
28 REDD+: What should come next?

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While REDD+ has been a remarkable success as an idea and as a flagship of international climate negotiations, its implementation has been slower and the results smaller than most expected when the initiative was launched in 2005. The Warsaw Framework (2013) established the structure for an international REDD+ mechanism, but the corresponding funding to make it operational has not been forthcoming. National REDD+ policies are shaping up in major forest countries, but face continuous political struggles with vested interests for continued forest exploitation and/or legitimate development objectives. So far, REDD+ efforts have not been able to change – at any scale – the basic deforestation logic and to make living trees worth more than dead trees. The way forward, this chapter argues, is for REDD+ countries to assume a stronger role and ownership in the implementation of REDD+, and to incorporate it in their INDCs and in their domestic emission targets. Corporate efforts – through the greening of supply chains – can play a major role, pushed by consumer pressure and environmental watchdogs, and complemented by domestic policy reforms. International agreements should nudge countries towards making stronger commitments, and provide funding for capacity building and partial incentives for forest conservation through result-based mechanisms.

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1 Introduction

“Through effective measures against deforestation we can achieve large cuts in greenhouse gas emissions - quickly and at low cost. The technology is well known and has been available for thousands of years. Everybody knows how not to cut down a tree”

(Jens Stoltenberg, (then) Prime Minister of Norway, COP 13, 2007)

The AFOLU sector (agriculture, forestry and other land uses) is responsible for 24% of global GHG emissions (Smith et al. 2014). Tropical deforestation alone is estimated to account for approximately 10% of the global emissions (Harris et al. 2012), but will – due to the comparatively low mitigation costs – constitute a much larger share of a cost-efficient global mitigation plan. Efforts to reduce forest emissions are spearheaded through the REDD+ initiative. REDD+, the acronym for ‘Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries’, has been among the most prominent ideas in international climate negotiations during the past decade. It has also achieved unprecedented visibility for forest issues in the political and corporate spheres. The Warsaw framework (UNFCCC COP19 in 2013) and a new set of decisions to be agreed at COP21 (in Paris in December 2015) provide the structure for an international REDD+ mechanism. Mission completed.

Well, not yet. The funding that is supposed to back up an international REDD+ mechanism has not been forthcoming, neither from carbon markets nor from other sources. At the national level, REDD+ implementation has focused on capacity building, while the policy reforms needed to scale up REDD+ projects face strong opposition from entrenched business interests. Ten years after REDD+ first appeared on the UNFCCC agenda (in 2005), we are still waiting for the concept to be applied at a scale that will reduce emissions substantially.

The early optimism was reflected in the opening quote in this chapter and in the influential *Stern Review*, which claimed that, as the opportunity costs of forest conservation are often low, emission cuts could be achieved cheaply and quickly (Stern 2006, p. ix). Given the failure to reach a substantial scale, REDD+ is increasingly viewed with a healthy dose of cynicism. But, I would argue, this is in part due to how REDD+

has been interpreted (see Section 2.1 below). Viewed as a mechanism for large-scale, results-based funding from developed to developing countries, REDD+ has failed and is unlikely ever to be realised at the envisioned scale (Section 2.2). Viewing REDD+ as a broad set of policy instruments at different scales, significant progress has been made toward achieving the ultimate goal: reduced emissions (Section 2.3).

The future success of REDD+ hinges on successfully pursuing actions within three areas. Developing countries must assume a stronger ownership of REDD+ and the efforts for reduced forest emissions, and make it part of their contribution to curbing climate change (Section 3.1). This is then complemented by corporate-consumer initiatives for greener supply chains and deforestation-free commodities (Section 3.2). International support for capacity building should continue, but the magnitude of the support will only be sufficient to provide partial financial incentives and compensation for the opportunity costs of conservation (Section 3.3).

