



A GREEN DEAL FOR THE AMAZON

Sovereign Sustainability-Linked Bonds

BY MORITZ KRAEMER



**DEBT RELIEF FOR A GREEN &
INCLUSIVE RECOVERY**

ABOUT

A debt crisis is emerging in the Global South at the precise moment when substantial investment is needed to meet shared climate and development goals. Yet, the G20 Common Framework has been unable to engage all creditor classes or link debt relief to climate and development. The Debt Relief for Green and Inclusive Recovery (DRGR) Project, a collaboration between the Boston University Global Development Policy Center, Heinrich-Böll-Stiftung and the Centre for Sustainable Finance at SOAS, University of London, argues it is time for comprehensive debt reform. Utilizing rigorous research, DRGR seeks to develop systemic approaches to both resolve the debt crisis and advance a just transition to a sustainable, low-carbon economy in partnership with policymakers, thought leaders and civil society from around the world.

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EXECUTIVE SUMMARY

As deforestation progresses at a torrid pace, countries in the Amazon region are increasingly vulnerable to climate change and its potential negative economic impacts.

Tailored financial instruments can support incentives for conservation for both current and future governments in the Amazon region. Linking deforestation to debt service cost creates a clear financial incentive to policymakers to enforce national rules aimed at preventing deforestation.

Specifically, sovereign governments in the Amazon basin region could issue standardized sustainability-linked bonds (SLBs), wherein interest varies inversely with the progress made by the respective governments in reducing deforestation, thereby making conservation financially attractive for governments. It is important to note that SLBs are not an instrument to restructure debt and will not signal financial distress. Rather, government debt service costs will be linked to independently measured progress in reducing national deforestation rates, thereby enhancing the monetary value of the forest. Standardized issuance by different Amazon governments will enhance liquidity and reduce debt service costs further. If purposefully designed, SLBs will provide financial incentives to overcome the perceived short-term trade-off between conservation and development.

INTRODUCTION

The deforestation of the Amazon rainforest is progressing at a torrid pace. After a significant reduction of annual forest loss between 2004–2014, the area lost to deforestation has since increased continuously again. An estimated 1.98 million hectares (4.89 million acres) of forest were cleared in 2022, a 21 percent increase from 2021. It was the worst year for deforestation since 2004, according to Amazon Conservation's Monitoring of the Amazon Project (MAAP), which analyzed satellite readings from Global Forest Watch (Radwin 2023). This is more than one-third of the size of Belgium. Additionally, approximately one-fifth of the forest cover that existed in 1970 has permanently disappeared. In Brazil and Bolivia, the ratio of forest "transformation" and degradation is even higher than this regional average (RAISG 2022).

The Amazon region is especially vulnerable to climate change. The Amazon is the largest rainforest in the world and represents 40 percent of all remaining rainforest on the planet. As the Amazon is an important carbon sink, its gradual disappearance not only has serious consequences for the planet, but it also jeopardizes the economic prosperity of the countries sharing the Amazon. It has been suggested that 40 percent deforestation may be a "tipping point" beyond which forest loss causes local rainfall to decrease significantly, which would cause further forest loss and lasting reduction in land fertility (INPE 2011). While the world at large would bear the consequences of a continued reduction of forest cover in the Amazon region, direct deforestation is a more immediate threat to the Amazon countries' own climate and thus agricultural prospects.

It is therefore in the long-term economic interest of Amazon countries to protect the forest. However, in the short term the "transformation" of the forest can lead to increases in national wealth through farming or cattle raising, however unsustainable this increase in prosperity may be. Agricultural expansion is driving almost 90 percent of global deforestation, including 50 percent from expansion for cropland and 39 percent for livestock grazing (UN 2022). These orders of magnitude will also apply in the Amazon. Especially in poorer regions, the relative poverty of the population raises the rate at which future losses are discounted against present gains. This "time inconsistency" problem, wherein short-term interests outweigh long-term losses, conspires against conservation of the national natural habitat. To reverse the destructive trend towards deforestation, financial incentives must be strengthened to promote long-term national interests over short-term profiteering.

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PROPOSAL: SOVEREIGN SUSTAINABILITY-LINKED BONDS

Innovative financial instruments can incentivize the shift to long-term national interests that support financial stability and environmental sustainability. A first step would be the introduction of long-term sovereign sustainability-linked bonds (SLBs).

The central feature of SLBs would be to link annual levels of deforestation with debt service. The faster the reduction in forest loss rates, the lower the interest rate charged on the bond. Linking deforestation to debt service cost creates a clear financial incentive to policymakers to enforce national rules aimed at preventing deforestation. It also creates direct incentives to tighten deforestation restrictions, as every hectare of deforestation that is avoided reduces national debt service cost in the following period. If deforestation rates rise, the interest rate would rise accordingly. Optionally, the savings in interest payments through more effective conservation could be earmarked for improving the economic prospects of the local forest population, such as smallholders, subsistence farmers and Indigenous populations.

SLBs require three technical inputs:

- 1. Key Performance Indicators (KPIs)/Benchmarks:** A future rate of deforestation will be defined as a benchmark against which interest rates are priced. This benchmark rate of deforestation could, for example, be an extrapolation of past trends, or a moving-five-year average. If the pace of deforestation falls, so will the interest burden. If deforestation rises above the benchmark, the debt service burden will rise in proportion to the deviation from the benchmark. The sustainability KPI would be the reduced rate of deforestation, excluding forest set aside for carbon credits or covered by existing REDD¹ deals to avoid double counting.
- 2. Measurement:** It will be necessary to establish an independent mechanism for measuring conservation progress. This task cannot be done by national institutions or even the government itself, as it would pose a conflict of interest and undermine the credibility of the SLB mechanism from the outset. A supranational organization fully independent of the

¹ REDD stands for "Reducing emissions from deforestation and forest degradation in developing countries", an UN-sponsored program that aims to make forest conservation economically attractive.

issuing sovereign must be tasked with certifying progress, for example a relevant United Nations organization, such as the UN Department of Economic and Social Affairs (DESA) or the United Nations Forum on Forests (UNFF). The measurement of deforestation rates in period t should be done in $t+1$ to be effective for interest rate adjustments in $t+2$. Any longer lag would diminish the conservation incentives, especially if the period extends beyond governmental terms. In this case, progress made by one government would accrue to the next government, which may or may not be the same.

