



Green Finance – The Road from Billions to Trillions

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Executive Summary

This paper is a longer version of a chapter in a collective book edited by Lili Yan Ing and Dani Rodrik for the Indonesian G20 Presidency. We thank the editors and reviewers of the chapter for their comments.

The G20 should enhance green finance along two parallel tracks: a short-term track that underlines the urgency of the situation and the need to accelerate now, and a medium-term track that recognises that green finance must be sustained over decades and therefore requires reform in the international financial architecture.

There are many promising evolving innovations in green finance, some of which are highlighted in this note. At this stage, we recommend that the G20 develop a process for advancing green finance that is credible and consistent with the scale and urgency of the challenge.

On the short-term track, the G20 could:

- Establish a digital database of all cross-border activities, supported by its members, initially with a focus on public finance but with the potential to expand to capture private finance later.
- Monitor progress towards the \$100 billion climate finance pledge in the G20 Sustainable Finance Working Group annual report and bring to leaders' attention any gaps, including in disaggregated areas such as adaptation.
- Encourage dialogue amongst advanced economy (AE) members on a sub-target for additional concessional finance for climate by 2025.
- Motivate expanded multilateral finance to permit more ambitious implementation of the nationally determined contributions (NDCs) by low- and middle-income countries.
- Reallocate, on a voluntary basis, surplus special drawing rights (SDRs) in a way that permits countries to expand fiscal space for NDC implementation in a leveraged way.
- Encourage a review of climate-related official development assistance allocations, in their own agencies and in multilateral agencies, to take into account the needs established in NDCs and the ability to prepare and execute quality green public activities.

On the medium-term track of reforming the international financial architecture, the G20 could:

- Encourage multilateral development banks (MDBs) to scale up their contribution to NDCs, including by helping to scale up country-owned, country-led green country platforms.
- Establish a long-term, forward-looking strategy of MDB capital adequacy, and encourage innovations to free up capital, such as backstop credit facilities, guarantees to reduce single borrower risks, and asset sales, along with a process for considering paid-in capital increments.
- Review principles for debt restructurings such that official and mobilised private green finance are not bound by the same comparable treatment rules as other forms of debt.
- Assess ways of de-risking privately mobilised green finance, including through the use of guarantees.
- Review regular issuance of SDRs to expand the fiscal space for NDC implementation.
- Review the potential for expanding and integrating carbon offset markets.

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 \$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 suggest 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 (AEs) 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.

A Path Forward – Consolidate the Base First

At COP15 in 2009, developed countries pledged to provide \$100 billion annually in climate finance by 2020. This pledge has been extended through 2025, but the most recent figures (2019 estimate of \$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 \$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 \$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 \$100 billion climate pledge, both in terms of the aggregate amount and in terms of important disaggregations 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 \$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.

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 \$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

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.

Dooley, 2022). 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 \$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 \$100 billion climate finance pledge for 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.

Enhancing the Role of IFIs

Multilateral development banks (MDBs) currently finance about \$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 \$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 \$25 billion per year through 2025, considerably less than the \$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 \$0.80 of private money is expected to accompany each \$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 \$40 billion–\$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.

Reallocating More SDRs to Accelerate Green Transitions

The \$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 rechanneling 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 \$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 \$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 that fiscal mechanisms are in place to back NDCs, in order 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 specialized 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.

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 much cheaper 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 \$50/ton, up to \$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 (McKinsey, 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 \$2–\$10 per ton. The size of these operations was estimated at around 160 million tons in 2020 (at about \$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.).

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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