Innovative Financial Instruments for Climate Action: Challenges and Opportunities of Debt for Climate Swaps in Latin America

Instrumentos financieros innovadores para la acción climática: Desafíos y oportunidades de los canjes de deuda por clima en América Latina

José Fernández Alonso¹ p Patricio Yamin²

https://doi.org/10.32719/26312549.2023.23.3

Recibido: 7 de mayo de 2024 | Revisado: 12 de agosto de 2024 | Aceptado: 18 de noviembre de 2024

Abstract

Sovereign debt crisis and accelerating climate change have emerged as deeply interconnected global challenges. The fiscal impact of the COVID-19 pandemic and the economic fallout from the Ukraine war have pushed public debt to historic highs, while the frequency and severity of climate disasters continue to intensify. These converging crises disproportionately affect developing countries, spurring renewed attention to debt-for-climate action swaps as a potential policy solution. This article presents a comprehensive analysis of such debt swap mechanisms, drawing on an original dataset spanning from their inception in the late 1980s to present-day initiatives. We focus particularly on Latin America, a region that offers valuable insights given its extensive experience with both sovereign debt crises and debt-for-nature swaps, coupled with its high vulnerability to climate change impacts.

Keywords: debt for climate swaps, climate change, Latin America, adaptation, mitigation

² Magíster en Relaciones Internacionales. pyaminvazquez@udesa.edu.ar. Para citar este artículo: Fernández, José Alonso, and Patricio Yamin. "Innovative Financial Instruments for Climate Action: Challenges and Opportunities of Debt for Climate Swaps in Latin America". Comentario Internacional 23 (2023): 53-80.



Doctor y licenciado en Relaciones Internacionales, josefernandezalonso@conicet.gov.ar.

Resumen

Las crisis de deuda soberana y el cambio climático han emergido como desafíos globales profundamente interconectados. El impacto fiscal de la pandemia del COVID-19 y las consecuencias económicas de la guerra en Ucrania han elevado la deuda pública a niveles históricos, mientras que la frecuencia y la severidad de los desastres climáticos continúan intensificándose. Estas crisis convergentes afectan de manera desproporcionada a los países en desarrollo, al generar un renovado interés en los canjes de deuda por acción climática como una potencial solución política. Este artículo presenta un análisis exhaustivo de dichos mecanismos de canje de deuda, sustentado en una base de datos original que abarca desde sus inicios en los años 80 hasta las iniciativas actuales. Nos enfocamos particularmente en América Latina, una región que ofrece valiosas perspectivas dado su amplia experiencia tanto en crisis de deuda soberana como en canjes de deuda por naturaleza, junto con su alta vulnerabilidad a los impactos del cambio climático.

Palabras clave: canje de deuda por acción climática, cambio climático, América Latina, adaptación, mitigación

Introduction

The outbreak of the COVID-19 pandemic exacerbated global vulnerabilities in many political, social, and economic arenas. This has particularly been the case with sovereign debt. In effect, during 2020 the level of public debt registered its highest peak since the Second World War.³ In this context, the global public debt ratio jumped to a record 99 percent of GDP, all of which involved 40 percent of the total world debt.⁴ The Russian invasion of Ukraine and its consequent impacts on the rising of food and energy prices heightened the tightening of international financial conditions and the aforementioned trends in global sovereign debt.⁵

Although a systemic phenomenon, the aggravation of public debt parameters did not affect all States equally. In developed countries, public debt rose by 19 percentage points of GDP during 2021,⁶ enabling them to cope with fiscal challenges resulting from the pandemic crisis. As regards developing countries, the sovereign debt/GDP ratio continued its upward trajec-

³ Vitor Gaspar, Paulo Medas and Roberto Perrelli, "Global Debt Reaches a Record \$226 Trillion", IMF Blog, December 15th, 2021, https://tinyurl.com/nhztcf3y.

⁴ International Monetary Fund (IMF), "Global Debt Database", *International Monetary Fund*, accessed May 12th, 2025, https://tinyurl.com/rcrhnw2u.

⁵ UN Global Crisis Response Group, "Global Impact of War in Ukraine on Food, Energy and Finance Systems", Global Crisis Response Group, April 13th, 2022, https://tinyurl.com/mrnzz7n8.

⁶ Gaspar, Medas and Perrelli, "Global Debt".

tory, but at a lower level than that recorded in developed countries. As stated by Gaspar et al.

Emerging markets (excluding China) and low-income countries accounted for small shares of the rise in global debt, around \$1-\$1.2 trillion each, mainly due to higher public debt. Nevertheless, both emerging markets and low-income countries are also facing elevated debt ratios driven by the large fall in nominal GDP in 2020.⁷

In light of the foregoing, it should be noticed that in a context of low growth, greater uncertainty, and inflationary pressures, debt market operators adopted a conservative position, all of which has increased structural imbalances in international financial access and capacities to service and repay public debt. Moreover, the projections regarding the speed of recovery are clearly different: while developed economies will have managed to recover by 2023, production in developing countries will still be 4% below pre-pandemic levels, reaching a 7.5% and 8.5% downfall in fragile and island states, respectively. In short, public debt levels in developing countries have become comparable to those that prevailed during the crises of the mid-1980s and 1990s.

Considering the chronic vulnerabilities of low-income countries (LICs) in public borrowing, the core of institutions of the international financial architecture -the Group of Twenty (G20), the International Monetary Fund (IMF) and the World Bank (WB)- have pursued different initiatives, such as the Debt Service Suspension Initiative (DSSI) and Common Framework for Debt Treatments. However, these institutional responses did not provide a comprehensive response for developing countries as a whole. In fact, most of the debt service burden falls not on the least developed countries, but on upper-middle-income ones, reaching 70% of the total. As a corollary of the deterioration of the international financial conditions and the inconsistency

8 IMF, World Economic Outlook: Managing Divergent Recoveries (Washington DC: IMF, 2021), https://tinyurl.com/mvwm3hyj.

⁷ Ibid.

World Bank, "Global Growth to Slow through 2023, Adding to Risk of 'Hard Landing' in Developing Economies", World Bank Group, January 11th, 2022, https://tinyurl.com/fhf9pzhy.

¹⁰ Kristalina Georgieva and Ceyla Pazarbasioglu, "The G20 Common Framework for Debt Treatments Must Be Stepped Up", IMF Blog, December 2nd, 2021, https://tinyurl.com/y59ypdwh.

¹¹ Homi Kharas and Meagan Dooley, COVID-19's Legacy of Debt and Debt Service in Developing Countries (Washington DC: Center for Sustainable Development at Brookings Institution, 2020), 4.

of comprehensive institutional responses, most of middle-income developing had to deepen unsustainable social and economic measures to cope with the pandemic crisis.

In this context, climate action, both in terms of adaptation and mitigation, has been strongly affected. This setback not only negatively affects global efforts to tackle climate change but also the capacities of lower-income states to develop and face negative climate impacts, creating a vicious circle of economic instability and climate vulnerability. In this regard, it is important to note that these processes have worsened most of climate change indicators. According to the US National Oceanic Atmospheric Administration (NOAA), in November 202,3 the concentration of parts of carbon dioxide in the atmosphere peaked at 421 parts per million.¹² Meanwhile, the World Meteorological Organization (WMO) reported that 2023 would be the warmest year on record, with the global average near-surface temperature at 1.45 Celsius (with a margin of uncertainty of ± 0.12 °C) above the pre-industrial baseline. ¹³ Additionally, it also stated that in 2023, "the global mean sea level reached a record high in the satellite record (since 1993), reflecting continued ocean warming as well as the melting of glaciers and ice sheets". 14 These phenomena have led to a proliferation of extreme weather and climate events such as major floods, cyclones, extreme heat and drought, and associated wildfires, which have increased economic costs and heightened the vulnerability of developing countries.

