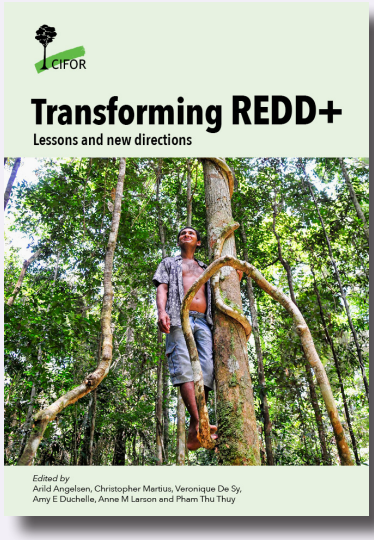
Chapter 3

Financing REDD+

A transaction among equals, or an uneven playing field?

Stibniati S Atmadja, Shintia Arwida, Christopher Martius and Pham Thu Thuy



This chapter is part of the "Transforming REDD+: Lessons and new directions" book.

How to cite this chapter
Atmadja SS, Arwida S, Martius C and Pham TT. 2018. Financing REDD+: A transaction among equals, or an uneven playing field? *In* Angelsen A, Martius C, De Sy V, Duchelle AE, Larson AM and Pham TT, eds. *Transforming REDD+: Lessons and new directions.* p. 29–39. Bogor, Indonesia: CIFOR.

Full version of this publication can be downloaded at:
https://www.cifor.org/library/7045

Chapter 3

Financing REDD+

A transaction among equals, or an uneven playing field?

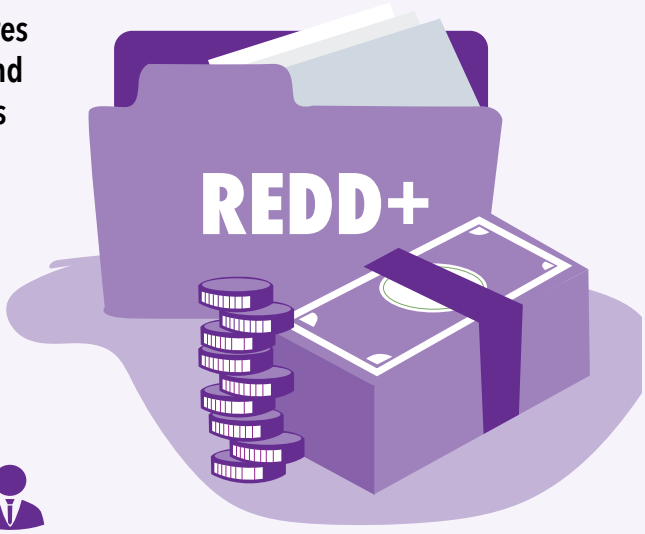
Stibniati S Atmadja, Shintia Arwida, Christopher Martius and Pham Thu Thuy

Key messages

- A small group of donors and multilateral institutions dominate international REDD+ funding, making it potentially vulnerable to political fluctuations. Readiness funding from established mechanisms is drying up, jeopardising newcomers' ability to tap into future public or private funding.
- REDD+ needs political and financial support from both REDD+ developing countries and developed countries. Developing countries and communities have already contributed their own funding and support to REDD+ implementation, and this should be better acknowledged in global REDD+ funding discourse and negotiations.
- High expectations of private sector finance are not matched by observed flows and commitments, and the best available data on private sector REDD+ initiatives has limited depth and coverage. Enhancing private sector investment in REDD+ requires enabling conditions such as carbon rights, tenure security and law enforcement.

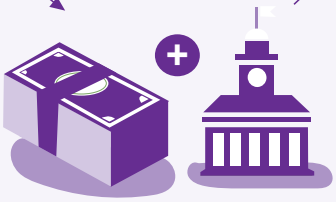
Financing REDD+ in a nutshell

Harnessing forests' potential to mitigate climate change requires money to compensate for costs and to provide the financial incentives for change. REDD+ is expected to facilitate this.



A small group of donors and multilateral institutions dominate international REDD+ funding, making it vulnerable to political fluctuations.

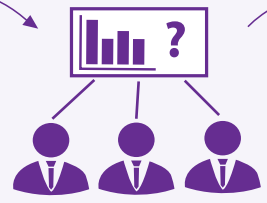
Lack of readiness funding can jeopardise newcomers' ability to tap into future public or private funding.



REDD+ needs both political and financial support at the national level from REDD+ developing countries.

Established readiness funding is drying up, so newcomers face more funding challenges than did 'early movers' in REDD+.

REDD+ countries and communities shoulder a lot of REDD+ costs, which are not well-documented; global funding discussions need to acknowledge this contribution.



Private sector finance has not materialised as expected, and there is a lack of data on progress towards commitments.

The private sector does not see the business case for REDD+, in part due to the many risks involved, e.g., lack of tenure security, carbon rights and law enforcement.