2 Taking stock

2.1 Evolving REDD+

REDD+ was conceived within the global climate negotiations (UNFCCC) and envisioned as a mechanism whereby developed (Annex I) countries would incentivise and compensate developing (non-Annex I) countries for verifiably achieved emission reductions. This results-based payment mechanism could be mirrored within countries, to ensure that forest owners and users are incentivised and compensated for the carbon sequestered and stored in forests. Other policies, such as effective enforcement of protected forest areas, were also assumed to play a role in national and local implementation. While UNFCCC has provided a global arena for discussions and decisions, most of the actions have been among multilateral and bilateral donors, national and state governments, and private actors (corporations and NGOs).

In this process, REDD+ has changed in three significant ways (Angelsen and McNeill 2012). First, REDD+ has moved from having a single to multiple *objectives*. Initially (from 2005 to 2008), contributing to the “stabilisation of greenhouse gas concentrations in the atmosphere” was the principal objective of REDD+, but other objectives (referred

to as “co-benefits” or “non-carbon benefits”) have been added to the debate: protecting biodiversity, reducing poverty/enhancing local livelihoods, strengthening indigenous rights, improving governance, and expanding capacity for climate adaptation.

Second, the *implementation* focus has moved from results-based payments to a portfolio of policies. Creating a market for forest climate services presupposes a demand (created by emission caps), a well-defined commodity in the form of verified emission reductions (measured emissions, and a credible reference level), well-defined sellers (carbon rights clarified), and a marketplace with associated rules and regulations (Angelsen 2014). These elements are not yet in place in most countries. REDD+ must therefore be pursued as a broader set of national forest conservation policies (Angelsen 2009). The results-based payment idea has survived and is still seen (in different versions) as a key component of REDD+ policies and projects, but alongside other instruments (Sills et al. 2014).

Third, the *funding* for REDD+ was initially supposed to come mainly from an international carbon market. That demand for REDD+ credits has not materialised due to the lack of a global climate agreement with cap and trade (CAT) that includes REDD+ credits, either as an offset mechanism in a compliance carbon market or indirectly through, for example, auctioning emission allowances to generate revenues for a global REDD+ fund. As a result, 90% of international funding is currently coming from public sources, mainly official development aid (ODA) budgets (Norman and Nakhouda 2014).

2.2 Global negotiations and commitments

The Warsaw framework for REDD+ is a set of decisions in seven areas made at COP13 in 2013: finance; coordination; national monitoring; safeguards; reference levels; measuring, reporting and verification (MRV); and drivers; with a few outstanding issues (safeguards and non-carbon benefits) to be concluded at COP21 in Paris (December 2015). The agreement is a major diplomatic achievement. Parties with divergent views and interests were able to reach consensus, but arguably at the cost of clarity, specificity and concrete actions. Most importantly, a large-scale funding mechanism for REDD+ has yet to be established, although the decisions recognises “the key role that the

Green Climate Fund [GCF] will play in channelling financial resources to developing countries and catalysing climate finance” (UNFCCC 2011, par. 70). GCF funding is to be provided principally by developed (Annex I) countries, which at COP16 (Cancun, 2010) committed to contributing US\$100 billion per year by 2020. It is, however, highly uncertain whether this promise will be fulfilled, and what share will go to REDD+.

Approximately \$8.7 billion of international funding has been pledged from 2006 to 2014 for REDD+, with annual pledges declining after 2010 (averaging \$605 million since 2010) (Norman and Nakhooda 2014). While some donors are experimenting with light versions of performance-based funding, at least 61% of the public funding pledged so far is for readiness activities, such as capacity building and information systems. Three-quarters of the funding comes from five donor countries (Norway, the US, Germany, Japan and the UK), with Norway being the REDD+ superpower (contributing 41% of the total, or \$3.5 billion). A significant share of the funding is channelled through multilateral programmes,² while Norway has bilateral agreements with Brazil and Indonesia, each totalling \$1 billion. These two countries are expected to receive about 40% of the international funding. The share is justifiable based on their share of tropical forest cover and emissions, but questionable as development aid which has poverty reduction as its primary aim.

