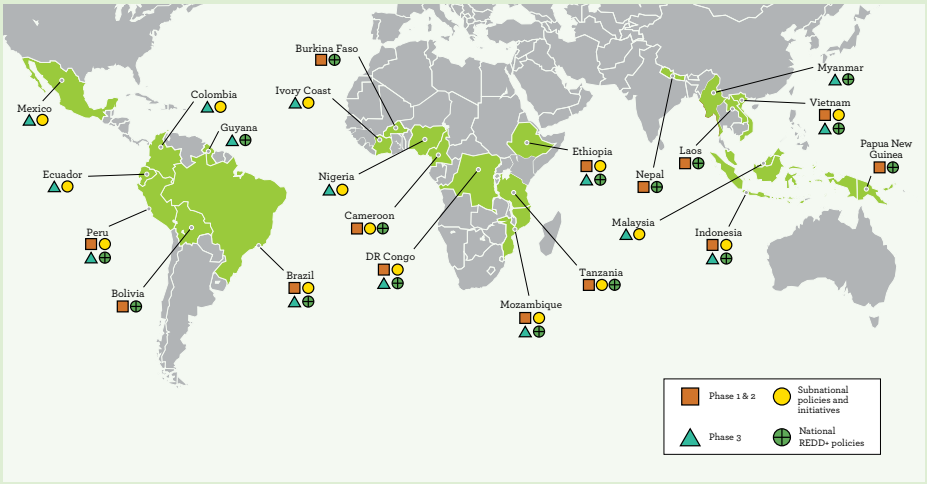


Figure 1.2 CIFOR's Global Comparative Study on REDD+ research countries

The project is organised into four research components: (i) national REDD+ policies and measures, (ii) subnational initiatives, (iii) monitoring and reference levels, and (iv) multilevel governance of REDD+ (Table 1.1). GCS REDD+ has been implemented in three phases: 2008–2011, 2012–2015 and the current phase, 2016–2020.

As of November 2018, the project has produced almost 500 scientific journal articles and book chapters, 5 books, and around 140 policy briefs and factsheets, and many have been translated into several languages. We also developed nine different tools to help policy-makers. All publications, tools and other knowledge products can be accessed through our website (www.cifor.org/GCS).

Continued to next page

Box 1.2 Continued

Table 1.1 Research and dissemination components of the Global Comparative Study on REDD+ (GCS REDD+)

I. REDD+ policies	Analysing effective, efficient and equitable (3E) REDD+ policies and measures at international, national and subnational levels; REDD+ policy architecture (mechanisms for REDD+ benefit sharing, safeguards information systems), media discourses and policy network analysis.
II. Subnational REDD+ and low-emission development initiatives	Assessing the performance of subnational REDD+ and other low-emission development initiatives, including subnational jurisdictional programmes and local-level projects
III. Measuring carbon emissions	Measuring carbon emissions and determining forest and carbon reference levels; measurement, reporting and verification (MRV) of forests and carbon; MRV capacity
IV. Multilevel governance of REDD+	Understanding the synergies and trade-offs in joint mitigation and adaptation and the challenges of multilevel and multi-sector governance and carbon management
V. Knowledge sharing	Partner engagement and dissemination

The following funding partners have supported GCS REDD+: Australian Agency for International Development (AusAID); CGIAR Research Program on Forests, Trees and Agroforestry (CRP-FTA) with financial support from the contributors to the CGIAR Trust Fund (www.cgiar.org/funders/); David and Lucile Packard Foundation; European Commission (EC); Government of Finland; International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU); Mott Foundation; Norwegian Agency for Development Cooperation (Norad); the Department for International Development (UKAID); and United States Agency for International Development (USAID).

in that they help actors reach agreement (Chapter 2). To rephrase Leo Tolstoy's Anna Karenina principle: *vague terms allow all parties to be happy in their own interpretation*. We question, however, the sustainability of that happiness.

Thus, we aim to clarify concepts and provide useful frameworks for thinking about REDD+. Beginning with the term 'REDD+', we note in Chapter 2 that a distinction must be made between REDD+ as an *outcome* (reduced emissions) and REDD+ as the *framework* (the activities) to achieve that outcome. We distinguish the term 'direct drivers' (deforesting activities and the associated actors, such as small-scale subsistence farmers, large-scale cattle ranchers, or palm oil companies) from 'underlying causes' such as export-promoting strategies, high population growth,

or corruption (Chapter 5). Or take the concept of 'coordination problems', which refers to very different structural problems, from pure coordination problems which are relatively easier to solve, to bargaining problems with fundamental conflicts of interests (Chapter 7). We also question the 'politics of unsustainability', and call for a clarification of the objectives, diagnosis and prescriptions of multiple green initiatives (e.g., green growth and green economy) to avoid putting more concepts forward without addressing the roots of unsustainable development (Chapter 6).

This book is based on 10 years of GCS REDD+ research, but also draws on the wider literature and partner contributions. We selected 14 important issues to which research can contribute lessons, insights and future avenues. The resulting synthesis chapters are meant to be used as a reference for future debate and actions.

1.4 A guided tour

The chapters of this book are divided into four parts: Part I (Chapters 2–5) dissects finance and other key building blocks needed to reduce emissions from deforestation and forest degradation; Part II (Chapters 6–8) analyses national politics; Part III (Chapters 9–11) synthesises impact assessment studies on national policies and local REDD+ initiatives; finally, Part IV (Chapters 12-15) discusses four evolving initiatives critical to achieving REDD+ as an objective.