3.1 The REDD+ finance landscape

Harnessing forests' potential to mitigate climate change requires funding to cover the costs of changing policies and practices, as well as to provide financial incentives for change. A review of 13 countries showed that expectations around results-based payment drive progress in establishing national REDD+ policies and initiatives (Brockhaus *et al*. 2017) – but the needs far exceed the available funds.

Most countries are currently in the readiness and implementation phases of REDD+ (Chapter 2). Readiness funding allows countries to improve forest governance, to develop national strategies and institutions, to enable stakeholders to invest in forests, and to acquire the skills and technologies to monitor, report and verify carbon released by (or sequestered in) forests.

Current available estimates of direct global REDD+ funding (i.e., for activities explicitly labelled as REDD+) rely mainly on data from public funding sources, mostly grants. A few countries account for a large proportion of international public funding; between 2008 and 2015, 87% of official development assistance (ODA) for activities explicitly labelled as REDD+ was committed by Norway, Germany, the United Kingdom, the United States and Australia (Olesen *et al*. 2018) (Figure 3.1).

Around 25–33% of this funding is channelled via multilateral funds managed by a handful of institutions: the World Bank, the UN-REDD programme, the Global Environment Facility (GEF) and the Green Climate Fund (GCF) (Norman and Nakhooda 2014; Olesen *et al*. 2018). For donors, these multilateral mechanisms secure a high level of governance and lower transactions costs (compared to direct engagement with recipient countries) and offer donors a degree of control on how the fund mechanisms are governed (UK-DECC 2014). However, the strict formal requirements posed by these funds are challenging for recipients to meet, and lead to high transactions costs and capacity building needs.

3.2 The key challenges

3.2.1 Donor funding is not enough and is vulnerable to political fluctuations

Current donor-driven funding is insufficient to realise tropical forests' mitigation potential, and is vulnerable to changes in political leadership, public opinion, and economic interests within and between donor and recipient countries (Wolosin and Lee 2014; Angelsen 2017). Global estimates of finance pledged or committed to support REDD+ efforts are USD 1.1–2.7 billion per year (Norman and Nakhooda 2014; Olesen *et al*. 2018) – a wide range, mainly due to differences in what is labelled REDD+ (Figure 3.1).[1] By some estimates, the world needs at

1 For example, Olesen *et al*. (2018) estimated that EUR 19.4 billion (USD 21.5 billion) was committed between 2008 and 2015 for activities explicitly labelled as REDD+ and for those not labelled as REDD+ but sharing the same objectives, while Norman and Nakhooda (2014) estimated USD 9.8 billion was pledged between 2006 to 2014 to support REDD+.

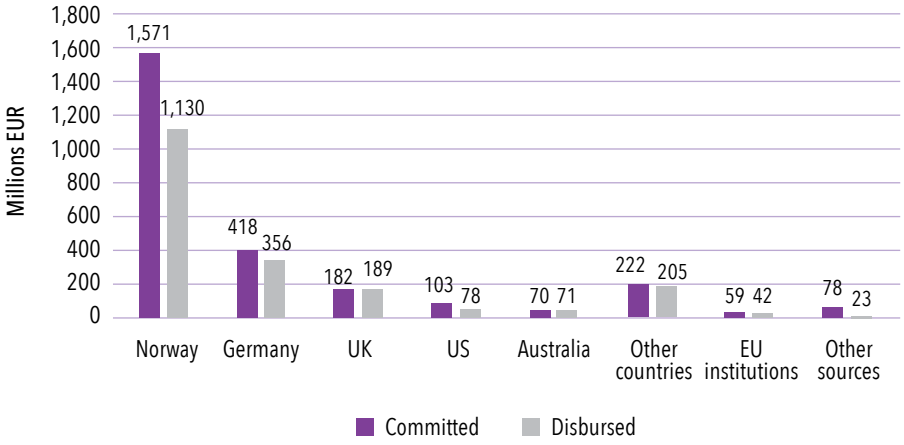


Figure 3.1 ODA cumulative commitments and disbursements for activities labelled as REDD+, 2008–2015

Source: Organisation for Economic Cooperation and Development (OECD) Creditor Reporting System (CRS) database, as calculated in Olesen *et al*. (2018)

least USD 15 billion per year, compared to the USD 1–2 billion currently available (Norman and Nakhooda 2014). This takes into account estimates by the Eliasch Review (i.e., by 2030, the cost to halve emissions from the forest sector could be around USD 17–33 billion per year, including global carbon trading) and Morris and Stevenson (2011) (i.e., by 2020 the cost to halve deforestation is between USD 15 and USD 60 billion). Côte d'Ivoire, for example, needs USD 289 million per year to meet its objective of 20% forest cover by 2030; this is 10 times the 2015 total of USD 28.1 million, mobilised for all REDD+ activities from domestic and international sources (Falconer *et al*. 2017).