The idea of an existing correlation between debt crisis and environmental degradation has been extensively studied for decades.¹⁵ In recent years,

¹² US Global Monitoring Laboratory, "Trends in CO₂, CH₄, N₂O, SF₆", Global Monitoring Laboratory, accessed May 12th, 2025, https://tinyurl.com/6mnt985c.

¹³ WMO, "2023 Shatters Climate Records, with Major Impacts", World Meteorological Organization, November 30th, 2023, https://tinyurl.com/2s4t5s72.

¹⁴ Ibid

¹⁵ Thomas Lovejoy, "Aid Debtor Nations' Ecology", The New York Times, October 4th, 1984, https://tinyurl.com/5n8pubsb; L. P. Greener, "Debt-for-Nature Swaps in Latin American Countries: The Enforcement Dilemma", Connecticut Journal of International Law 7 (1991), https://tinyurl.com/3xsas7u8; Karin Theophile, Debt-for-Nature Swaps and Alternative Financial Instruments for Financing Environmental Programs (Washington DC: US Department of Agriculture Forest Service, 1994); Matthias von Bechtolsheim, "Debt for Nature Swaps in German Financial Co-Operation", KfW Entwicklungsbank, 2004, https://tinyurl.com/5n8kspxy; Danny Cassimon, Martin Prowse and Dennis Essers, "The Pitfalls and Potential of Debt-for-Nature Swaps: A US-Indonesian Case Study", Global Environmental Change 21, n.° 1 (2011), https://doi.org/10.1016/j.gloenvcha.2010.10.001; Catherine Kilbane Gockel and Leslie Gray, "Debt-for-Nature Swaps in Action: Two Case Studies in Peru", Ecology and Society 16, n.° 3 (2011), https://tinyurl.com/3b428y83; Robert Weary, "Financing Action on Climate Adaptation in Small Island Developing States (SIDS) via Debt-for-Adaptation Swaps, a Global Approach", The Nature

however, numerous studies have been published specifically addressing the link between debt and climate change. Within this context, this paper seeks to contribute to the debate on potential solutions and opportunities to break the vicious circle in Latin America and the Caribbean by addressing previous utilization of debt-for-nature swaps.

Based on the notion of a mutually reinforcing linkage between sovereign debt and climate change crises, different initiatives have been recently conceived to promote debt swaps for climate actions.¹⁷ Although they can take a variety of forms, depending on the number of stakeholders involved and the nature of the debt affected, debt-for-climate swaps are generally defined as a restructuring process in which a creditor -official and/or private- cancel or forgive a certain amount of foreign debt owed by a developing country in return for allocation of resources in local currency for adaptation or mitigation projects to be conducted in the debtor nation.¹⁸ Some of these initiatives have become

Conservancy, 2012; Barry Spergel, "Reducing Debt in Small States: Is There a Role for Debt-for-Nature Swaps?", internal consultant report for the World Bank, 2014; Rei Odawara, "Debt for Nature Swaps in Small States", internal staff report for the World Bank, 2014.

Tobias Haque et al., Addressing Debt Vulnerabilities in Small States: The Potential Role of New Financing Instruments (Washington DC: World Bank, 2002), https://tinyurl.com/59jh89er; Adrian Fenton et al., "Debt Relief and Financing Climate Change Action", Nature Climate Change 4 (2014), https://doi.org/10.1038/nclimate2303; Pervaze Sheikh, "Debt-for-Nature Initiatives and the Tropical Forest Conservation Act: Status and Implementation", Congressional Research Service, July 24th, 2018, RL31286; Romina Picolotti et al., Debt-for-Climate Swaps (Washington DC: Institute for Governance & Sustainable Development, 2020), https://tinyurl.com/2mwwcmky; Dennis Essers, Danny Cassimon and Martin Prowse, "Debt-for-Climate Swaps: Killing Two Birds with One Stone?", Global Environmental Change 71 (2021), https://doi.org/10.1016/j.gloenvcha.2021.102407; Patrycja Klusak et al., "Rising Temperatures, Falling Ratings: The Effect of Climate Change on Sovereign Creditworthiness", Management Science 69, n.º 12 (2023), https://doi.org/10.1287/mnsc.2023.4869.

¹⁷ Travis Mitchell, Debt Swaps for Climate Change Adaptation and Mitigation: A Commonwealth Proposal (London: Commonwealth Secretariat, 2015), https://doi.org/10.14217/5js4t74262f7-en; Ulrich Volz et al., Debt Relief for a Green and Inclusive Recovery: A Proposal (Berlin: Heinrich-Böll-Stiftung / School of Oriental and African Studies-University of London / Boston University, 2020); Paul Steele and Sejal Patel, Tackling the Triple Crisis: Using Debt Swaps to Address Debt, Climate and Nature Loss Post-COVID-19 (London: International Institute for Environment and Development, 2020), https://tinyurl.com/3wpfvs9n; Essers, Cassimon and Prowse, "Debt-for-Climate Swaps"; Mengdi Yue and Christoph Nedopil Wang, "Debt-for-Nature Swaps: A Triple-Win Solution for Debt Sustainability and Biodiversity Finance in the Belt and Road Initiative", Green Finance & Development Center, February 1st, 2021, https://tinyurl.com/535reext; Andrés Arauz, Carlos Larrea and Jesús Ramos, Proposal for a Debt-for-Nature Swap with China (Ciudad de México: Centro de Estudios China-México-Universidad Nacional Autónoma de México, 2022), https://tinyurl.com/4338aree.

¹⁸ Brijesh Thapa, "Debt for Nature Swaps: An Overview", International Journal of Sustainable Development and World Ecology 5 (1998), https://doi.org/10.1080/13504509809469990; Srijesh Thapa and Brijesh Thapa, "Debt-for-Nature Swaps: Potential Applications in Nepal", International Journal of Sustainable Development and World Ecology 9, n.° 3 (2002), https://doi.org/10.1080/13504500209470120.

effective -as in the renowned cases of Seychelles, Belize, Barbados, Ecuador, and Perú, while others lost their momentum shortly after being launched. In recent years, new proposals have been echoed in various multilateral forums related to climate negotiations -the Conferences of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC)- as well as in those aimed at reforming the international financial system, such as the convened by France in Paris during June of 2023.¹⁹

This article analyzes the recent history and initiatives of debt swaps for climate action, with a particular focus on Latin America. This region has a long history of sovereign debt crises, vulnerability to climate change, and considerable experience in debt for nature swaps. To achieve this goal, we proceed in two steps. First, we discuss the case for debt-for-climate swaps in the context of debt and climate crises. Second, we analyze the history and current state of agreements and initiatives. For that purpose, we built a dataset on debt for nature swaps, covering agreements from the late 1980s to climate action initiatives in 2023. A total of 149 swaps have been identified and analysed. They cover 39 debtor countries around the world. Finally, we present our concluding remarks.

Debt for climate swaps: an initial overview

Undoubtedly, the starting point in the path of the relevance of these instruments necessarily refers to the recognition of convergent crises that tend to reinforce each other. As expressed by Chamon *et al*.

climate change can exacerbate debt vulnerabilities by adversely impacting countries' productive capacity and their tax base, creating fiscal costs (including for reconstruction after natural disasters) and making external borrowing more expensive. On the other hand, debt problems reduce fiscal space for climate mitigation and adaptation investments and hence exacerbate climate change and/or the adverse implications of climate change.²⁰

¹⁹ Nouveau Pacte Financier Mondial (NPFM), "Summit for a New Global Financing Pact", Mission Permanente de la France Auprès des Nations Unies à New York, November 30th, 2023, https://tinyurl.com/2u2umi6p

²⁰ Marcos Chamon et al., Debt-for-Climate Swaps: Analysis, Design, and Implementation (Washington DC: IMF, 2022), 4.

