Can Debt-for-Climate Swaps Help Heavily Indebted Developing Countries Address Climate Priorities?

By Gautam Jain, Luisa Palacios, and Harry Verhoeven

Rising debt levels and the ravages wrought by climate change present acute threats to achieving sustainable development goals in emerging market and developing economies (EMDEs).\(^1\) The external debt stock of developing countries surpassed $10 trillion in 2020.\(^2\) Almost 60 percent of the world’s poorest countries are either in or at high risk of debt distress.\(^3\) Soaring debt undermines governments’ ability to respond to external shocks such as climate disasters, the toll of which has been mounting: from the devastating 2022 floods that tormented Pakistan to six successive failed rainy seasons in the Horn of Africa.\(^4\)

Policymakers globally are discussing possible mechanisms to address fiscal and climatic challenges in EMDEs simultaneously.\(^5\) Debt-for-climate swaps—also referred to as debt-for-nature swaps\(^6\)—are one such arrangement, in which creditors provide debt relief and, in exchange, sovereigns commit to specific conservation efforts.\(^7\) The intuition behind such complex deals is that, by freeing up fiscal space for environmental protection and so-called nature-based solutions in EMDEs, some of the climate-related challenges faced by capital-scarce countries can be confronted in coordination with those possessing ample capital.\(^8\) This proposition is particularly attractive if it can help unlock new and additional funding for climate adaptation projects, which typically do not generate attractive financial returns but are nonetheless a priority for most EMDEs, including many African states.\(^9\)

Debt-for-climate swaps can be classified into two broad types: “bilateral” or “multilateral” debt swaps, which are negotiated directly with one or more official creditors, and “tripartite” debt swaps, which involve three parties: creditors, sovereigns, and conservation organizations.

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swaps, in which a sovereign buys back its bonds from private investors to retire them with the help of a loan from a third party.\textsuperscript{10} These swaps have three important elements. First, either all or part of the existing debt is repurchased at a discount using a loan. Second, new bonds are issued at an interest rate below the market rate for the country with the support of a guarantee from a highly rated institution, thus providing fiscal savings. And third, the sovereign commits to use part of the savings toward conservation activities typically targeted to climate adaptation and biodiversity preservation.

After the first debt-for-climate swap was executed by Bolivia in 1987, more than 100 similar transactions were engineered during the 1980s and 1990s, but numbers peaked in 1993 and were followed by a sharp decline.\textsuperscript{11} A recent revival has taken place, with several sovereigns successfully executing such swaps:\textsuperscript{12} Seychelles in 2015 (blue bond issued in 2018), Belize in 2021, Barbados in 2022, and Ecuador and Gabon in 2023.\textsuperscript{13}

While the number of deals annually does not compare with the early 1990s, the recent batch of executed swaps makes up for the lower number by the size of debt covered.\textsuperscript{14} Indeed, Ecuador’s debt swap of $1.6 billion has spurred considerable interest in the instrument: more than 50 developing countries are presently either in debt distress or at high risk of an imminent debt crisis, many of which—including Cabo Verde, Eswatini, Gambia, Kenya, Pakistan, and Sri Lanka—are contemplating debt-for-climate swaps to achieve debt relief and create fiscal space.\textsuperscript{15}

In this commentary, the authors find that intrinsic features and the experience so far of debt-for-climate swaps suggest they could become a valuable tool—even if they are no silver bullet and may need to be complemented by additional instruments—to address fiscal and environmental problems. These swaps offer a realistic option to help, for example, vulnerable small island developing states (SIDS) respond to specific challenges\textsuperscript{16} and can become an innovative mechanism to channel additional capital to certain EMDEs while anchoring climate commitments.

**Key Features of Debt-for-Climate Swaps**

To better understand the scalability and applicability of debt-for-climate swaps, it is worthwhile to derive lessons from recent deals (see Appendix for details). Key aspects of these transactions are:

- **Credit enhancements:** Arguably the most critical feature of these swaps for investors, as well as for the sovereign, is the extent of the guarantee or insurance provided by a third party. In all deals, the new bond’s principal was either fully or partially guaranteed (or insured) by highly accredited institutions. Additional credit enhancement features were also sometimes included; for example, a loan was extended to Seychelles on attractive terms to lower its interest payment burden. Not surprisingly, the new bonds issued as part of the swaps carry high
investment-grade ratings. Such credit enhancements were crucial in attracting investors to the new bond offerings by sovereigns facing debt distress, which otherwise would be difficult. Moreover, the improved credit rating can sometimes even entice investors who typically do not buy EMDE bonds, thus diversifying the issuer’s investor base. In addition, for the sovereign, the guarantee results in lower coupon payments, leading to fiscal savings.

