

Chapter 11

Green Finance

–The Road from Billions to Trillions

Ishac Diwan and Homi Kharas

1. Introduction

Green financing can be considered as a structured financial activity that contributes to better environmental outcomes. As a general proposition, these activities can be disaggregated into three main areas: (i) sustainable infrastructure, notably the transition of energy systems to reduce the use of fossil fuels; (ii) adaptation and resilience, including the use of nature-based solutions; and (iii) agriculture and the transformation of land use, including the need for biodiversity conservation. In this paper, we refer to these as green activities – the investments, policies, and institutional changes needed to implement ambitions for a green and just transition of the global economy.

The main constituent elements of green activities have been clearly articulated by recent reports (e.g., IMF, 2021; World Bank, 2020; and United Nations Inter-agency Task Force on Financing for Development, 2021). For developing countries, in particular, they include a major role for public sector activities that allows countries to fulfil their nationally determined contributions (NDCs) under the Paris Agreement (UNFCCC, 2015). Green finance, as used here, is any finance that supports these activities. It therefore extends beyond climate finance, although the greenhouse gas emissions reductions involved in energy, transport, and land use transitions represent a large part of the financing needs.

The G20, as the main steering group for the global economy, is best positioned to advocate for changes that would support the development of green finance. It has already established the G20 Sustainable Finance Working Group (SFWG), under the Italian Presidency in 2021, which has laid out priority areas in a roadmap (G20 SFWG, 2021). This is a good step forward. The classic gains from collective action apply to green finance: larger investment multipliers when many countries act together; opportunities for learning-by-doing across different places, contexts, and issues; and larger markets that can spur technological innovation.

What is needed is a reform of the international financial architecture that can deliver green financing to developing countries at scale and with urgency and purpose. The most recent Intergovernmental Panel on Climate Change report (IPCC, 2022) suggested that developing countries would need to increase their climate financing by a multiple of 4x to 8x over 2019 levels, or by US\$1.8 trillion–US\$3.4 trillion per year.

In this paper, we go beyond existing proposals on how to support green finance by focusing on the reforms in public institutions needed to support developing countries to reach the climate goals of the Paris Agreement (Bhattacharya and Stern, 2021). In particular, we make recommendations on how the G20 SFWG can advance two of its work streams:

- Enhancing the role of international financial institutions (IFIs) in supporting the goals of the Paris Agreement and the 2030 Agenda, by changing:
 - the size and allocation rules for official development assistance (ODA);
 - the size and orientation of non-concessional official finance, including the role of IFIs in mobilising and catalysing private finance; and
 - debt resolution.
- Improving the comparability and interoperability of approaches to align investments to sustainability goals, specifically by:
 - the development of carbon markets and offsets in which all developing countries can participate.

2. Scale and Urgency of the Challenge

The numbers associated with green finance are often strikingly large, but the incremental costs, net of associated co-benefits, are far smaller and could even be negative. Green finance is not costly, in the traditional sense, but shifts costs from the future to the present. Precise figures would need detailed country NDCs and the related investment plans. The experience with the South Africa Just Energy Transition proposal, presented at the 26th United Nations Climate Change Conference (COP26) in Glasgow in 2021, suggests that investment and financing needs are likely to exceed the initial estimates made at COP15 in Copenhagen in 2009 when the US\$100 billion pledge was made, once all the transition costs are taken into consideration – including, for example, those related to compensation for workers affected by the closure of carbon-intensive activities.

The large size of the estimated financing needs suggests three important implications. First, given that the Sustainable Development Goals (SDGs) are already grossly underfinanced, making progress on the climate goals will require that green financing be both *additional* to what currently flows to finance the SDGs and *conditional* on the green activities being implemented.

Second, more grants should be provided to developing countries, in relation to their level of poverty and underdevelopment – the concessionality of climate finance matters as well as its volume in recognition of:

- equity for countries that have not contributed to carbon emissions, but that are now hurt by them;
- valuation differences on the benefits of a green transition for advanced economies and developing countries, given the higher discount factor in developing countries;
- adoption differences for green technologies, given the high interest rates developing countries face; and
- international assistance to compensate those adversely affected by a green transition.

The current situation has large gaps between lofty global goals, scarce public funds, and private capital unwilling to take on the risks of long-term investment in infrastructure and other green activities in developing countries. This suggests that a two-track approach is required. Because green finance requires scaled-up financing over decades, starting now, there is a set of issues to be tackled in the short run and, in parallel, a need for system reforms of the international financial architecture that will have an impact in the medium and long run.