In this context, debt for climate swaps could be seen as innovative instruments to cope with "challenges related to insufficient climate finance but also debt sustainability by exploring alternative financing instruments".²¹

A review of the relevant literature reveals a number of strengths for advancing these initiatives. Primarily, these transactions offer an exceptional opportunity to enhance adaptation policies and reduce economic losses. According to Thomas and Theokritof, these swaps

offer a stream of predictable financing for longer-term adaptation projects or capacity-building for which it may be difficult to secure other types of climate finance. For example, these funds can be used for the long-term maintenance of adaptation measures that have been implemented with short-term project-specific budgets, or they can be used to bolster human resources for strained national climate change departments.²²

In doing so, debt for climate swaps could help to balance the climate financing flows towards adaptation and mitigation.²³ It is a truism that climate finance provided by developed countries has tended to focus on mitigation over adaptation, despite the equal status of both actions in international agreements. According to data from the OECD (2021), between 2016 and 2019 the financing provided and mobilized by its members for mitigation projects tripled that for adaptation projects. Consequently, debt-for-climate swaps can be a valuable mean to alleviate debt distress, overcome financing gaps, and promote investment in adaptation.

Notwithstanding the foregoing, debt for climate swaps can also serve to enhance the design and implementation of mitigation policies in vulnerable countries. Furthermore, increased investment in mitigation projects could have positive economic effects for these countries by reducing fossil fuel imports or creating new jobs, even outweighing potential job losses in the fossil fuel sector.²⁴ In this regard, debt for climate swaps could be a valuable tool to scale

²¹ Frances Fuller et al., "Debt for Climate Swaps: Caribbean Outlook", *Impact: Science Based Implementation of 1.5*°C Compatible Action for LDCs and SIDS, April 5th, 2018, https://tinyurl.com/pc2jz44m.

²² Adelle Thomas and Emily Theokritoff, "Debt-for-Climate Swaps for Small Islands", *Nature Climate Change* 11 (2021): 891, https://tinyurl.com/yd7ektxb.

²³ Kevin Gallagher et al., "Reforming Bretton Woods Institutions to Achieve Climate Change and Development Goals", One Earth 6, n.° 10 (2023), https://doi.org/10.1016/j.oneear.2023.09.009.

²⁴ Dolf Gielen et al., "The Role of Renewable Energy in the Global Energy Transformation", *Energy Strategy Reviews* 24 (2019), https://doi.org/10.1016/j.esr.2019.01.006.

up climate action in countries with room for improvement but lacking fiscal resources. In this context, it is important to underline that global mitigation efforts are still insufficient. Current projections show that to meet the objectives of international agreements and achieve carbon neutrality by mid-century, an annual investment of 4 trillion dollars will be needed by 2030, 70% of which should be focused on emerging economies and developing countries. Second, different studies indicate that developed countries have not fulfilled the commitment of mobilizing 100 billion dollars per year by 2020 to the developing world. The implementation of debt-for-climate swaps in developing countries can also help close both the ambition and the finance gap.

In sum, benefits from debt for climate swaps could be twofold. In the case of highly vulnerable countries, swaps can help address debt unsustainability problems and encourage investment in adaptation, creating a virtuous circle that allows these countries to address both problems simultaneously. In the case of middle-income countries with greater financial and technical resources, swaps appear as an opportunity to significantly increase actions not only for adaptation but also for mitigation, helping to simultaneously reduce the ambition and financial gap.

Naturally, debt swaps for climate actions are not exempt from questions or concerns. In this regard, previous works also point out some of the challenges of these operations. The literature highlights the role of conditionalities imposed by creditors and third parties involved in debt swaps that can undermine the sense of ownership of the financed policies or programs. As Paul, Weber, and Svartzman observe,

The funds generated by the swap are often paid out according to donor preferences, which are more or less aligned with national priorities in terms of nature conservation and meeting the needs of local populations, including indigenous populations who are often present in areas with a particularly rich biodiversity.²⁷

Comentario Internacional 23, 2023 e-ISSN 2631-2549

²⁵ International Energy Agency (IEA), World Energy Outlook 2021 (Paris: IEA, 2021).

²⁶ Independent Expert Group on Climate Finance, Delivering on the \$100 Billion Climate Finance Commitment and Transforming Climate Finance (Glasgow: Independent Expert Group on Climate Finance, 2020), https://tinyurl.com/bdct9f57; Organisation for Economic Co-operation and Development (OECD), Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data (Paris: OECD, 2021), https://doi.org/10.1787/03590fb7-en.

²⁷ Quentin Paul, Pierre-François Weber and Romain Svartzman, "Debt-for-Nature Swaps: A Two-Fold Solution for Environmental and Debt Sustainability in Developing Countries?", Bulletin de la Banque de France 244 (2023): 6, https://tinyurl.com/y6wy353x.

Similarly, the design and implementation of programs incorporating creditor conditionalities can delay their effective execution.

Moreover, many studies agree that systematic, large-scale responses are needed; otherwise, they may only serve as temporary solutions for individual cases. Consequently, numerous authors insist that swap operations should be part of a broader debt restructuring scheme, aligned with the objectives of the Paris Agreement, particularly Article 2.1.c. It should be noted that, from a different point of view, numerous studies from a critical Political Ecology perspective emphasize the commoditization of nature inherent in these operations. Essentially, this means assigning a market value to common goods.²⁸

In terms of their economic consequences, financing programs with national currencies can lead to increased money supply, resulting in higher inflation and imbalances in the medium and long term.²⁹ In this regard, many studies note that debt-for-climate action swaps must be framed within a stable macroeconomic environment to avoid implementation failures. In addition, a significant number of studies highlight the potential worsening of credit ratings, especially in the short and medium term, for states that pursue such operations.³⁰

In summary, there is no consensus among scholars regarding the advisability of debt-for-nature swaps. However, there is general agreement that these instruments are not suitable for all developing states and that the implementation of such agreements should consider the specific circumstances of each country. Studies with more extensive statistical analysis tend to agree that these are feasible solutions for vulnerable states with sustainable debt profiles. Conversely, they are not considered appropriate instruments for middle-income states with critical debt levels.

²⁸ Philip Mader, Daniel Mertens and Natascha van der Zwan, eds., The Routledge International Handbook of Financialization (London: Routledge, 2020), https://doi.org/10.4324/9781315142876; Andre Standing, "The Financialization of Marine Conservation: The Case of Debt-for-Ocean Swaps", Development 66 (2023), https://doi.org/10.1057/s41301-023-00379-y.

²⁹ Hildegard Bedarff, Bernd Holznagel and Cord Jakobeit, "Debt-for-Nature Swaps: Environmental Colonialism or a Way Out from the Debt Crisis That Makes Sense?", *Verfassung und Recht in Übersee* 22, n. ° 4 (1989), https://tinyurl.com/5drh4vtm; Amin Sarkar and Karen Ebbs, "A Possible Solution to Tropical Troubles? Debt-for-Nature Swaps", *Futures* 24, n. ° 7 (1992), https://doi.org/10.1016/0016-3287(92)90074-P.