- **Approach for retiring old debt:** Three different approaches were used to retire existing debt in the recent deals. First, the case of Seychelles involved bilateral negotiations, which are typically not complicated because the money is owed to a few developed countries. Second, in Belize, the goal was to retire one bond in its entirety. Doing so necessitated negotiations with external commercial bondholders, which are invariably more complex given the number of investors involved and the minimum threshold of investors needed to participate. Finally, the transactions for Barbados and Ecuador involved buying back part of the existing bonds via auctions. The approach was much simpler than Belize’s since the success of the transaction was not conditioned on the retirement of outstanding bonds. Barbados repurchased roughly 15 percent each of an external bond and a domestic bond, the former via a modified Dutch auction and the latter via an option that the government had to buy it back. The Ecuadorian government announced a buyback tender for the outstanding bonds via a modified Dutch auction and managed to retire approximately 10 percent of them. In a signal that this approach has now become the norm, Gabon launched a tender to buy up to $450 million of its government bonds to eventually swap them into a new bond.

- **Fiscal savings achieved:** The reduction in the notional amounts of bonds following debt-for-climate swaps varied considerably, with almost no change in Barbados to as much as a 60 percent reduction in Ecuador. In the latter case, bonds traded at significantly distressed levels, enabling large savings in terms of the future amount owed. All deals significantly reduced interest payments, which is critical to begin restoring debt sustainability. These fiscal savings were a function of the price at which old bonds were trading before being retired, the guarantee provided, and investor demand for the new bonds.

- **Conservation commitments and governance structures:** In all four deals, the new instrument was labeled a “blue bond” because at least part of the funds unlocked by the swap via debt relief and reduced interest payments go toward marine conservation and promotion of the marine economy—for example, expansion of marine protected areas and better management of priority fisheries in Seychelles. Although these blue bonds appear to be a type of thematic bond, they do not fall under either of the two broad categories of such bonds: use-of-proceeds bonds, in which funds are earmarked for specific projects, or those based on key performance indicators. As such, there are no specific requirements for how the proceeds of blue bonds are
allocated toward conservation projects. While the entire amount raised from the Seychelles blue bond was allocated for such purposes, in Barbados it was only about a quarter of the proceeds and roughly half each for Belize and Ecuador. Such a wide variation was possible because no blue bond principles have been defined yet. As such, an integral component of all transactions was the creation of independent bodies to oversee the execution of environmental commitments, with support from intermediaries involved in the deals. (The governance structures created in the four deals are delineated in the Appendix.) Another important feature of the four swaps was that, by protecting the ocean to support livelihoods and biodiversity, the funds were primarily directed toward climate resilience and adaptation projects, which are more difficult to finance.  

Challenges to Broad-Brush Applications

Following the completion of the debt-for-climate swap by Seychelles in 2018, the Nature Conservancy—which played a pivotal role in this deal and others that followed—estimated that a similar model could apply to up to 85 countries. The mere handful of deals completed since then underlines their complexity and the challenges faced in executing them.

A seminal International Monetary Fund paper argues that debt-for-climate swaps are superior to alternatives only in narrow settings: they are better than conditional grants only if they are structured in a way that makes climate commitments senior to debt service, and they surpass comprehensive debt restructuring only if they lower debt risks without economic disruptions.

Several barriers may impede the successful execution of a debt-for-climate swap:

- **Lack of political commitment:** Since credit enhancements are necessary for a deal to succeed, it is imperative that the international institution providing the guarantee is convinced by a state’s pledge to rebuild its fiscal position and execute ambitious conservation policies. Without strong, high-level political commitments by the sovereign, external partners may be unwilling to provide this guarantee.