Many factors external to REDD+ countries' ability to reduce emissions from forests can pose significant hurdles for fundraising. Donors and recipients need to find the most suitable partner to implement REDD+ actions. During the early phases of REDD+, this matching process faces high communication, monitoring and transaction costs, and favours countries that have REDD+ proponents headquartered in the donor countries, those who received aid from the donor country in the past, or proposed projects clustered with other projects funded by the donor (Gallemore and Jespersen 2016). Targeting such countries may be more efficient for donor countries in the short term, but it is not inclusive and not necessarily equitable, sustainable or efficient for global emissions reduction.

Box 3.1 Accounting of REDD+ finance in Vietnam

Available data show that, since 2009, REDD+ in Vietnam has primarily been funded by ODA. In 2016, the main sources were bilateral government funding – mainly from Germany, the United States, Japan and Norway (USD 38.07 million) – and multilateral institutions, such as UN-REDD and the Forest Carbon Partnership Facility (USD 39.25 million). Private sector contributions were much smaller, at USD 0.46 million (MARD 2016). The Vietnamese government estimated that it contributed USD 5.6 million of domestic public funding for implementation of its national REDD+ programme. This was to cover the operations of the Vietnam REDD+ Office, the formulation of relevant policies and strategies, scientific research, and the piloting of methodologies for a national forest monitoring system (MARD 2016).

Is this an accurate account of REDD+ finance in Vietnam? No, because it does not capture all state budget allocations for the implementation of REDD+ activities, and because discrepancies within REDD+ financial data and statistics pose a major challenge to building a comprehensive and accurate dataset.

Accounting challenges for REDD+ domestic funding in Vietnam include:

- **Difficulty aggregating data across sectors**. As REDD+ requires cross-sector coordination, funding for REDD+ is not classified as a separate budget line in the state budget. Thus, it can be funded through various initiatives such as Vietnam's Green Growth Programme, its Nationally Determined Contribution Implementation Plan and its National Strategy on Climate Change. Lack of consistency among data from different programmes overseen by different ministries makes aggregation and analysis a major challenge.
- **Inconsistency in documenting financial data for REDD+**. Data on REDD+ have been collected at different scales (e.g., through REDD+ activities, projects and the national programme), at different times using different data sources. Donors provide annual financial reports by December, but the government's report is released only in June of the following year.
- **Lack of clarity in REDD+ priorities and activities**. The country's legal framework does not provide clear guidance on REDD+ priorities. This leads to different definitions and terminologies used to determine whether funding for a particular expenditure can be classified as REDD+; as a result the management of REDD+ investments lacks focus.

3.2.2 REDD+ countries, including communities, are filling the funding gap

Despite the funding gaps in REDD+, action continues to take place on the ground (see list of REDD+ initiatives in Simonet *et al*, 2018a). Government, communities, some companies and NGOs in REDD+ countries at national, subnational and local levels are shouldering part of the funding gap. For example, Vietnam (Box 3.1), Indonesia, Ecuador and Ethiopia contributed their own domestic resources to carry out awareness-raising activities, refine their monitoring and evaluation frameworks, and cover operational costs of REDD+ activities at subnational level. Indonesia contributed IDR 3,354 billion (USD 250.6 million) for climate change mitigation – more than 30 times the IDR 105.4 billion (USD 7.87 million) in donor

grants (Haryanto 2017).[2] In Ecuador, the government provided more than three times the amount committed to the country in international REDD+ funding from 2009 to 2014 (Silva-Chávez *et al*. 2015). However, these countries' contributions are not well documented, are difficult to aggregate, and are not integrated into global discourses on climate finance (Box 3.1).

REDD+ countries are also bearing high costs. For example, in the Tigray region of Ethiopia, male and female farmers provide 20 days of compulsory unpaid labour during the dry (off-peak) season to implement water and soil rehabilitation programmes, including afforestation (Kumasi and Asenso-Okyere 2011; Gromko 2016). GCS REDD+ analysis of 22 subnational early REDD+ initiatives in five countries found that small-scale or subsistence stakeholders bore the most significant opportunity costs in terms of number of people affected (Luttrell *et al*. 2016). A high proportion of villages (62%) and subnational institutions (40%) carry significant implementation costs without receiving any monetary benefits (Luttrell *et al*. 2016). Given the UNFCCC principle of 'common but differentiated responsibilities and respective capabilities', the fact that developing countries are shouldering substantial costs without being acknowledged is a major equity concern.

3.2.3 Private sector funding remains important, but data are missing

Given the large size of private investments in the forestry and agriculture sectors as compared to international public funding, the private sector has been expected to take on a larger role in financing REDD+ initiatives – either by developing forest carbon projects or by committing to 'forest-friendly' investments and supply chains (Badgery-Parker 2013; Castrén *et al*. 2014; Clarke *et al*. 2016).