³⁰ Linde Warland and Axel Michaelowa, Can Debt for Climate Swaps Be a Promising Climate Finance Instrument? Lessons from the Past and Recommendations for the Future (Zurich: Perspectives GmbH, 2015), https://doi.org/10.5167/UZH-159661.

Debt for climate swaps in a historical perspective. Stylized Facts and Lessons

Although debt for climate action swap initiatives have proliferated in recent years, they must be conceived as a specific type of debt for nature swaps. In sum, instruments that have a vast track record of decades. The proposal of a debt-for-nature deal was originally developed by Thomas Lovejoy (1984) in the midst of the Latin American and Eastern European debt crisis. In an article published in the New York Times, the then vice-president of the World Wildlife Fund (WWF) argued that the so-called Third World countries should be relieved of part of their debts while promising to pursue environmental protection actions. ³¹ Precisely, this conservationist perspective was the characteristic feature of the first experiences of debt-for-nature swaps. ³²

The first debt for nature swap initiatives took place in Latin American countries (Bolivia, Costa Rica, and Ecuador) during 1987. All of them had the primary objective of exchanging sovereign debt instruments to programs focused on protecting nature reserves. Because of this protectionist bias, these early experiences with debt-for-nature swaps were predominantly "tripartite". It should be noted that debt-for-nature swaps can be structured in different ways depending on the number of participants. In this sense, they can be bilateral, trilateral or multilateral. In bilateral debt swaps, a debtor State agrees with a creditor to restructure financial commitments -through relief measures or issuing new instruments on improved terms (longer maturity, better interest, for example)-, with the promise of allocating the released resources to fund local programs with positive impacts. The funding for these concerted projects is usually disbursed in the country's domestic currency.³³

As explained by Chamon et al.,

Tripartite swaps involve buybacks of privately held debt financed by donors and/ or new lenders, usually intermediated by an international nongovernmental organization (NGO), conditional on nature- or climate-related policy actions

³¹ WWF Center for Conservation Finance, "Bilateral Debt-for-Environment Swaps by Creditor", Convention on Biological Diversity, December 9th, 2003, https://tinyurl.com/yejh3aew.

³² Jens Rosebrock and Harald Sondhof, "Debt-for-Nature Swaps: A Review of the First Experiences", Intereconomics 26 (1991), https://doi.org/10.1007/BF02929541.

³³ Eric Swanson et al., Debt for Nature Swap: A Green Finance Tool for Dealing with Overseas Sovereign Debt (Chicago, US: Paulson Institute / Green Finance and Development Center, Fudan University, 2022).

and/or investments. In the most common type of operation the NGO lends the funds to the debtor country at below-market interest rates, on condition that (1) the debtor uses the funds to buyback commercial debt at a discount, and (2) a portion of the resulting debt relief (the difference between the cost of the retired commercial debt and the new debt to the NGO) is used to fund climate-related actions or investments.³⁴

Debt swaps are categorized as multilateral or plurilateral when a greater number of actors, whether debtors or creditors, are included. According to Karaki and Vilal, multi/plurilateral debt swaps raise the scale and thus also the political profile of debt swaps.³⁵ Doing so also increases the political leverage of the creditors to promote systemic impact, potentially helping to shift the focus from one-off projects towards the development of a pipeline of projects aiming for transformative and sustainable impacts. In addition, it would strengthen the visibility of the swap, and the reputation and influence of actors involved, creditors and debtors.

Over the years, initiatives were added to carry out debt swaps aimed at other dimensions of sustainable development: microfinance, education and health.³⁶ This inherent flexibility of debt swap mechanisms made it 'natural' to sponsor them as timely instruments to address the converging debt and climate crises.

Moreover, swaps can be classified according to the type of debt affected. In this context, we must differentiate between official and private/commercial debt swaps. Although it is a truism, official debt swaps refer to transactions between States and/or with multilateral agencies. Commercial debt swaps imply the conversion of existing sovereign debt into tradeable securities, such as bonds. The instruments issued through these swaps brace the idea of obtaining financial space to tackle mitigation and/or adaptation actions. As Chamon et al. point out, the bonds resulting from these swaps offer favorable terms to debtor countries, thanks to credit enhancement guarantees or insu-

³⁴ Chamon et al., Debt-for-Climate Swaps, 6.

³⁵ Karim Karaki and San Bilal, Upscaling Debt Swaps for Greater Impact (Maastricht, NL: ECDPM, 2023), 5.

³⁶ International Labour Organization (ILO), The Potential of Debt Conversions for Microfinance Development: Background Document for ILO Expert Meeting (Geneva: ILO, 2001); UNESCO, Education for All: First Meeting of the Working Group on Debt Swaps for Education (27-28 November 2006, Paris), Final Report, September 2007, ED/EFA/RP/2007/19; Danny Cassimon, Robrecht Renard and Karel Verbeke, "Assessing Debt-to-Health Swaps: A Case Study on the Global Fund Debt Health Conversion Scheme", Tropical Medicine & International Health 13, n. 9 (2008), https://doi.org/10.1111/j.1365-3156.2008.02125.x.

rances- offered by development finance institutions (DFIs).³⁷ By the way, this model was the basis for the most recent cases of debt for climate swaps: Seychelles (2017), Belize (2021), Barbados (2022), Ecuador (2023), Perú (2023) and Gabon (2023).

As stated, in order to develop our main research goal, we constructed a comprehensive dataset of implemented cases from the late 1980s to 2021. Our data collection methodology followed a two-stage process. First, we identified cases through existing compilations from government agencies.³⁸ international organizations,³⁹ and environmental NGOs.⁴⁰ We also check in media and academic papers for more recent cases. Next, we conducted in-depth research on each case, drawing from academic studies and official documentation from multiple stakeholders: creditor country institutions (such as the US Department of State, Finnish Ministry of Foreign Affairs, and Italian Agency for Development Cooperation), debtor country agencies (Philippines Department of Finance and Chilean Ministry of Foreign Affairs), fund administrators (Forever Costa Rica Association and Brazilian Fund for Biodiversity), multilateral development banks (International Monetary Fund), and third-party purchasers or donors (The Nature Conservancy and World Wildlife Foundation). We supplemented this data with academic literature, 41 and media reports to ensure current and comprehensive coverage. Overall, we identified and analyzed 149 swaps in 39 debtor countries all around the world. These agreements have involved renegotiating almost 5 billion US dollars and have generated more than 1.8 billion US dollars for environmental action. One of the main issues observed in the data is that the signature of this type of agreement and the environmental funding involved has not been constant over time and peaked in the early 1990s (Figures 1 and 2). In terms of the number

Comentario Internacional 23, 2023 e-ISSN 2631-2549

³⁷ Chamon et al., Debt-for-Climate Swaps.

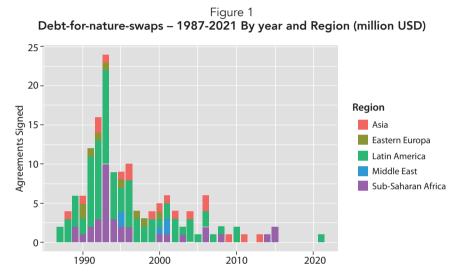
³⁸ Sheikh, "Debt-for-Nature Initiatives".

³⁹ Peter Dogsé and Bernd von Droste, Debt-for-Nature Exchanges and Biosphere Reserves: Experiences and Potential (Paris: UNESCO, 1990).

⁴⁰ WWF Center for Conservation Finance, "Bilateral Debt-for-Environment Swaps"; WWF Center for Conservation Finance, "Commercial Debt-for-Nature Swaps", Convention on Biological Diversity, December 9th, 2003, https://tinyurl.com/2rwv3p4d.