3. A Path Forward – Consolidate the Base First

At COP15 in 2009, developed countries pledged to provide US\$100 billion annually in climate finance by 2020. This pledge has been extended through 2025, but the most recent figures (2019 estimate of US\$79.6 billion) suggest that the target for 2020 will not be met (OECD, 2019).

The experience of climate finance to date has highlighted several issues:

- The aggregate mobilised volume, despite being intended as a floor, is inadequate.
- Without a methodology for establishing additionality, there is a risk that climate finance will crowd out other development finance.
- Too little financing is being allocated to adaptation.
- Some vulnerable country groups, notably small island developing states, have had difficulty in accessing funds.

Given the reduced trust, legitimacy, and credibility that failure to fulfil the climate pledge has brought about, the G20 could usefully commit to the green pledge of its advanced economy members in its leaders' communiqué as well as articulate the increased ambitions of other G20 members in the run-up to COP27. Making the pledge more granular, in terms of specific pledges of official concessional and non-concessional finance and private capital to be mobilised by specific agencies, would introduce greater accountability into the pledge. Without such a scorecard, there is a risk that the US\$100 billion pledge will become akin to the 0.7% ODA target – aspirational but with little real commitment from many major donors.

Consolidating and delivering on the US\$100 billion pledge, and addressing the issues of allocation identified above, is an early priority for the G20. However, this is not enough. A clear signal that this is only the first step in a more ambitious programme of stepping up green finance would help to build credibility and commitment amongst developing countries that their voices are being heard.

We recommend that the G20 SFWG include in its annual report a stocktaking of progress towards the US\$100 billion climate pledge, both in terms of the aggregate amount and in terms of important disaggregation by geography and sector. The report could include issues for leaders to discuss.

We further recommend that a digital database of all cross-border activities supported by G20 members be established to improve transparency on what is being done by the G20 on green finance, in line with the Government of Indonesia's priority to track G20 commitments using digital

technologies. For example, several countries, including about half of the G20 members, already participate in the International Aid Transparency Initiative. An equivalent effort, but with participation from all G20 countries, narrowly focused on green finance, would generate up-to-date data in a standardised form. It would need to be extended to cover aid, non-concessional G20 bilateral flows, and mobilised private capital.

Such a database would build a stronger knowledge base on the scope and amounts of green finance that would shorten the current 2-year lag in reporting on official green finance to 1 year.¹ It would also provide opportunities to document the impact of the funds released under the US\$100 billion climate finance pledge and drive a learning agenda for donors and recipients alike.

Establishing a common knowledge platform, open to all, is critical for the G20 to scale up green finance. There are many ways to scale up, but three common features are focused attention, strategic planning and management, and resource allocation. The proposed knowledge platform would support each of these.

4. Increasing and Reallocating Climate-Related ODA

Although the G20 is not a forum for discussing ODA pledges, it could usefully underline the sense of its members that additional ODA remains central to the global green transition. Green bilateral public finance for climate change totalled US\$30 billion per year in 2018 and 2019. This would have to increase by at least 50% by 2025 as part of a package to finance green transitions on the scale required (Kharas and Dooley, 2021). Some countries, including the United Kingdom and the United States, have already agreed to double their bilateral commitments by around 2025, but more progress is needed.

ODA is a particularly valuable component of climate finance due to its concessional terms. At present, grants only constitute US\$16.7 billion, or slightly more than 20% of total climate finance. But the large gaps in climate finance are in precisely those areas where concessional assistance is needed most:

- for adaptation and resilience
- for land use system changes
- for vulnerable and low-income countries

ODA has one additional role. It can be a system multiplier. Green activities need to be coordinated and planned, and domestic institutions and policies strengthened, to ensure country ownership of the activities, including through technical assistance. Concessional finance is best suited for these purposes.

There are two implications of this assessment for the G20 to consider. First, because of its special nature, there should be a sub-target within the US\$100 billion climate finance pledge for

¹ The lag in ODA reporting on green finance is 2 years and on other aspects of green finance it is even longer and more ad hoc.

concessional finance. The G20, which has not traditionally been a forum for aid pledges, could nevertheless encourage other forums to negotiate and set such a sub-target.

The second implication is to discuss the way in which concessional climate-related finance, most of which emanates from G20 members, is allocated. Middle-income countries that are willing to move on ambitious green transition plans cannot access ODA for the institutional and technical support they need to move from political commitment to action.

Importantly, as already noted, climate-related ODA allocation discussions must be held in conjunction with discussions on boosting the volume of aid to remove any inference that funds are being taken away from low-income countries to support this new global agenda.