Despite these expectations, little is known about the private sector's REDD+ financing and investments (Henderson and Coello 2013; Tennigkeit *et al*. 2013). Publicly available global data on private sector sources of funding come mainly from the voluntary carbon markets (Wolosin *et al*. 2016). This paints only part of the picture, since private sector involvement in, for example, deforestation-free supply chains (Chapter 13) could be much more significant, but is difficult to quantify. Most companies are reluctant to share complete information on their progress towards implementing their commitments (Haupt *et al*. 2018). Private companies are not convinced of the REDD+ business case (CDP 2018); risks related to land tenure, carbon ownership, and nesting rules for carbon credits – which companies feared may lead to loss of carbon rights generated by private projects nesting in jurisdictional/national REDD+ programmes – make REDD+ investment less attractive than other investments (CDP 2018).

2 USD 1 = IDR 13,381.87, the World Bank official exchange rate, 2017 (https://data.worldbank.org/indicator/PA.NUS.FCRF)

Good governance is essential for private sector funding to be meaningful for REDD+. Experience from other sectors reveals that turning assets from public to private (e.g., by privatising forest ecosystem services) needs to be carefully regulated and monitored to avoid regulatory capture (Perotti and Bortolotti 2005). For example, early in REDD+ implementation 'carbon cowboys' benefited by exploiting local people's lack of understanding about how carbon markets function, and private plantations often had negative effects on local communities and the environment through misallocation of public funds for reforestation and dispossession of local communities from land held under customary law (e.g., Barr *et al*. 2010; Landry and Chirwa 2011; Andersson *et al*. 2016). Meanwhile, socially responsible enterprises suffered because they lacked the political, regulatory and law enforcement support to implement proper safeguards.

The private sector also needs government support – through improved land-use planning, regulation and public funding – to maintain interest in putting commitments into action (Haupt *et al*. 2018). Governments need to adopt and enforce existing laws, formulate policies and support the poorest farmers through their transition to REDD+. In return, the public sector expects the private sector to finance REDD+, but funding to create the enabling conditions for REDD+ is drying up.

3.2.4 REDD+ readiness funding is quickly disappearing – but it is still needed

The first generation of REDD+ countries took risks, but in return they gained early access to readiness funds. This has led to a better understanding of drivers, stronger engagement of stakeholders in national forest policy discussions (Duchelle *et al*. 2018a), and the establishment of national MRV systems and capacity (Romijn *et al*. 2015). Second-generation REDD+ countries can benefit from the foundations built by the first wave, but readiness funds are now dwindling.

Multilateral funding programmes are an important means of distributing REDD+ funds globally. They have a comparative advantage over bilateral funding mechanisms in that they have specialised capacity – both technical (e.g., following UNFCCC guidelines) and governance (e.g., fiduciary and safeguards) – and can cultivate large networks of countries engaged in similar activities. These programmes significantly influence how funds are structured, used, provided and reported by REDD+ countries and donors.

The leading multilateral funding mechanisms focused on REDD+ readiness are the Forest Carbon Partnership Facility Readiness Fund (FCPF-RF), the UN-REDD National Programmes (NP), and the Forest Investment Program (FIP) of the Climate Investment Funds (CIF); we exclude the recently established Green Climate Fund from this list because of its limited focus on REDD+. FCPF-RF and UN-REDD-NP are due to end in 2020, while FIP is facing a potential deficit of USD 51.2 million

(CIF 2017; FCPF 2017; UN-REDD+ Programme 2018). However, many donors that contribute to these three funds also provide funding to REDD+ countries directly through bilateral agreements.

Countries that have not yet applied for readiness funding are competing for an increasingly small pool from multilateral mechanisms. Among 39 countries that mention REDD+ in their NDCs, 12 countries participate in UN-REDD, 2 receive FCPF readiness funding, and 5 (Angola, Bahamas, Palau, Rwanda, and Saint Vincent and the Grenadines) have neither received an FCPF Readiness Grant nor are they a participant of UN-REDD (Figure 3.2). And although the Green Climate Fund's Readiness Programme will extend beyond 2020, it is capped at USD 1 million per year per country and can also be used for activities not directly related to REDD+ readiness.