⁴¹ Sherif Kamel and Eskandar Tooma, Exchanging Debt for Development: Lessons from the Egyptian Debt-for-Development Swap Experience (Cairo: Economic Research Forum, 2005); Jennifer Silver and Lisa Campbell, "Conservation, Development and the Blue Frontier: The Republic of Seychelles' Debt Restructuring for Marine Conservation and Climate Adaptation Program", International Social Science Journal 68, n.° 229-230 (2018), https://doi.org/10.1111/issj.12156; Tomasz Zylicz, Debt-for-Environment Swap as a Game: The Case of the Polish EcoFund (Milan: Fondazione Eni Enrico Mattei, 1998).

of signed agreements, Latin America and Sub-Saharan Africa are the regions with greater participation in this period; in terms of funds generated, Latin America and Eastern Europe appear as the most relevant regions. The case of Eastern Europe is noteworthy since it involves only 9 agreements, 8 of which include Poland as the Debtor country.



Source: authors' own elaboration.

Latin America, on the other hand, is the region of the world that has entered in most debt-for-nature swaps and where those agreements generated the greatest amount of funds. In fact, the region has occupied a central place in initiatives of debt-for-nature swaps since their very beginning: Bolivia, Ecuador, and Costa Rica were the first cases in 1987 and 1988. Earlier debt-for-nature swaps were focused mainly on conservation and the creation or improvement of protected areas. In the three aforementioned cases, funds were allocated to different National Parks such as Beni Biosphere Reserve or Yacuma National Park in Bolivia; Galapagos National Park or Yasuni National Park in Ecuador; and La Amistad or Guanacaste National Park in Costa Rica. 42 Outside the region, the first debt-for-nature swap in Asia was agreed

⁴² WWF Center for Conservation Finance, "Commercial Debt-for-Nature Swaps".

in the Philippines in 1988; in Asia, Madagascar and Zambia became the first initiatives of this kind in 1989. Similarly, to the previous cases, the main environmental goal in the three countries was conservation and protection of areas, such as St. Paul Subterranean River National Park and El Nido National Marine Park in the Philippines.

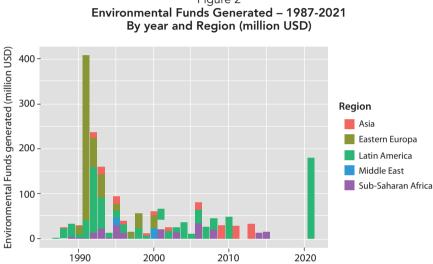


Figure 2

Source: authors' elaboration.

Another relevant characteristic of this period is that the swaps were based on three-party agreements, where civil society organizations played a central role as debt buyers and donors. In this context, three organizations stand out from the rest: Conservation International (CI), The Nature Conservancy (TNC), and World Wildlife Fund (WWF). Together, they were part of more than 90% of the debt-for-nature swaps where a third party was a donor.

However, despite the relevant role that civil society organizations have played in debt-for-nature swaps, most of the financing has come from bilateral agreements. In this sense, the United States has been the main donor through three programs channeling most funds: the Enterprise for the Americas Initiative (EAI), the Tropical Forest Conservation Act (TFCA), and the Polish EcoFund. The total amount of funds allocated to environmental actions

by US bilateral swap agreements has been equivalent to 733 million dollars. This figure rises to almost 900 million if agreements involving third parties are considered. In the case of Latin America, a similar situation is observed since the United States appears as the first donor, followed by Switzerland, Canada, the Netherlands, and Sweden (Figure 4).

Highest Environmental Funds Generated Bilateral Agreements - 1987-2021 By Creditor/Donor and Region (million USD) Switzerland-Germany -Type of agrement

Figure 3

United States -France-Asia Italy-Eastern Europa Latin America Canada -Middle East Norway-Sub-Saharan Africa Netherlands -Finland-Sweden-200 400 600 Environmental Funds generated (million USD)

Source: authors' own elaboration.

The growing evidence of the externalities of climate change and the deterioration of debt indicators in many developing countries have catalyzed a renewed interest in debt for nature swaps. Given the intertwined nature of the climate and debt crises, this time around, the focus has been on the urgency of scaling up financing for both adaptation and mitigation. This (re)emergence of debt for climate swap initiatives was not limited to unilateral calls by political and social leaders and movements but was widely discussed and prompted by international institutions and/or multilateral forums.⁴³

The following are some of the initiatives launched in recent years, without attempting to provide a detailed overview of each one. According to Swan, the

⁴³ Paul, Weber and Svartzman, "Debt-for-Nature Swaps".

starting point for the incremental interest on debt for climate equity swaps can be found in a report published in 2009 by the Commonwealth Secretariat and the *Organisation Internationale de la Francophonie* (OIF).⁴⁴ The paper aimed to examine debt relief mechanisms for developing countries, with a particular focus on initiatives that contribute to the fight against climate change. One year later, the United Nations Development Programme (UNDP) prepared a discussion paper on debt sustainability and the Millennium Development Goals in which considered the opportunity to foster a debt for climate swap in Maldives.⁴⁵ On the basis of the document that had been presented years earlier, and in the run-up to the signing of the PA at the COP, the Commonwealth Secretariat (2015) formalized a proposal regarding debt for climate actions swaps. In the following years, studies on debt-for-climate swaps were published by the United Nations Economic Commission for Latin America and the Caribbean,⁴⁶ and the United Nations Economic and Social Commission for Asia and the Pacific.⁴⁷

As noted by Swan (2022), the issue has been explored and advocated for by policy and research institutions,⁴⁸ including the joint presentation by researchers from the Boston University Global Development Policy Center, SOAS University of London and Heinrich Böll Stiftung.⁴⁹ Besides, multilateral forums encouraged debt for climate actions. In this respect, it could be underlined the statement from Vulnerable Twenty (V20) Group of Ministers of Finance calling for a major restructuring of sovereign debt.⁵⁰

⁴⁴ Cathal Swan, "Assessing the Suitability of Countries for Debt-for-Climate Swaps: Creating and Comparing Indices" (master's thesis, Lund University, Sweden, 2022), https://tinyurl.com/52zztmbw.

⁴⁵ United Nations Development Programme (UNDP), Achieving Debt Sustainability and the MDGs in Small Island Developing States: The Case of the Maldives (New York: UNDP, 2010), https://tinyurl.com/3jnvajs7.

⁴⁶ Economic Commission for Latin America and the Caribbean (ECLAC), Proposal on Debt for Climate Adaptation Swaps: A Strategy for Growth and Economic Transformation of Caribbean Economies, April 21st, 2016, LC/CAR/L.492; ECLAC, "ECLAC's Proposal on Debt for Climate Adaptation Swaps: A Strategy for Growth and Economic Transformation of Caribbean Economies" (presentation, CARICOM UN High-Level Pledging Conference, November 2017).

⁴⁷ Economic and Social Commission for Asia and the Pacific (ESCAP), Debt-for-Climate Swaps as a Tool to Support the Implementation of the Paris Agreement (Bangkok: ESCAP, 2021), https://tinyurl.com/3f4f3hj2.

⁴⁸ Swan, "Assessing the Suitability".

⁴⁹ Volz et al., Debt Relief.

⁵⁰ Vulnerable 20 (V20), "V20 Statement on Debt Restructuring Option for Climate-Vulnerable Nations", V20, October 27th, 2021, https://tinyurl.com/mrywwep8.