- 3. Elasticity:** The “elasticity” of the interest rate with respect to the deforestation rate is the crucial parameter to size the conservation incentive for the government. The higher this elasticity, the more leveraged the incentive to slow or even reverse deforestation. The incentive effect could be leveraged by introducing a progressive scale: at every given increment of forest conserved, the interest savings will rise in a non-linear way. In other words, the “reward” in terms of lower interest outlays grows more than proportionately to deeper cuts in deforestation rates.

Market acceptance of such sovereign SLBs could be promoted by the following:

- 1. Standardization:** The financial parameters (tenor, interest elasticity) of SLBs should be standardized across Amazon countries. This will enhance the familiarity with the concept for investors, which are often hesitant to buy beyond “plain vanilla” instruments. It will also foster a degree of competition between SLB-issuing Amazon sovereigns, as the respective interest savings of each country would be more easily comparable. Since turning around deforestation trends may take time to become effective, longer tenors seem most appropriate. This has the added advantage of locking in future governments, which may have a less constructive attitude towards forest conservation.

It may not be advisable to issue joint bonds by various sovereigns. The link between deforestation and interest savings would be diluted for each participating sovereign. Furthermore, rating agencies would apply a weak link approach, lowering the issue rating of a joint SLB to the lowest sovereign rating of any participating government. This would make the instrument unnecessarily expensive to service for the higher rated participating countries.

- 2. Sweeteners:** In the beginning, multilateral partners or philanthropic organizations can provide Brady-type sweeteners, such as rolling

interest guarantees, to incentivize participation and uptake. A possible blueprint is Ecuador's Social Bond guaranteed by the Inter-American Development Bank (IDB). In this example, the IDB guaranteed a \$300 million tranche of an overall \$400 million issuance (IDB 2020). The guaranteed part received a rating uplift to the IDB's issuer rating of AAA, while the remainder is rated at the level of the Republic of Ecuador. A more moderate guarantee provisioning (such as rolling interest guarantees) than in the Ecuadorian Social Bond case is likely for Amazon SLBs. Under current rating methodologies, this would probably not materially enhance the rating assigned to the SLB security, if at all. Even so, it could entice investors to endorse a hitherto non-existent asset class. Once the instruments are established, they should function without any external support on par with conventional sovereign bonds issued by the Amazon sovereigns.

- 3. Redemption:** The face value of the bond would remain unchanged throughout its lifetime to incentivise investors to buy SLBs. A reduction in the nominal value could deter investors, as they would have to write down the value of the bonds in their books, causing direct accounting losses to investors.
- 4. Twin Bonds:** SLBs could be issued alongside existing conventional bonds with identical tenor and base interest rate. This would allow to measure investors' assessment of the credibility of governments' conservation pledges. The more credible the anti-deforestation policies, the more expensive the conventional bond would trade in the market vis-à-vis its SLB twin bonds (a higher conventional bond price would equalize the yield with the lower expected yield of the SLB, due to above-benchmark conservation progress). To enhance the liquidity and investor acceptance of the SLB, a government can offer to exchange SLBs into conventional bonds (or vice versa) upon investor requests. This "twin bond" concept would be analogous to the innovative design applied by the debt management office of the Federal Republic of Germany for its green bonds (Federal Republic of Germany – Finance Agency).
- 5. Debt Swaps:** Amazon governments could offer to exchange at market conditions existing plain vanilla sovereign bonds (other than twin bonds) for SLBs to increase the circulating volume of SLBs and therefore improve the liquidity of the instruments. The expected net present value (NPV) of the existing conventional bond and the SLB should be equivalent, lest rating agencies consider it a distressed debt exchange and thus tantamount to a sovereign default.

A few caveats apply. First, SLBs would not be an exercise in a debt reduction and should not be associated with a government in financial distress. Second, SLBs are not the same as green bonds. The issuance receipts can be earmarked for “green” expenditure, but this is optional. Nevertheless, SLBs are likely to attract the growing band of environment, social and governance (ESG) investors, as SLBs evidently contribute to the UN 2030 Sustainable Development Goals (SDGs), Goals 13 (Climate Action) and 15 (Reverse Land Degradation) in particular (UN DESA n.d.), and promote conservationist policies through their embedded incentive structure. As “greenwashing” scandals become more frequent (Furness and Jessop 2023), the scarcity of “sustainable” or “green” instruments will mount, making SLBs relatively more attractive for investors with ESG mandates.

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CONCLUSION

Financial engineering can be used to support government efforts to protect the Amazon rainforest. Purposefully designed SLBs will provide financial incentives to overcome the perceived short-term trade-off between conservation and development. Government debt service costs will be linked to independently measured progress in reducing national deforestation rates, thereby enhancing the monetary value of the forest. Standardized issuance by different Amazon governments will enhance liquidity and reduce debt service costs further. Importantly, SLBs are specialized sovereign issuance and can be implemented independently of sovereign debt restructuring efforts. If SLBs were linked to debt swaps including debt relief, the related stigma would reduce the chances of broader adaptation by issuers and limit the attractiveness for investors.

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