2011	Democratic Republic of the Congo[b], Ghana[b], Indonesia, Nepal[b]
2012	Costa Rica[b], Ethiopia, Liberia, Republic of the Congo, Vietnam[b]
2013	Cameroon[b], Chile, El Salvador, Mozambique[b,c], Nicaragua[c], Uganda[b]
2014	Cambodia[b], Côte d'Ivoire, Guatemala, Guyana[b], Honduras, Laos, Mexico, Panama, Peru, Suriname[b]
2015	Bhutan[b], Burkina Faso, Colombia[b], Dominican Republic, Fiji[b], Madagascar[b], Nigeria, Pakistan, Papua New Guinea[b], Sudan[b], Thailand[b,c], Togo[b], Uruguay[b,c], Vanuatu[b]
2016	Argentina
2017	Belize[b,c], Central African Republic, Paraguay
2018	Kenya
n/a	Angola[b,c], Bahamas[b,c], Burundi[b], Chad[b], Equatorial Guinea[b], Guinea Bissau[b], India[b], Ivory Coast[b], Malawi[b], Myanmar[b], Palau[b,c], Rwanda[b,c], South Sudan[b], Saint Vincent and the Grenadines[b,c], Tanzania[a,b] Zambia[b], Zimbabwe

Figure 3.2 Year of REDD+ Readiness Preparation Grant Agreement from FCPF by country, countries mentioning REDD+ in their INDCs or participating in UN-REDD+

Note: Colours group countries by time of grant agreement related to disbursements of at least USD 3 million. Purple = early, White = mid, Grey = late/no grant agreement as of 2017
a Did not seek Readiness Preparation Grant from FCPF but is a partner country
b INDC document mentions 'REDD+' (Source: World Bank 2016)
c Countries that are not a participant of the UN-REDD Programme

Source: Author compilation from documents at https://www.forestcarbonpartnership.org/redd-countries-1

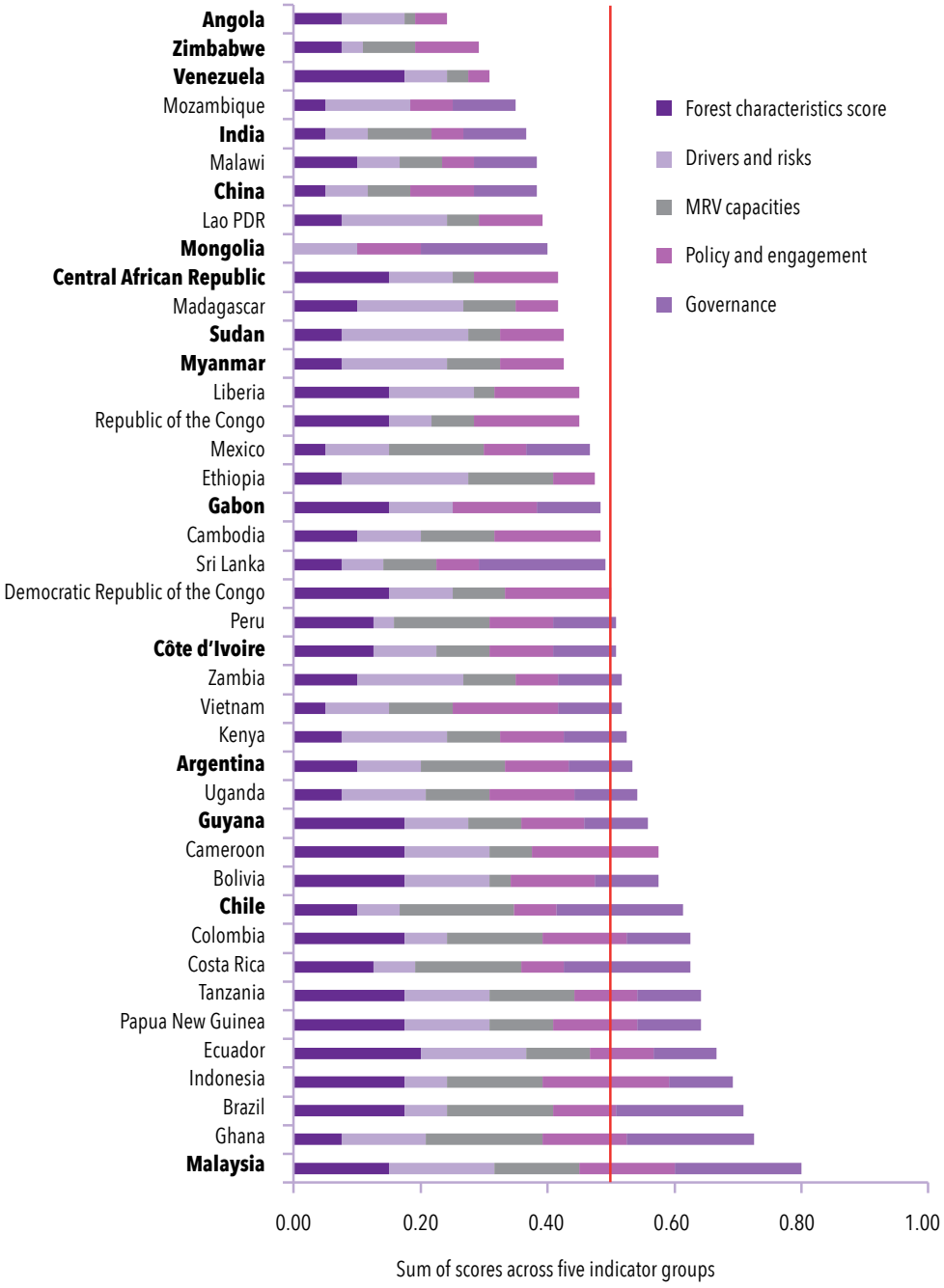


Figure 3.3 Assessment of REDD+ effectiveness and capacity to access international REDD+ funds across 41 countries

Note: Horizontal axis is the sum of scores across indicator groups, ranging from 0 to 1; the red line denotes 0.50. Countries highlighted in bold have a low (<0.5) score for access to international funds designated explicitly for REDD+.