Costa Rica Creditor Peru Colombia Belaium El Salvador -Canada Jamaica -Bolivia -Finland Guatemala Germany Honduras -Panamá -Japan Brazil Netherlands Chile Spain Uruguay -Ecuador Sweeden Belize Switzerland Paraguay United States Argentina Nicaragua 120

Funds generated (million USD)

Figure 4
Highest Environmental Funds Generated by Bilateral and mixed Agreements in Latin America – 1987-2021
By Debtor and Creditor Country (million USD)

Source: authors' own elaboration.

These expressions of interest and gradual appeals led to concrete experiences with debt for climate swaps. The debt for nature swap concluded by the Seychelles in 2017 has been repeatedly referred to as the first experience of a debt for climate swap. The beginning of this operation dates back to 2012, when Sevchelles committed to developing an ambitious marine conservation policy. Over the next few years, Seychelles negotiated with external creditors to reschedule debt to finance marine conservation projects and climate change adaptation policies. Negotiations with Paris Club creditors reached an agreement in 2016, resulting in Seychelles paying just over \$5 million to its bilateral creditors through loans from different philanthropic organizations coordinated by The Nature Conservancy (TNC). The abovementioned settlement involved the cancellation of a debt of almost \$21 million. Through this operation, Seychelles pledged to protect the marine environment and to implement adaptation measures in an amount close to the debt relief achieved. Such funds would be raised through the issuance of "blue" bonds. In terms of outreach, this pioneering experience in the Seychelles is often described as one of the most successful. In this regard, it is pointed out that since 2017, the institutional body in charge of the management of the project has capitalised a total of 33 projects. During this period, it has increased the resources it manages, mainly through the expansion of the donor base.

In November 2021, the TNC supported a new debt-for-climate action swap operation. This time, the initiative involved a Central American country: Belize. The agreement permitted the country to purchase debt instruments to the value of \$553 million, thereby reducing the country's external debt by approximately 10% of its GDP. Credit Suisse structured the financing of this operation by organizing the issuing of 364 million dollars in "blue bonds". Besides, the US International Development Finance Corporation (DFC), provided insurance, which enabled the loan to have a low interest rate, a 10-year grace period during which no principal is paid, and a 19-year maturity. In return for this debt relief, Belize has pledged to spend \$ 4 million annually on marine conservation until 2041. The case of Belize is frequently regarded by numerous commentators as a comparative success narrative. In this regard, it is emphasised that following the restructuring that was accomplished, this nation was able to circumvent the recurrent defaults it had encountered during the preceding decade.⁵¹

Additionally, the island nation of Barbados served as a case study for a debt-for-climate action swap. The deal was officially announced in September 2022. The aforementioned TNC and the Inter-American Development Bank (IADB) constituted the partners in the agreement. The total amount of debt subject to restructuring was approximately USD 150 million. Through the operation, debt instruments duly issued by Barbados were exchanged for new 'blue bonds' at lower interest rates and longer maturities. As in the case of Belize, Credit Suisse provided financing for the operation, albeit accompanied by CIBC First Caribbean. The IDB and TNC backed the new instruments as co-guaranties. According to TNC, the net savings would enable Barbados to allocate an estimated \$ 50 million in conservation funding over 15 years. ⁵²

In May 2023, Ecuador announced a debt-for-nature swap with some allusions to adaptation policies. Fostered by Climate Fund Managers (CFM), a Dutch private equity fund manager, the transaction allowed Ecuador to free

⁵¹ Stephanie Fontana-Raina and Sebastian Grund, "Debt-for-Nature Swaps: The Belize 2021 Deal and the Future of Green Sovereign Finance", *Capital Markets Law Journal* 19, n.° 2 (2024), https://doi.org/10.1093/cmlj/kmad024.

⁵² The Nature Conservancy, "The Nature Conservancy Announces Its Third Global Debt Conversion in Barbados", *The Nature Conservancy*, September 21st, 2022, https://tinyurl.com/mwkxy7b4.

up fiscal space to invest in the conservation of the Galapagos Islands. The swap involved the conversion of USD 1.6 billion in sovereign bonds for an impact of USD 600 million. Because of the magnitude attained, the swap was identified as the largest in history. The financing for this transaction was obtained from the capital markets. As noted in the swap of Belize, the transaction was backed by a guarantee from the U.S. International Development Finance Cooperation. The Inter-American Development Bank has also stepped in to provide a liquidity reserve. It is important to note that various political leaders and social movements highly criticized the transaction for the lack of transparency in the negotiations and the aforementioned commoditization of nature.⁵³

In early 2023, Germany finally concluded two debt-for-climate swap agreements with Egypt and Kenya, for \$54 million and \$65 million, respectively. These agreements, announced at COP27 in Sharm el Sheik, were based on a bilateral public debt scheme. Under these agreements, Germany agreed to a debt restructuring with both countries committed to increasing climate ambition. In September 2023, Peru announced a debt-for-nature swap with climate impacts, in partnership with the United States and four non-governmental organizations: Conservation International (CI), TNC, Wildlife Conservation Society (WCS), and WWF. The transaction was made under the Tropical Forest and Coral Reef Conservation Act (TFCCA) and for a relatively small sum (\$20 million). The commitments made within this initiative revolved around the conservation of the Peruvian rainforest. However, different documents related to the agreement refer to contributions to the fight against climate change.

Conclusions

Debt and climate crises are intrinsically linked since their externalities tend to reinforce each other. This assumption has gained more and more evidence in the countries of the global South over the past few years. Debt unsustainability issues are a long-standing problem for low and middle-income countries in the Global South and the risks associated with debt distress increased steadily following the 2009 global crisis, affecting a large part of the

⁵³ Daniel Ortega-Pacheco, "Galapagos Deal: An Ignominious Legacy", SSRN, May 19th, 2023, https://dx.doi.org/10.2139/ssrn.4455918.

developing world. In addition, the COVID-19 pandemic exacerbated existing risks, leading many countries to extreme financial instability.⁵⁴ The debt service burden affects the viability of public policies in different areas. In effect, it threatens post-pandemic economic recovery, but also puts long-term political objectives -such as the Sustainable Development Goals (SDG)- at risk.⁵⁵ Logically, under these conditions of budgetary restrictions, climate actions become limited, all of which harm the conditions to face the current climate crisis.

As previously mentioned, climate crisis refers to a comprehensive change in climate patterns and its consequences on natural ecosystems and human life throughout the planet. According to the IPCC, the average temperature for the period 2011-2020 was 1.1°C higher than in 1850-1900, an increase that is primarily due to human activity and that favors more frequent extreme weather events, changes in rainfall, declining glaciers, warming oceans, and rising sea levels. ⁵⁶ In turn, these changes have caused negative and deep impacts on human life, in terms of economic losses; infrastructure damage; decrease in food production; water scarcity; or the increase in health issues worldwide. In this context, developing countries are particularly vulnerable to the effects of climate change and have fewer resources to adapt to these changes. In addition, negative effects are expected to grow in the future: Climate Action Tracker estimates that under current policies and actions, the temperature will increase 2.7°C above pre-industrial levels by 2100, well above the 1.5°C desired target established in the Paris Agreement (PA). Climate action, both in terms of mitigation and adaptation, is still insufficient and needs to be enhanced.

The lack of ambitious climate policies and actions increases the future costs that countries will suffer, especially the most vulnerable, due to the climate crisis. This is a particularly serious problem in the Global South, given the higher exposure to negative effects and the lower availability of resources to adapt. In a scenario of a 3°C increase in the global average temperature, the annual losses on GDP could exceed 10% in some countries, particu-

⁵⁴ Shari Spiegel, Oliver Schwank and Mohamed Obaidy, COVID-19 and Sovereign Debt (Washington DC: United Nations, 2020), https://tinyurl.com/yy2ctucd.