Part 1 REDD+ finance and building blocks

To be transformative, REDD+ requires an articulated theory of change. **Chapter 2** reviews diverse theories offered by different actors in the REDD+ debate on how to reduce emissions from deforestation and forest degradation. It highlights critical uncertainties around results-based payment, the lynchpin of the REDD+ theory of change, and points to flaws in the design of REDD+ if looked at through this analytical lens.

Chapter 3 tallies up REDD+ finance. A small group of countries and multilateral institutions dominate international REDD+ funding, and readiness funding is shrinking. Data reveal only modest contributions from the private sector (but data are scarce – another problem). The contributions of REDD+ countries and communities must be better acknowledged in the funding debate.

Chapter 4 looks at experience to date with results-based payment, focusing on three challenges: whom to pay, what to pay for, and how to set reference levels. It highlights the politics behind answering these questions, the risk of biases and of 'cherry picking' favourable numbers, and argues for a clear Paris Agreement rule book and institutional checks and balances.

Chapter 5 examines data and information, which are key to rational planning and policy design, implementation and evaluation. If the generation and use of information are influenced by powerful agents of deforestation and forest degradation, how can that information bring about transformational change? The chapter highlights both opportunities and challenges around information-driven policy change throughout the REDD+ policy process.

Part 2 National politics

Initially, national policy reforms were thought to be central to REDD+. But, while some policy reforms materialised, the goal of reducing emissions from forests is still not a priority in most countries, and curbing business-as-usual development policies and practices has been hard. NDCs reflect the latest national commitments towards climate change actions, and **Chapter 6** analyses how forests feature within them. The chapter examines progress, challenges and opportunities for countries in enhancing the role of forest-based mitigation, and discusses opportunities and barriers to realising the potential contributions of forests in the NDCs. NDCs and climate change policies will be ineffective if they do not have effective policies and measures addressing the drivers of deforestation and degradation.

Chapter 7 seeks to understand why coordination is so difficult, and finds answers in the conflicting interests attached to land and forest use. The authors note the importance of distinguishing between coordination failures that can be addressed through improved coordination, and those that arise from fundamental differences in goals and interests. The chapter reviews experiences and lessons learned, and the potential and challenges of solutions such as collaborative multi-actor processes and forums.

Land tenure and the rights of indigenous peoples and local communities have been prominent on the REDD+ agenda since its early days. **Chapter 8** concludes that REDD+ implementation has resulted in some progress on tenure, but not enough to secure local rights and ensure a proper functioning of REDD+. Institutional and legal reforms have been observed in Indonesia, Peru and Tanzania; however, local efforts are often not backed up with sufficient national policy support.

Part 3 Assessing impacts

Have REDD+ policies, subnational initiatives and local projects led to any forest impacts? Has REDD+ helped to improve local livelihoods and forest governance? The three chapters of this section aim to answer these questions, although only a few rigorous analyses have been undertaken to estimate such impacts.

Chapter 9 reviews evidence around three types of national and subnational policies: (i) enabling policies, like decentralisation and tenure reforms; (ii) incentive-based policies, like PES; and (iii) disincentive-based policies, like protected areas and other land-use restrictions. The chapter paints a heterogeneous picture, with too few studies to announce a policy winner. On average, the impact of REDD+ on forests has been positive, but well below what was predicted.

Despite the scarcity of studies focused on carbon outcomes, **Chapter 10** highlights moderately encouraging results from local REDD+ initiatives, in terms of forest conservation and carbon stock enhancement. Three projects using conditional incentives showed positive results for forests, through reducing the negative impacts of smallholder agriculture and firewood collection.

Chapter 11 shows that the well-being outcomes of early REDD+ interventions have been small or insignificant. While it is impossible to make firm conclusions about trade-offs between forest and well-being outcomes, evidence on similar local-level PES initiatives points to challenges in designing REDD+ initiatives that are both effective at reducing forest carbon emissions *and* strongly pro-poor.

Part 4 Evolving initiatives

REDD+ was initially focused on large-scale results-based financial transfers to national governments. In the past 10 years, however, new, complementary initiatives have emerged. This part of the book reviews four of them.

Chapter 12 introduces the concept of jurisdictional approaches to low-emission rural development. These are comprehensive approaches to forest and land use across one or more legally defined territories that align REDD+ incentives, sustainable supply chain initiatives, and domestic policy and finance. New analysis from 39 states and provinces in 12 countries – which hold 28% of the world's remaining tropical forests – shows strong commitments by these jurisdictions towards reducing deforestation, and clear actions towards meeting these goals.

The notion of 'shifting the trillions' towards more sustainable forest and land use exemplifies the high expectations for the private sector to contribute to reduced emissions. **Chapter 13** examines private sector commitments by exploring dominant approaches to zero deforestation, and reviews progress made across key forest-risk commodities. Challenges remain, and a lack of information and transparency makes it hard to assess progress. For commitments to be effective, private sector initiatives must align with government regulations in both producer and consumer countries, with wider corporate sustainability policies, and with consumer demand.

Chapter 14 asks whether and how sustainable intensification of agricultural production, a key component of climate-smart agriculture, can potentially conserve forests. The answer depends on the commodity, farm practices and context. Positive forest outcomes cannot be taken for granted, as higher yields can incentivise agricultural expansion into forests; policies therefore need to incorporate forest-specific measures to promote land-sparing.

Chapter 15 notes that causes of forest landscape degradation are similar across the tropics and vary predictably in line with deforestation. This chapter shares findings from restoration projects in Latin America that show how funding sources determine the goal, activities and size of projects. It highlights two challenges: to change incentive structures in order to promote sustainable land stewardship and degraded land restoration; and to secure adequate funding.

Finally, **Chapter 16** summarises the main findings of the book and provides an outlook on what should come next for REDD+ as it evolves.

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