Source: Olesen *et al*. 2018 based on 2008–2015 ODA data from the Organisation for Economic Co-operation and Development (OECD)

The projected country demand for REDD+ related activities in 2017 was USD 500,000 per year per country (Green Climate Fund 2016). This may be sufficient if all potential REDD+ countries could be 'REDD+ ready' by 2020, but unfortunately that is unlikely. A review of 41 REDD+ countries found that 19 of them still have low effectiveness (Olesen *et al*. 2018); of those, 10 have low scores for access to international funds explicitly for REDD+ and came late – or not at all – to the FPCF funding pipeline (Figure 3.3). Of the remaining 21, only 3 countries (Argentina, Ecuador and Ghana) scored well in all indicator groups, including access to REDD+ funding. And, as mentioned previously, poor REDD+ readiness can jeopardise access to private financing for REDD+.

3.3 The way forward

Countries need to have better access to diverse sources and modes of financing, and have institutions to manage them (Box 3.2). Those that do not will need to deftly court donors or be left with few funding options. As countries look for other sources of funding, including private investments and domestic sources, the role of the traditional gatekeepers of REDD+ is likely to diminish. REDD+ cannot remain the domain of a few donors or institutions. This may come as a relief to the handful of donor countries shouldering most of the burden for REDD+ thus far.

Box 3.2 Case study: Indonesia's Environmental Fund Management Agency

In anticipating the third phase of REDD+ (results-based payments) and other climate funding, the Government of Indonesia established the Environmental Fund Management Agency (*Badan Pengelola Dana Lingkungan Hidup* – BPDLH), based on Government Regulation No. 46/2017 on Environmental Economic Instruments, signed on 10 November 2017.

The financial aspects of BPDLH will be managed by the Ministry of Finance, while the technical and coordination aspects will be managed by the Ministry of Environment and Forestry's Directorate General of Climate Change Control. The institution will handle a variety of financing flows, such as grants, loans and equities, including large grants such as Norway's 2010 Letter of Intent, at USD 1 billion. This diversity is considered important to secure long-term funding. The rules and regulations for allocating funds are still under preparation.

BPDLH aims to increase transparency and accountability in managing climate funds. It will have a checks and balances mechanism involving a custodian bank as a trustee, who will carry out asset safekeeping, bookkeeping, and reporting on managed funds. A Presidential Regulation (Perpres) on the Establishment of the Public Service Fund for the Management of Environmental Funds will be issued soon to regulate operational modalities of BPDLH and establish standard operational procedures at subnational level.

The process of establishing this fund started mid-2015. It was delayed due to the need to consult with ministries involved in implementing environmental and climate change programmes, including Ministries of Finance, of Environment and Forestry, of Energy and Mineral Resources, and of Transportation.

Between 2008 and 2015, ODA commitments to activities labelled as REDD+ equalled EUR 2.7 billion in total, while ODA for those with REDD+ objectives but not labelled as such was EUR 16.7 billion (Olesen *et al*. 2018). To better tap into this 'REDD+ like' funding, countries such as Indonesia are developing flexible mechanisms that can channel funding to different sectors, using a variety of financial instruments (e.g., grants, loans and equity) from both private and public sources (Box 3.2). If the definition of REDD+ is better aligned to what countries need, there could be stronger domestic support for REDD+ and a wider variety of business opportunities that complement its goals.

Developing countries' own contributions to REDD+ must be recognised in light of the 'common but differentiated responsibilities and respective capabilities' principle. This includes better monitoring of domestic climate finance (e.g., budget tagging) for analysis and documentation. Seymour and Angelsen (2012, 320) note that framing REDD+ in terms of aid "creates an unfortunate domestic political dynamic in recipient countries and raises sovereignty concerns". Instead, they argue that REDD+ funding should be "a transaction among equal partners in the context of an international agreement". The needs and preferences of developing countries should determine how REDD+ is being negotiated and financed.

Companies must overcome their reluctance to contribute more to REDD+ objectives, and show more transparency about their progress towards commitments (e.g., zero deforestation pledges). There are simply not enough data to assess whether private sector investments are central – or detrimental – to REDD+ objectives. Global debate needs to address how to regulate, monitor and enforce private sector investments that are environmentally sustainable.