⁵⁵ Howard Haughton and Jodie Keane, "Alleviating Debt Distress and Advancing the Sustainable Development Goals", Sustainable Development 29, n.° 3 (2021), https://doi.org/10.1002/sd.2198.

⁵⁶ Intergovernmental Panel on Climate Change (IPCC), Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Geneva: WMO / UNEP, 2023).

larly in Sub-Saharan Africa, Southeast Asia, and Central America.⁵⁷ At the same time, the economic costs and damage to infrastructure and assets affect the payment capacity of vulnerable states and, therefore, the sustainability of their debt. At this point, it should also be noted that spending on adaptation is a high-return investment as a consequence of the triple dividend it generates it avoids losses, it generates economic profits, and it results in social and environmental benefits.⁵⁸

This ultimately leads to a vicious circle: greater economic problems lead to less climate action. Since highly indebted and vulnerable countries are usually those that contribute least in terms of greenhouse gas emissions, the lack of mitigation actions in these cases would not necessarily represent a serious problem at the global level. However, investment in adaptation becomes essential in these cases in order to avoid further deterioration of their economic and environmental conditions. Reducing investment in adaptation ends up increasing exposure to the negative effects of climate change, which in turn increases structural economic weaknesses and threatens debt sustainability in the medium and long term, which ends up further reducing the implementation of adaptation policies.

Debt swaps for climate action are suggested as a possible approach for Latin American countries to pursue due to the overlap of debt and climate crises. Several countries in the region have a significant amount of experience in designing and implementing these operations, which can be an invaluable asset. Latin America presents a valuable opportunity in terms of swapping debt for climate action as a consequence of four factors: a shortcoming in adaptation policies; the existence of room for further mitigation actions; the need for financing; and the combination of experience in debt swaps and the current capacity for the implementation of actions.

Firstly, the region includes highly vulnerable countries with an urgent need to deepen their adaptation policies to reduce the negative impact of cli-

⁵⁷ Tom Kompas, Van Ha Pham and Tuong Nhu Che, "The Effects of Climate Change on GDP by Country and the Global Economic Gains from Complying with the Paris Climate Accord", *Earth's Future* 6, n.º 8 (2018), https://doi.org/10.1029/2018EF000922.

⁵⁸ Global Commission on Adaptation, Adapt Now: A Global Call for Leadership on Climate Resilience (Washington DC: World Resources Institute, 2019).

mate change and its economic, social and environmental costs.⁵⁹ The island states in the Caribbean present a vulnerability marked by the rise in sea level and by increasing exposure to natural disasters, among other factors. Other members of the region, such as the Central American countries, Bolivia, Ecuador, or Venezuela, also present high levels of vulnerability, often associated with infrastructure deficiencies.⁶⁰ In this regard, it should be noted that besides avoiding losses and damages, investment in adaptation has significant multiplier effects based on the economic, social, and environmental benefits it generates, reducing development gaps and boosting the economy in the context of global crisis.⁶¹

Secondly, the region presents a promising opportunity for mitigation actions. According to FAO, Latin America and the Caribbean contain 22% of the planet's forest area, while seven South American states (Brazil, Peru, Mexico, Colombia, Bolivia, Venezuela, and Argentina) are among the top twenty countries by forest coverage area worldwide. 62 In terms of biodiversity, Latin America and the Caribbean is home to around 60% of the world's terrestrial species. 63 Likewise, in a global context where renewable energy has become increasingly cost-competitive, the sector has recently shown great dynamism in the region: investment in renewables rose to almost \$120 billion during the period between 2010 and 2015, including countries like Brazil, Mexico, and Chile ranked among the largest investors in the world by the end of the period (IRENA, 2016).64 In addition to the environmental benefits, it is necessary to point out that energy transition also generates a positive financial impact: a greater production of energy from renewable sources could reduce the import of fossil fuels in weak economies. According to the Argentine Wind Chamber, for example, foreign exchange savings from the replacement of imported gas was equivalent to 800 million dollars in 2021 and has the potential to continue growing in the following years. The current context of uncertain-

Comentario Internacional 23, 2023 e-ISSN 2631-2549

⁵⁹ Alicia Bárcena et al., La emergencia del cambio climático en América Latina y el Caribe: ¿Seguimos esperando la catástrofe o pasamos a la acción? (Santiago de Chile: CEPAL, 2020), https://tinyurl.com/4wbuycwy.

⁶⁰ ND-GAIN, "Country Index", ND-GAIN, accessed May 13th, 2025, https://tinyurl.com/2c49kvrm.

⁶¹ Global Commission on Adaptation, Adapt Now.

⁶² UN Food and Agriculture Organization (FAO), Global Forest Resources Assessment 2020 (Rome: FAO, 2020).

⁶³ United Nations Environment Programme (UNEP), The State of Biodiversity in Latin America and the Caribbean: A Mid-Term Review of Progress towards the Aichi Biodiversity Targets (New York: UNEP, 2016), https://tinyurl.com/4ykcwve2.

⁶⁴ International Renewable Energy Agency (IRENA), Renewable Energy Market Analysis: Latin America (Abu Dhabi: IRENA, 2016), https://tinyurl.com/5sae9c5d.

ty in the fossil fuel market, as a result of the war in Ukraine, further highlights the need for a long-term plan for the development of renewable energies.

Debt swaps for climate change can potentially help reduce debt burdens and gain fiscal space for climate actions -in adaptation, particularly-but they cannot be considered as the only and/or best instruments to cope with the vicious circle of indebtedness in developing countries. In this sense, these instruments need to be accompanied and reinforced with macroeconomic policies and structural reforms aimed at restoring debt sustainability and fiscal space for climate actions all of which only harms the conditions to face the climate crisis. However, it should not be overlooked that climate action debt swaps are not the only answer for the countries of the global periphery. and Latin America in particular, in the face of the interplay between climate and debt crises. As marked by Karaki debt swaps cannot replace debt restructuring, grants, and concessional loans that finance sustainable development goals (SDGs), 65 they should be understood, designed and implemented as part of a "debt and development toolbox". In sum, debt for climate actions swaps should not be considered as an unequivocal solution for the region. This is particularly salient when considering the disparities and/or asymmetries between the countries within the region. The cases that have been frequently highlighted as successful in the literature exhibit a relatively limited economic diversity and a straightforward debt structure in terms of creditors. Conversely, states with more substantial economies within the region present a distinct scenario, complicating the extrapolation and extension of debt-for-climate action swap initiatives.

References

Arauz, Andrés, Carlos Larrea and Jesús Ramos. *Proposal for a Debt-for-Nature Swap with China*. Ciudad de México: Centro de Estudios China-México-Universidad Nacional Autónoma de México, 2022. https://tinyurl.com/4338aree.

Bárcena, Alicia, Joseluis Samaniego, Wilson Peres and José Eduardo Alatorre. La emergencia del cambio climático en América Latina y el Caribe: ¿Seguimos esperando la catástrofe o pasamos a la acción? Santiago de Chile: CEPAL, 2020. https://tinyurl.com/4wbuycwy.

⁶⁵ Karim Karaki, Debt Reform for Climate Action: Demand Grows Louder, but Will Europe Respond? (Maastricht, NL: ECDPM, 2022).