5. Enhancing the Role of IFIs

Multilateral development banks (MDBs) currently finance about US\$38 billion in climate finance to developing countries, of which about 40% is for adaptation and the rest is for mitigation projects (African Development Bank et al., 2021). MDBs have announced their intention to ramp this up to US\$50 billion per year by 2025, divided equally between adaptation and mitigation (OECD, 2021). In doing so, they can count on the specialised Climate Investment Funds they have developed. The MDBs face a number of headwinds, however.

Several MDBs are now starting to reduce the level of their overall lending, as a natural counterpart of the countercyclical expansion of their COVID-19 response. The International Bank for Reconstruction and Development (IBRD), for example, has a board-approved sustainable lending level of US\$25 billion per year through 2025, considerably less than the US\$35 billion it committed in 2021. Regional banks are also constrained, although to different degrees. Amongst the major MDBs, only the European Investment Bank, the Asian Infrastructure Investment Bank, and the New Development Bank appear to have sufficient capital headroom to scale up climate commitments to a significant degree.

In the medium term, recognising that climate finance requires investments over a period of decades, or more, all the MDBs will face capital constraints if they are to play a material role. There are opportunities to use capital more effectively, for example by asset sales, to retain profits as equity and reserves, and to refine capital adequacy frameworks. Some innovations, such as the credit line issued to the European Investment Bank by the European Central Bank, could be explored for other MDBs to free up capital – potentially, advanced economies could provide a liquidity backstop to IBRD using their surplus special drawing rights (SDRs) – and these innovations are worth additional study.

But such fine-tuning will not be sufficient to underpin the 3X expansion in MDB lending for green finance that is required. It must be accompanied by shareholder commitment to capital increases. The process through which new capital is raised for MDBs has been long, complicated, and undertaken institution by institution. Ensuring an appropriate contribution to climate finance will

require a more strategic process where the contours and ambitions for the system are outlined. Because of the time lags involved, it would be best to start this process as soon as possible.

Despite considerable efforts, MDBs have not been able to leverage their lending multiple times with mobilised private capital. In the forward-looking Climate Finance Delivery Plan, only US\$0.80 of private money is expected to accompany each US\$1.00 of MDB lending (OECD, 2017). Raising the mobilisation rates of MDB finance is a pressing concern. Blended finance has started to grow, reaching about US\$40 billion–US\$50 billion in recent years, and a larger pipeline of projects by the International Finance Corporation in particular is promising for further future growth, but efforts on this front must be accelerated.

6. Reallocating More SDRs to Accelerate Green Transitions

The US\$650 billion SDR allocation agreed in August 2021 created hopes that new resources could flow to developing countries. While SDRs were allocated in line with long-outdated quotas, rich countries have started rechannelling part of their allocation.

At this point, pledges remain timid and are only directed at International Monetary Fund (IMF) facilities. The Poverty Reduction and Growth Trust, which supports the delivery of the SDGs, is being enlarged by about US\$20 billion. In support of the green agenda, a new Resilience and Sustainability Trust (RST) is being established at the IMF, and the challenge is now to get it up and running with funding of about US\$50 billion. While other facilities at the IMF can be used to respond rapidly to climate disaster, the main goal of the RST should be to signal those fiscal mechanisms are in place to back NDCs, to encourage co-financing by MDBs and bilateral financing institutions.

To generate demand for RST funding, it will be important for access to be aligned with NDC needs, and for the new instrument to have minimal conditionality. In the current discussions, the question of conditionality looms large. But when NDCs are credible and legitimate, they should allow for some shifting of conditionality from Bretton Woods macro conditions to national parliaments, based on negotiations on how to build resilience conducted between national governments and the communities affected.

In the long run, a specialised institution, such as a Global Green Bank, may have to be created to generate the leverage that the RST cannot provide. The option of SDR reallocation to finance World Bank and regional development bank programmes should be developed.

A large SDR allocation to MDBs to finance the green agenda would allow green finance to move towards wholesaling. To date, climate finance has been allocated to specific projects. Project interventions will remain important – particularly in specialised domains that are best served by vertical funds, such as those related to biodiversity, capacity and institution building, or monitoring and evaluation. But as financial flows going to the green agenda become larger, increased reliance on wholesaling through country systems becomes necessary. Country platforms that focus on broad sector plans (transport, energy, construction, and land management), and that are financed in more wholesale ways, should become more prevalent. This would also dynamise

the process of setting up NDCs and improving them over time – which requires devising policy reforms and initiatives, building the needed institutions, constructing a pipeline of projects, and developing mutual accountability mechanisms between national stakeholders and the international community.

7. Expanding and Integrating Carbon Markets

New carbon sequestration reduces the effort needed to reach net zero. It can come from three sources: reforestation and avoided deforestation; avoidance or reduction of emissions such as methane from landfills; and technology-based removal of carbon from the atmosphere. The first forest-related source can be produced at much lower costs in some poor countries, and it could radically change the climate narrative – from viewing poor countries as victims (and focused solely on adaptation needs) to important actors in saving the planet (by actively sequestering carbon).