Finally, readiness funding should be provided to countries that still need it. This funding is arguably producing some of the largest benefits of REDD+ seen to date: more national dialogue and awareness, clearer national strategies, and improved forest monitoring and institutions. These benefits need to be extended to all forested countries. Although the Green Climate Fund is envisioned to support some REDD+ readiness activities, it lacks the targeted funds and broad REDD+ expertise of the FCPF-RF and UN-REDD-NP. For REDD+ to be successful, newcomers must be able to develop a basis for it and tap into future public or private funding.

References

Andersson K, Lawrence D, Zavaleta J, and Guariguata MR. 2016. More trees, more poverty? The socioeconomic effects of tree plantations in Chile, 2001–2011. *Environmental Management,* 57(1): 123–136.

Angelsen A. 2017. REDD+ as result-based aid: General lessons and bilateral agreements of Norway. *Review of Development Economics,* 21(2): 237–264.

Badgery-Parker I. 2013. Good governance is "critical" to engage the private sector in REDD+. Bogor, Indonesia: Center for International Forestry Research (CIFOR) *Forests News*. July 16, 2013.

Barr C, Dermawan A, Purnomo H, and Heru K. 2010. Financial governance and Indonesia's Reforestation Fund during the Soeharto and post-Soeharto periods, 1989–2009: A political economic analysis of lessons for REDD+. Bogor, Indonesia: Center for International Forestry Research (CIFOR).

Brockhaus M, Korhonen-Kurki K, Sehring J, Di Gregorio M, Assembe-Mvondo S, Babon A, Bekele M, Gebara MF, Khatri DB, Kambire H, Kengoum F, Kweka D, Menton M, Moeliono M, Paudel NS, Pham TT, Resosudarmo IAP, Sitoe A, Wunder S, and Zida M. 2017. REDD+, transformational change and the promise of performance-based payments: A qualitative comparative analysis. *Climate Policy,* 17(6): 708–730.

Castrén, Tuukka, Katila M, Lindroos K, and Salmi J. 2014. Private Financing for Sustainable Forest Management and Forest Products in Developing Countries: Trends and Drivers. Washington, DC: Program on Forests (PROFOR).

CDP (Carbon Disclosure Project). 2018. Harnessing the potential of the private sector to deliver REDD+: A briefing for policymakers. London, UK: CDP.

CIF (Climate Investment Funds). 2017. *Climate Investment Funds (CIF) FIP Operations and Results Report*. Washington, DC: Climate Investment Fund.

Clarke M, Mikkolainen P, Camargo M, and Elhassan N. 2016. *Second Evaluation of the Forest Carbon Partnership Facility*. Helsinki, Finland: Indufor.

Duchelle AE, Seymour F, Brockhaus M, Angelsen A, Larson AM, Moeliono M, Wong GY, Pham TT, and Martius C. 2018a. *REDD+: Lessons from National and Subnational Implementation*. Ending Tropical Deforestation Series. Washington, DC: World Resources Institute (WRI).

Falconer A, Dontenville A, Parker C, Daubrey M, and Gnaore L. 2017. *Landscape of REDD+ Aligned Finance in Côte d'Ivoire*. San Francisco, CA: Climate Policy Initiative.

FCPF (Forest Carbon Partnership Facility). 2017. *Forest Carbon Partnership Facility 2017 Annual Report*. Washington, DC: FCPF.

Gallemore C, and Jespersen K. 2016. Transnational markets for sustainable development governance: The case of REDD+. *World Development,* 86: 79–94.

Green Climate Fund. 2016. Progress and outlook report of the Readiness and Preparatory Support Programme. Apia, Samoa: Green Climate Fund.

Gromko D. 2016, 2 May 2016. Ethiopia's farmers fight devastating drought with land restoration. The Guardian. [accessed 25 November 2018]. https://www.theguardian.com/sustainable-business/2016/may/02/ethiopia-famine-drought-land-restoration

Haryanto JT. 2017. National & Sub-National Climate Budgeting in Indonesia. [accessed 22 November 2018]. http://www.unpei.org/system/files_force/National%20and%20Subnational%20Climate%20Budgeting%20in%20Indonesia.pdf?download=1

Haupt F, Bakhtary H, Schulte I, Galt H, and Streck C. 2018. *Progress on Corporate Commitments and their Implementation*. Amsterdam: Climate Focus.

Henderson I and Coello J. 2013. REDD+ finance: What do we know about the private sector contribution? Washington, DC: Forest Trends. [accessed 22 November 2018]. https://www.forest-trends.org/ecosystem_marketplace/redd-finance-what-do-we-know-br-about-the-private-sector-contribution

Kumasi TC and Asenso-Okyere K. 2011. *Responding to Land Degradation in the Highlands of Tigray, Northern Ethiopia*. IFPRI Discussion Paper No. 01142. Washington, DC: International Food Policy Research Institute (IFPRI).