The current international pledges – approaching \$10 billion – represent an unprecedented level of funding to a single environmental effort in developing countries. Yet, this amount constitutes only a small fraction of the estimated funding needed if REDD+ countries are to be compensated for their emissions reductions. For example, paying for a 50% reduction in the current rate of deforestation, if valued at \$5 per tCO₂, would cost around \$9-10 billion *per year*.³ This funding gap (between this amount and the current pledges) is unlikely to be filled in the near future, and REDD+ as an international, results-based mechanism risks never achieving its envisioned scale and role. This is in spite of the many attractive features, including the fact that reduced forest emissions remains one of the most cost-efficient mitigation options.

2 These include the World Bank’s BioCarbon Fund, Forest Investment Program (FIP) and FCPF, the UN-REDD Programme, and the Congo Basin Forest Fund.

3 Assuming current (2000-2010) emissions from tropical deforestation to be in the order of 1GtC/year (Baccini et al. 2012), that REDD+ achieves a 50% reduction (with reference level = historical emissions) and that the price is \$5/tCO₂, the annual international transfer to REDD+ countries is \$9.2 billion ($1 \times 3.67 \times 0.5 \times 5 = 9.2$).

2.3 National politics and local realities

Brazil has been the poster child for successful reductions of forest emissions, with annual Amazonian deforestation after 2009 being only one-quarter of the rates over the period 2001-2008.⁴ The decline is due to a combination of factors: removal of agricultural subsidies, granting of conditional agricultural credit, establishment of protected areas, improved enforcement of laws and regulations, and supply chain interventions combined with an appreciation of the real until 2011 that made export less profitable (e.g. Nepstad et al. 2014).⁵ Recent developments are, however, disquieting. There are signs that regional deforestation rates have increased, and that conservation policies have been relaxed.⁶ The revised Forest Code (2012) increased the amount of land that can be deforested legally, new protected areas have become more difficult to establish, and the development/farm lobby has gained momentum at the expense of environmental interests.

The Brazilian success demonstrates that strong policy reforms that directly affect the cost-benefit calculus of landowners have a strong impact. The fact that policy reforms were mainly undertaken pre-REDD+, and that the country does not even have a national REDD+ strategy as such, does not diminish the lessons to be learned from Brazil (and other countries such as Costa Rica and Mexico).

Indonesia, the other important REDD+ country, has undertaken a number of policy reforms, but it remains to be seen whether they will slow down deforestation rates.⁷ The Letter of Intent with Norway (2010) resulted in a two-year moratorium on forest conversion, effective from May 2011 (and extended twice, until May 2017). The real impact of the moratorium is debated, as it is limited to primary forests and peatlands, thus leaving more than 40 million hectares of logged-over forests and peatlands open to conversion. In addition, several loopholes exist; for example, it only applies to new concessions and an exception is made for the production of vital commodities. Other bureaucratic and legal reforms in support of traditional forest management, as well

4 See www.inpe.br.

5 Evidence of the importance of the real exchange rate for deforestation is given in Arcand et al. (2008).

6 See http://e360.yale.edu/feature/what_lies_behind_the_recent_surge_of_amazon_deforestation/2854/.

7 Deforestation was significantly down in 2013, after having risen for a decade, but it is too early to say if this represents a trend shift, and whether the shift reflects lower commodity prices (palm oil) or policy changes (see <http://blog.globalforestwatch.org/2015/04/tree-cover-loss-spikes-in-russia-and-canada-remains-high-globally/>).

as recent signals and changes of practice from the corporate sector, are nevertheless encouraging.

The third major rainforest country, the Democratic Republic of Congo, has had comparably low deforestation rates, due to civil war and unrest, political instability and forest inaccessibility for commercial exploitation. The main challenge is to keep the rates low, while securing peace and economic development. REDD+ implementation in such fragile states raises particular challenges (Karsenty and Ongolo 2012). Yet, the development transition presents a unique opportunity and the country has made significant progress on REDD+ (Lee and Pistorius, 2015)

In these and other REDD+ countries, the political economy issues remain a strong – and perhaps the most critical – barrier to implementation: deforestation happens because some people or companies benefit from it (from the poor African smallholder, to the rich Brazilian cattle-owner and the Indonesian palm oil company). The large beneficiaries often hold the power to block or slow down policy reforms. The concept of REDD+ was to make it beneficial to conserve forests, but the cost-benefit equation of most land owners has not shifted in favour of forest conservation. And, perhaps not all actors should be compensated for the opportunity costs of forest conservation. Can we justify spending development aid (most of the international funding) on rich and powerful agents of deforestation? The question is particularly pertinent as the process of allocating concessions and land rights in the first place often is flawed.