Projections by Climate Action show that Africa has enormous untapped potential in reforestation: if it could sell carbon removal at US\$50/ton, up to US\$15 billion of annual revenue could be generated on the continent, creating 35 million–86 million jobs, and enormous livelihood improvement in the process (Climate Action Platform Africa, n.d.). McKinsey suggests that at this price, annual global demand for carbon credits could reach 1.5–2.0 billion tons by 2030, and up to 7–13 billion tons by 2050 – i.e., about 10%–20% of the required reductions by 2050 (Blaufelder et al., 2021).

The market for offsets, however, is currently restricted to a shallow ‘voluntary market’, where buyers are firms that voluntarily offset their own emissions for corporate social responsibility reasons. Transactions tend to be over the counter at low and dispersed prices of US\$2–US\$10 per ton. The size of these operations was estimated at around 160 million tons in 2020 (at about US\$1 billion), but it is growing fast (by 70% in 2021) (UNFCCC REDD+, n.d.-a). Demand has been beefed up by global sector agreements, such as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

The inclusion of offsets in national markets would greatly expand demand. There have been two main constraints to this: first, policymakers need to be sure that these offsets have high enough quality (and are thus real). Second, they need an internationally recognised mechanism to count these as part of their own NDCs. There is now progress on both fronts, and room to consolidate and magnify the potential gains for developing countries to become large producers of carbon offsets.

On the first quality front, the worry relates to negative earlier experiences (especially under the Kyoto Clean Development Mechanism), which had pushed the European Union to outlaw forestry credits in its cap-and-trade programme due to concerns about their environmental integrity (Song and Moura, 2019). Since then, the growth of organised exchanges for voluntary offsets has pushed for the development of more disciplined standards based on four principles: additionality, permanence, verification, and measurability. These could extend to subnational exchanges – California has already proposed standards for forest offsets that it could accept in its ‘cap and

trade' carbon market (EDF, n.d.). Several standards certification agencies have emerged, such as REDD+, which certifies emissions reductions related to forestry (UNFCCC REDD+, n.d.-b).

Much progress has also been achieved on the second criterion of how to measure and attribute ownership to offsets that are traded. With the recent amendment of Article 6 of the Paris Agreement, it is now possible to account globally for carbon offsets (UNFCCC, 2015). The amendment has established a legally recognised way of crediting carbon credits to be used by the 193 parties to the Paris Agreement in determining their NDCs. This involves the upkeep of a global registry where countries' NDCs are kept, together with regular measurements of their actual emissions, with carbon trade netted out (UNFCCC, n.d.).

8. Dealing with Sovereign Debt

Green finance cannot evolve without confidence that countries will be able to maintain access to external credit, public and private. But currently, the need for green finance vastly surpasses the limits imposed by the creditworthiness of sovereign governments. Worse, the global urge to expand green finance is taking place at a time of mounting debt-servicing difficulties, which will be exacerbated by the expected tightening of monetary policy in the United States and the European Union. From a policy perspective, this makes it important to rapidly resolve the current debt overhang in ways that do not deter private flows in the future, and over time, to strengthen the financial architecture in ways that allow for closer global integration of capital markets. The Common Framework for debt treatment beyond the debt service suspension initiative needs to be refreshed in a way that encourages speedier debt resolution while dealing with more cases.

An expansive programme of green transformation will inevitably result in debt obligations that exceed the current thresholds used in debt sustainability analyses by credit rating agencies, the IMF, and the World Bank. This is because the thresholds place a premium on the analysis of liquidity rather than solvency. Where public investments in green transformation are high, there is a rise in public assets associated with the rise in public liabilities, and solvency may even be improved if projects are well executed. Many countries have successfully set up and used public wealth funds to finance infrastructure assets in particular. But doing this well requires an accounting approach that properly uses the International Financial Reporting Standards, rather than book value, as well as a management approach that prioritises a return on public assets (Detter and Fölster, 2018). A successful green transformation has the potential to substantially raise the value of local government land holdings.

The debt overhang is raising particular tensions amongst low- and middle-income countries, which, having struggled to cultivate capital market access (to offset their loss of access to ODA), resist being asked to restructure their private debts and jeopardise this access. Helping low- and middle-income countries to maintain market access should therefore be a priority. There are many technical options: swapping sovereign debt into long-term concessional green debt; the provision of partial risk guarantees by MDBs for new green debt, after restructuring; and debt claims that are more flexibly indexed to risk (such as state-contingent bonds). The G20 could develop a menu of those it is willing to support.

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