Landry J and Chirwa PW. 2011. Analysis of the potential socio-economic impact of establishing plantation forestry on rural communities in Sanga district, Niassa province, Mozambique. *Land Use Policy,* 28(3): 542–551.

Luttrell C, Sills EO, Aryani R, Ekaputri AD, and Evnike MF. 2016. *Who will bear the cost of REDD+? Evidence from subnational REDD+ initiatives*. CIFOR Working Paper No. 204. Bogor, Indonesia: Center for International Forestry Research (CIFOR).

MARD (Ministry of Agriculture and Rural Development). 2016. *Participatory self-assessment of the REDD+ readiness package in Vietnam*. Hanoi, Vietnam: MARD, Government of Vietnam.

Morris D and Stevenson A. 2011. *REDD+ and international climate finance: A brief primer*. Issue Brief No. 11–13. Washington, DC: Resources for the Future.

Norman M and Nakhooda S. 2014. *The State of REDD+ Finance*. Washington DC: Center for Global Development.

Olesen A, Böttcher H, Siemons A, Herrmann L, Martius C, Roman-Cuesta RM, Atmadja S, Hansen DS, Andersen SP, Georgiev I, Bager SL, Schwöppe C, and Wunder S. 2018. *Study on EU Financing of REDD+ Related Activities, and Results-Based Payments Pre and Post 2020: Sources, Cost-Effectiveness and Fair Allocation of Incentives*. Luxembourg: European Commission, DG Environment/Climate Action.

Perotti E and Bortolotti B. 2005. From Government to Regulatory Governance: Privatization and the Residual Role of the State. Milan, Italy: Fondazione Eni Enrico Mattei.

Romijn E, Lantican CB, Herold M, Lindquist E, Ochieng R, Wijaya A, Murdiyarso D, and Verchot L. 2015. Assessing change in national forest monitoring capacities of 99 tropical countries. *Forest Ecology and Management,* 352: 109–123.

Seymour F and Angelsen A. 2012. Summary and conclusions: REDD+ without regrets. *In* Seymour F, Angelsen A, Angelsen A, Brockhaus M, Sunderlin WD, and Verchot LV, eds. *Analysing REDD+: Challenges and choices*. p. 317–334. Bogor, Indonesia: Center for International Forestry Research (CIFOR).

Silva-Chávez G, Schaap B, and Breitfeller J. 2015. *REDD+ Finance Flows 2009–2014: Trends and Lessons Learned in REDDX Countries*. Washington, DC: Forest Trends.

Simonet G, Agrawal A, Bénédet F, Cromberg M, de Perthuis C, Haggard D, Jansen N, Karsenty A, Liang W, Newton P, Sales AM, Schaap B, Seyller C, and Vaillant G. 2018a. ID-RECCO, International Database on REDD+ projects and programs, linking Economic, Carbon and Communities data. Version 3.0. [accessed 23 November 2018]. www.reddprojectsdatabase.org

Tennigkeit T, Held C, Carodenuto S, and Merger E. 2013. *Financing REDD+ through private forestry sector: How to attract REDD+ related private investments*. Freiburg, Germany: UNIQUE forestry and land use GbmH.

UK-DECC (UK Department of Energy and Climate Change). 2014. An International Climate Fund business case for DECC investment in the BioCarbon Fund and the Forest Carbon Partnership Facility – Carbon Fund. London: UK Department of Energy and Climate Change (UK-DECC).

UN-REDD+ Programme. 2018. Ninth Consolidated Annual Progress Report of the UN-REDD Programme Fund. Geneva, Switzerland: UN-REDD.

Wolosin M and Lee D. 2014. *US Support for REDD+: Reflections on the Past and Future Outlook*. Washington, DC: Center for Global Development.

Wolosin M, Breitfeller J, and Schaap B. 2016. The Geography of REDD+ Finance Deforestation, Emissions, and the Targeting of Forest Conservation Finance. Washington DC: Forest Trends.

World Bank. 2016. *Mitigation Content Database*. Intended Nationally Determined Contributions (INDCs). Washington, DC: World Bank. Accessed 25 November 2018. http://spappssecext.worldbank.org/sites/indc/Pages/mitigation.aspx

RESEARCH PROGRAM ON
Forests, Trees and Agroforestry

This research was carried out by CIFOR as part of the CGIAR Research Program on Forests, Trees and Agroforestry (FTA). FTA is the world's largest research for development program to enhance the role of forests, trees and agroforestry in sustainable development and food security and to address climate change. CIFOR leads FTA in partnership with Bioversity International, CATIE, CIRAD, INBAR, ICRAF and TBI.

FTA's work is supported by the CGIAR Trust Fund: cgiar.org/funders/

cifor.org/gcs

forestsnews.cifor.org

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Norad

ISBN: 978-602-387-079-0