A broad consensus has emerged in response to this dilemma. The big holders (large commercial farmers and companies) should be discouraged from undertaking deforestation by direct regulation (concessions, licences, minimum forest requirements, etc.) *without* compensation. The smallholders (semi-subsistence farmers) should be encouraged to undertake forest conservation by Integrated Conservation and Development Programmes (ICDPs), the workhorse for international conservation initiatives for decades. ICDPs typically consist of a mix of interventions: information and education, local management and control, direct regulation, alternative income creation, and – more recently in REDD+ projects – some form of performance-based payment to communities or individuals (Sunderlin and Sills 2012).

Local and sub-national REDD+ projects exist in 47 countries. Most of these are self-defined and not part of a national REDD+ strategy as such (Simonet et al. 2014). In an in-depth review of 23 initiatives, de Sassi et al. (2014, p. 421) conclude that most projects have served their explorative roles, but “are struggling to make the transition from pilots to sustained REDD+ interventions”. Most initiatives initially planned to sell REDD+ credits from the project area, but only four of them have done so. More generally, lack of funding has not enabled the basic political economy forces that drive deforestation and forest degradation, and that seek to maintain business-as-usual, to be changed. Challenges also abound in other areas, notably in the form of unclear and insecure land tenure and carbon rights, and safeguards and co-benefits that protect the livelihoods of local stakeholders. The national-level policy learning from local demonstration sites is also limited.

Many underestimated the technical and practical challenges of designing and implementing REDD+, assuming that advanced remote-sensing technologies would just make it ‘plug and play’. This is far from the reality. Few issues are purely technical; they are embedded within political systems and in arenas of conflicting interests. Estimating changes in forest carbon stocks requires ground truthing to establish emission factors credibly. Information must be harmonised and coordinated across scales and actors. For example, in Indonesia, multiple and inconsistent maps of the forest area and the size and location of concessions, used by different government agencies, have held up the REDD+ process. Finally, realistic benchmarks (reference levels) are needed to estimate actual reductions (as compared to a BAU scenario), and to ensure additionality (see the chapter by Aldy and Pizer in this book).

REDD+ has, nevertheless, initiated advances in forest governance, in part due to major improvements in forest monitoring. For example, the monitored tropical forest area with good or very good forest inventory capacities increased from 38% in 2005 to 66% in 2015 (Romijn et al. 2015). Countries that participated in capacity-building programmes showed more progress. Interestingly, countries with poor monitoring capacities in the past tended to overestimate net forest loss. This might appear to be welcome news, but it also raises a warning if exaggerated historical deforestation rates become the benchmark for measuring success and the basis for making payments.

3 The REDD+ road ahead

Any proposal for how to solve the climate gridlock should place itself along a continuum between: (i) the necessity of what is needed to stay within the 2°C target; and (ii) the political reality of what is feasible. Many proposals are rightly criticised for being either insufficient or unrealistic, or sometimes both. In this section, I focus on three key topics that are critical for future progress: national commitments and policies; corporations and consumers; and international agreements and funding. The selection of these topics is based on the following three observations. First, national policies are key determinants of deforestation rates, more so than international funding and local REDD+ projects. Second, deforestation is increasingly driven by global trade involving multilateral corporations that have strong influence over the supply chains. Third, the global climate regime over the short-to-medium term will likely be a bottom-up, ‘pledge and review’ system, based on the countries’ Intended Nationally Determined Contributions (INDCs).⁸

3.1 National commitments and policies

To achieve substantial emission reductions, forest conservation will increasingly have to be considered as REDD+ countries’ contribution to the global effort of limiting climate change, as integrated into national green/low-emission/low-carbon/sustainable development strategies. In a post-2020 climate regime that “reflects the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances” (UNFCCC 2014, par. 3), this could imply that middle-income countries factor REDD+ partly into their domestic target and partly as a conditional pledge subject to international support.