- **Hesitancy by sovereign states:** Some governments may not see the merits of spending on environmental objectives amid a debt solvency or liquidity crisis, which may be a more immediate determinant of their political future. Additionally, while they could realize long-term savings on interest payments, swaps entail complex and time-consuming negotiations as well as high transaction costs for sovereigns, which may increase political pressure on the government. Finally, many developing states are sensitive to infringement of their sovereignty and may not be comfortable with external organizations either enforcing environmental
commitments or directing the creation of independent bodies to ensure conservation targets are met.\textsuperscript{32}

- **Balance sheet limitations:** While as much as $2 trillion of debt has been identified as potentially eligible for debt-for-climate restructuring,\textsuperscript{33} there are practical considerations that may limit that. If the principal on the new bond needs to be close to fully guaranteed, the combined balance sheets of development banks and development finance institutions will only cover so much of the outstanding debt of a sovereign or only extend to governments with low amounts of debt.

- **Limited investor appeal:** The combination of a high coupon and an investment-grade rating may entice some investors to the new bond, but others may balk at its illiquidity and the complexity of the arrangement. Other factors constraining the allure of debt-for-climate swaps include only partial redirection of realized savings toward conservation spending, limited ability to legally enforce conservation pledges, remaining fiscal risks in the absence of a comprehensive debt restructuring, and conceding part of the financial return for a nature-based solution.\textsuperscript{34}

### Considerations for Swaps

Despite the challenges, interest in debt-for-climate swaps is growing, as mentioned earlier, raising the question of under what circumstances and for what types of sovereigns and debt profiles they could be most applicable. Elements for consideration could include:

- **Degree of debt distress:** Recent transactions have either been carried out by sovereigns under intense debt distress (Belize), some level of debt distress (Ecuador), or normal financing conditions (Barbados). None of these states were in default. The applicability of debt-for-climate swaps for sovereigns in default is more complex given the need to first address the insolvency problem.\textsuperscript{35} Nevertheless, even in a restructuring scenario, a debt-for-climate swap might have a role, but as part of a menu of options.\textsuperscript{36}

- **Importance of conservation efforts:** De-risking these instruments implies using the balance sheets of bilateral partners and multilateral organizations, which poses limits on the amount of debt that can be guaranteed. As such, a couple of considerations are: (1) how critical the environmental priorities financed by the debt-for-climate swaps are to the sovereign’s fiscal outlook and (2) how relevant they are to global biodiversity and conservation goals. These factors might facilitate assessing whether debt-for-climate swaps are the most appropriate instrument, or whether other climate financing tools (for example, thematic bonds or conditional loans or grants) could be a better fit. These criteria might also affect their
marketability to private investors. For example, conservation of Ecuador’s Galápagos Islands and Belize’s coral reefs benefit these countries economically via tourism while also protecting biodiversity assets of global significance.

- **Credibility of a country’s institutions:** While the issuance of debt-for-climate swaps could reinforce climate governance, their success requires strong institutional commitments in the use of proceeds for the specific conservation goal. Therefore, eligibility for such transactions could depend on a sovereign’s willingness to agree to the appropriate governance structures and participatory practices to ensure the proper use of proceeds, transparency, and accountability vis-à-vis both external stakeholders and domestic populations. Such institutional structures are paramount to the credibility of the transaction and its ultimate contribution to fiscal sustainability and environmental priorities.

## Conclusion

Debt-for-climate swaps will not solve the widening crisis of indebtedness facing EMDEs, nor are they game-changers for the difficulties these countries face in attracting appropriate financing for climate mitigation and adaptation projects. That said, as this commentary has argued, under the right conditions debt-for-climate swaps can help particular subcategories of vulnerable states find new financing for environmental priorities while protecting livelihoods and improving a country’s fiscal outlook. It is no coincidence that climate-vulnerable and heavily indebted SIDS—such as Barbados and Seychelles—have been among the keenest adopters of the mechanism, as it provides these states with hitherto unavailable resources for adaptation projects that focus on combating oceanic biodiversity loss and supporting the livelihoods of coastal communities. Similar spending priorities associated with swap commitments have been on evidence in Belize, Ecuador, and Gabon, where the focus has been on the blue economy and marine conservation projects—the latter pose considerably fewer governance challenges than, for example, limiting deforestation in the world’s rainforests in terms of monitoring compliance with the swap’s conservation goals. Debt-for-climate swaps have thus been quite effective in directing funds toward climate adaptation projects.

Moreover, debt-for-climate swaps—as opposed to straightforward debt restructuring, for example—have an important signaling function for sovereigns to underline their commitment to both environmental and fiscal goals. As such, they can also be valuable for building institutionalized partnerships and ensuring accountability vis-à-vis investors, international organizations, and domestic populations.
# Appendix

## Table A-1: Key features of recent debt-for-climate swaps

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Instrument</th>
<th>Tenor (years)</th>
<th>Coupon</th>
<th>Rating</th>
<th>Currency</th>
<th>Type</th>
<th>Size (mm)</th>
<th>Debt restructured</th>
<th>Savings/haircut (mm/%)</th>
<th>Nature conservation</th>
<th>Guarantee/insurance</th>
<th>Guarantor/insurer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seychelles</td>
<td>2015</td>
<td>Blue bond (issued in 2018)</td>
<td>10</td>
<td>6.5%</td>
<td>None</td>
<td>USD</td>
<td>Private placement</td>
<td>$15.0</td>
<td>$21.6</td>
<td>$6.6 / 31%</td>
<td>$15.0</td>
<td>$5 + $5 loan to subsidize coupons</td>
<td>World Bank + GEF</td>
</tr>
<tr>
<td>Belize</td>
<td>2021</td>
<td>Blue loan/blue bond</td>
<td>20</td>
<td>Step-up: 3.0%–6.1% (loan); 1.6%–4.5% (bond)</td>
<td>Aa2</td>
<td>USD</td>
<td>Syndicated to institutional investors</td>
<td>$364.0</td>
<td>$553.0</td>
<td>$199.0 / 34%</td>
<td>$180.0</td>
<td>$364 political risk insurance + catastrophe insurance</td>
<td>DFC</td>
</tr>
<tr>
<td>Barbados</td>
<td>2022</td>
<td>Blue loan/blue bond</td>
<td>15</td>
<td>3.8% (loan); 4.4% (dollar bond)</td>
<td>Aaa (Class A) and Aa2 (Class B)</td>
<td>50% USD + 50% BBD</td>
<td>Syndicated to institutional investors</td>
<td>$146.5</td>
<td>$150.7</td>
<td>$4.2 / 3%</td>
<td>$40.0</td>
<td>$150 + natural disaster and pandemic clause</td>
<td>IDB + TNC</td>
</tr>
<tr>
<td>Ecuador</td>
<td>2023</td>
<td>Blue bond (&quot;Galapagos Bond&quot;)</td>
<td>18.5</td>
<td>5.6%</td>
<td>Aa2</td>
<td>USD</td>
<td>New debt issued in market</td>
<td>$656.0</td>
<td>$1,630.0</td>
<td>$974.0 / 60%</td>
<td>$323.0</td>
<td>$85 + $656 political risk insurance</td>
<td>IDB + DFC</td>
</tr>
</tbody>
</table>


Notes


6. There is a slight distinction between debt-for-climate swaps and debt-for-nature swaps in that the former arrangement aids climate action while the latter protects nature. However, since most swaps direct fiscal resources toward both activities, the terms are used interchangeably.


12. See Appendix for sources.


17. Since Seychelles’ blue bond was sold to three investors via private placement, it was not rated.


19. Isabelle Gerretsen, “The Deal that Saved Seychelles’ Troubled Waters,” BBC Future, August


21. In Belize’s case, the participation of more than 75 percent of holders of its bonds allowed for the amendment of the existing bonds.


33. Ibid.

34. Ibid., Jain et al. (2023), Kearse (2023), and Kenza Bryan and Joe Daniels, “UK Fund Giant L&G Bets on Ecuador’s Galápagos Debt Experiment,” Financial Times, May 24, 2023, https://www.ft.com/content/e895761d-63c6-44e7-84d8-ca6dd89a6a20.

35. Chamon et al. (2022).


38. Many countries facing debt distress or default with urgent climate needs could potentially be candidates for these instruments if it were not for their governance challenges. One example is Venezuela, a country under authoritarian rule facing a complex humanitarian crisis and severe environmental issues of global significance. Were political conditions to radically change, Venezuela could be a candidate for such a transaction—as part of a comprehensive debt restructuring program—given the urgent need to protect and restore the country’s Amazon region which, has experienced rapid deforestation. See Gideon Long, “Venezuela’s


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