Analysing the policy process in key REDD+ countries, Di Gregorio et al. (2012, p. 69) argue that “achieving emission reductions through REDD+ requires four preconditions for overcoming politico-economic hurdles: (i) the relative autonomy of the State from key interests that drive deforestation and forest degradation, (ii) national ownership over REDD+ policy processes, (iii) inclusive REDD+ policy processes, and (iv) the

⁸ http://unfccc.int/focus/indc_portal/items/8766.php

presence of coalitions that call for transformational change.” When the REDD+ process is driven by international actors, it is unlikely to make a difference on the ground.

National governments are therefore in the driver’s seat for achieving reduced forest emissions. They have the primary ability for achieving this goal, and – some would argue – also the primary responsibility. Governments can implement a range of specific policies that have proved efficient in limiting deforestation. I have reviewed these elsewhere (Angelsen 2010, Angelsen and Rudel 2013), and they include: (i) reducing/removing agricultural subsidies to deforestation agents/crops/areas, (ii) avoiding road building that makes forested areas more accessible, and (iii) establishing and enforcing protected areas.

Subsidised emissions are not just a problem for fossil fuel emissions. A recent report by the Overseas Development Institute points to the pervasive effect of subsidies on key commodities, such as beef and soy in Brazil, and palm oil and timber in Indonesia. The subsidies amount to \$40 billion per year for these two countries combined. “These subsidies are likely to have a far more significant impact on private investment in activities that drive deforestation, than current REDD+ finance” (McFarland et al. 2015, p. 43). Reducing these subsidies, or making them conditional on compliance with zero-deforestation practices, represents a win-win change for conservation and development, although some groups will stand to lose from such a reform.

3.2 Corporations and consumers

In parallel with the UNFCCC process, a number of initiatives at the global and national levels have involved the private sector as a key partner in REDD+. The most noted national example is the Soy Moratorium of Brazil, adopted in 2006. This made traders agree not to sell soy from farmers who had cleared Amazon forests (Nepstad et al. 2014). Internationally, ‘zero deforestation’ initiatives have resulted in several global companies making significant efforts in greening their value chains.⁹ Studies among business executives also confirm that corporate reputation, media attention and customer pressure are the most important reasons for taking climate issues into

⁹ An example is the Palm Oil Scorecard: <http://www.ucsusa.org/global-warming/stop-deforestation/palm-oil-scorecard-2015#.VYPp0fnq3St>

consideration, well ahead of policy regulation and investment opportunities (Enkvist and Vanthournout 2008). Security of supply (in areas where production is not sustainable) is likely to become more important as land competition and climate extremes increase in frequency and severity.

In the New York Declaration on Forests (2014),¹⁰ signatories committed to doing their part to halve current deforestation rates by 2020 and to end deforestation by 2030. They also agreed to ensure that the production of four key commodities (palm oil, soy, paper, and beef) did not add to deforestation. So far, the declaration has been signed by 36 countries, 20 states/provinces, 53 companies, and 4 indigenous peoples groups.

A combination of higher awareness of the costs and risks involved in continued climate change, consumer pressure and demand for green products, and ‘naming and shaming’ by NGOs and other watchdogs can strengthen this trend even further. With international climate negotiations proving ineffective in delivering credible emission cuts, private actors can define new standards and rules in (international) environmental governance, and gain what Green (2013) labels “entrepreneurial authority”. Supply chain reforms need to be backed by domestic legislation and supportive policies to make them function better and to hold companies accountable, while encouraging frontrunners.

A very different ballgame would emerge if companies were allocated emission caps, and these could be offset through buying REDD+ credits. The private sector would then become a major funder for REDD+. The very modest demand for carbon credits in the voluntary market suggests that only policy regulations in the form of emission caps can create sufficient demand.

3.3 International agreements and funding

The initially envisioned role of REDD+, or perhaps the core of REDD+, was a massive transfer of resources to incentivise forest conservation in developing countries. With that scenario unlikely to unfold, how could an international agreement advance the implementation of REDD+?

¹⁰ See <http://www.un-redd.org/portals/15/documents/ForestsDeclarationText.pdf>.

‘Pledge and review’ seems to be the new, or indeed the only, game in town: countries make their pledges through their submission of the INDCs, which are then subject to an assessment and review process (A&R). In the best scenario, this process would help align national contributions with the 2°C target, enhance transparency and build trust. The Paris Agreement is likely to recognise the need to “achieve net zero greenhouse gas emissions within the second half of this century”, which implies building and maintaining terrestrial carbon sinks counterbalancing residual emissions in other sectors. Halting and reversing the loss of carbon in forests and soils could become the main contribution of many developing countries in their INDCs. In other words, rather than REDD+ being seen solely as a vehicle to generate international funding, part of it could be claimed as a national contribution to the global efforts of curbing climate change, particularly for middle-income countries. The A&R process could play a similar role for REDD+ as for other mitigation areas. A major step forward would be if the INDCs and A&R process could also focus on policies and possibly establish some consensus on key policy reforms.

The GCF and possible other mechanisms to be established can provide funding for capacity building, upfront investments, concessional finance and possibly also direct payments for results (i.e. for reduced emissions). International funding for REDD+ (and climate funding in general) should arguably focus on the poorest countries, rather than middle-income countries like Brazil that have sufficient resources to cover the domestic costs of forest conservation.

The limitations for international transfers to be a game changer should be recognised. First, in spite of the low costs of REDD+ compared to most other mitigation options, the realistic level of funding is small compared to the overall costs and associated co-benefits. Second, the real cost of REDD+, the opportunity costs of forest conservation (mainly the foregone profit from agricultural production on forest land conserved) does not lend itself easily to the dominant ODA modalities. Third, designing results-based funding schemes is hard (reference levels, criteria, spending pressure, and so on; see Angelsen 2013). Policy reforms can only be bought by foreign money to a very limited extent (Collier 1997).

4 Concluding thoughts

REDD+ is frequently presented as one of the climate success stories, partly because the idea looks so simple and appealing, partly because of the unusual inclusiveness of the process (the wide variety of active CSO and IP observers), partly because of the funding mobilised and activities generated, and partly because UNFCCC has for once reached a balanced agreement despite huge technical challenges. Powerful actors – from presidents and finance ministers in REDD+ countries to top executives in international corporations – are engaged like never before in debates on the role of forests in the global carbon cycle. The issues of transparency, accountability, tenure and rights and indigenous peoples have been put on domestic political agendas by REDD+. The dramatic change in the global narrative and the political momentum generated are reasons for cautious optimism.

But a thorough reality check is needed. The envisioned results in terms of reduced emissions have – by and large – not been delivered. Brazil is a success story, although little of its success can be attributed to REDD+. For other countries, there are few stories of substantial early progress in terms of reductions in deforestation (and its harder-to-measure twin, forest degradation). Old and new business-minded coalitions have blocked progress, suggesting that REDD+, if implemented, would actually make a difference.

Arguably, many were overly optimistic about REDD+ as a cheap and quick fix. Change takes time. REDD+ has improved the capacity, created an enabling environment, and raised the awareness of the role of forests in climate change (Lee and Pistorius, 2015). The momentum might eventually lead to results on the ground. But to keep that momentum going, current REDD+ efforts must deliver significant, measurable reductions in forest emissions by the end of this decade.

To achieve significant reductions in forest emissions, the REDD+ countries themselves must take the driver's seat with a focus on domestic policy reforms and enabling environments; the corporate sector should continue the greening of its supply chains, pushed by consumers, watchdogs and demand-side policies; and the international regime must gently nudge the countries to stronger pledges and provide finance to nudge and supplement domestic efforts in the poorest countries.

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He has edited three REDD+ books: *Moving Ahead with REDD: Issues, Option and Implication* (2008), *Realising REDD+: National Strategy and Policy Options* (2009), and *Analysing REDD: Challenges and Choices* (2012), and served on several expert committees. He also works on environmental income and in experimental economics.