- Bedarff, Hildegard, Bernd Holznagel and Cord Jakobeit. "Debt-for-Nature Swaps: Environmental Colonialism or a Way Out from the Debt Crisis That Makes Sense?". *Verfassung und Recht in Übersee* 22, n.° 4 (1989): 445-59. https://tinyurl.com/5drh4vtm.
- Cassimon, Danny, Martin Prowse and Dennis Essers. "The Pitfalls and Potential of Debt-for-Nature Swaps: A US-Indonesian Case Study". Global Environmental Change 21, n.° 1 (2011): 93-102. https://doi.org/10.1016/j.gloenvcha.2010.10.001.
- –, Robrecht Renard and Karel Verbeke. "Assessing Debt-to-Health Swaps: A Case Study on the Global Fund Debt Health Conversion Scheme". Tropical Medicine & International Health 13, n.° 9 (2008): 1188-95. https://doi.org/10.1111/j.1365-3156.2008.02125.x.
- Chamon, Marcos, Erik Klok, Vimal Thakoor and Jeromin Zettelmeyer. Debt-for-Climate Swaps: Analysis, Design, and Implementation. Washington DC: IMF, 2022.
- Dogsé, Peter, and Bernd von Droste. Debt-for-Nature Exchanges and Biosphere Reserves: Experiences and Potential. Paris: UNESCO, 1990.
- ECLAC. "ECLAC's Proposal on Debt for Climate Adaptation Swaps: A Strategy for Growth and Economic Transformation of Caribbean Economies". Presentation, CARICOM UN High-Level Pledging Conference, November 2017.
- Proposal on Debt for Climate Adaptation Swaps: A Strategy for Growth and Economic Transformation of Caribbean Economies. April 21st, 2016. LC/CAR/L.492.
- ESCAP. Debt-for-Climate Swaps as a Tool to Support the Implementation of the Paris Agreement. Bangkok: ESCAP, 2021. https://tinyurl.com/3f4f3hj2.
- Essers, Dennis, Danny Cassimon and Martin Prowse. "Debt-for-Climate Swaps: Killing Two Birds with One Stone?". *Global Environmental Change* 71 (2021). https://doi.org/10.1016/j.gloenvcha.2021.102407.
- Fenton, Adrian, Helena Wright, Stavros Afionis, Jouni Paavola y Saleemul Huq. "Debt Relief and Financing Climate Change Action". *Nature Climate Change* 4 (2014): 650-3. https://doi.org/10.1038/nclimate2303.
- Fontana-Raina, Stephanie, and Sebastian Grund. "Debt-for-Nature Swaps: The Belize 2021 Deal and the Future of Green Sovereign Finance". Capital Markets Law Journal 19, n.° 2 (2024): 128-51. https://doi.org/10.1093/cmlj/kmad024.
- Fuller, Frances, Luis Zamarioli, Bianka Kretschmer, Adelle Thomas and Laetitia de Marez. "Debt for Climate Swaps: Caribbean Outlook". *Impact: Science Based Implementation of 1.5*°C Compatible Action for LDCs and SIDS. April 5th, 2018. https://tinyurl.com/pc2jz44m.
- Gallagher, Kevin, Rishikesh Ram Bhandary, Rebecca Ray and Luma Ramos. "Reforming Bretton Woods Institutions to Achieve Climate Change and Development Goals". One Earth 6, n.° 10 (2023): 1291-303. https://doi.org/10.1016/j.oneear.2023.09.009.
- Gaspar, Vitor, Paulo Medas and Roberto Perrelli. "Global Debt Reaches a Record \$226 Trillion". *IMF Blog.* December 15th, 2021. https://tinyurl.com/nhztcf3y.

- Georgieva, Kristalina, and Ceyla Pazarbasioglu. "The G20 Common Framework for Debt Treatments Must Be Stepped Up". *IMF Blog.* December 2nd, 2021. https://tin-yurl.com/y59ypdwh.
- Gielen, Dolf, Francisco Boshell, Deger Saygin, Morgan Bazilian, Nicholas Wagner and Ricardo Gorini. "The Role of Renewable Energy in the Global Energy Transformation". Energy Strategy Reviews 24 (2019): 38-50. https://doi.org/10.1016/j. esr.2019.01.006.
- Global Commission on Adaptation. Adapt Now: A Global Call for Leadership on Climate Resilience. Washington DC: World Resources Institute, 2019.
- Greener, L. P. "Debt-for-Nature Swaps in Latin American Countries: The Enforcement Dilemma". Connecticut Journal of International Law 7 (1991): 123-80. https://tinyurl.com/3xsas7u8.
- Haque, Tobias, Zeinab Partow, Sona Varma y Luiz Oliveira. Addressing Debt Vulnerabilities in Small States: The Potential Role of New Financing Instruments. Washington DC: World Bank, 2002. https://tinyurl.com/59jh89er.
- Haughton, Howard, and Jodie Keane. "Alleviating Debt Distress and Advancing the Sustainable Development Goals". Sustainable Development 29, n.° 3 (2021): 528-36. https://doi.org/10.1002/sd.2198.
- IEA. World Energy Outlook 2021. Paris: IEA, 2021.
- ILO. The Potential of Debt Conversions for Microfinance Development: Background Document for ILO Expert Meeting. Geneva: ILO, 2001.
- IMF. "Global Debt Database". International Monetary Fund. Accessed May 12th, 2025. https://tinyurl.com/rcrhnw2u.
- World Economic Outlook: Managing Divergent Recoveries. Washington DC: IMF, 2021. https://tinyurl.com/mvwm3hyj.
- Independent Expert Group on Climate Finance. Delivering on the \$100 Billion Climate Finance Commitment and Transforming Climate Finance. Glasgow: Independent Expert Group on Climate Finance, 2020. https://tinyurl.com/bdct9f57.
- IPCC. Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva: WMO / UNEP, 2023.
- IRENA. Renewable Energy Market Analysis: Latin America. Abu Dhabi: IRENA, 2016. https://tinyurl.com/5sae9c5d.
- Kamel, Sherif, and Eskandar Tooma. Exchanging Debt for Development: Lessons from the Egyptian Debt-for-Development Swap Experience. Cairo: Economic Research Forum, 2005.
- Karaki, Karim. Debt Reform for Climate Action: Demand Grows Louder, but Will Europe Respond? Maastricht, NL: ECDPM, 2022.
- -, and San Bilal. Upscaling Debt Swaps for Greater Impact. Maastricht, NL: ECDPM, 2023.
- Kharas, Homi, and Meagan Dooley. COVID-19's Legacy of Debt and Debt Service in Developing Countries. Washington DC: Center for Sustainable Development at Brookings Institution, 2020.

- Kilbane Gockel, Catherine, and Leslie Gray. "Debt-for-Nature Swaps in Action: Two Case Studies in Peru". *Ecology and Society* 16, n.° 3 (2011). https://tinyurl.com/3b428y83.
- Klusak, Patrycja, Matthew Agarwala, Matt Burke, Moritz Kraemer and Kamiar Mohaddes. "Rising Temperatures, Falling Ratings: The Effect of Climate Change on Sovereign Creditworthiness". *Management Science* 69, n.° 12 (2023): 7468-91. https://doi.org/10.1287/mnsc.2023.4869.
- Kompas, Tom, Van Ha Pham and Tuong Nhu Che. "The Effects of Climate Change on GDP by Country and the Global Economic Gains from Complying with the Paris Climate Accord". *Earth's Future* 6, n.° 8 (2018): 1153-73. https://doi.org/10.1029/2018EF000922.
- Lovejoy, Thomas. "Aid Debtor Nations' Ecology". *The New York Times*. October 4th, 1984. https://tinyurl.com/5n8pubsb.
- Mader, Philip, Daniel Mertens and Natascha van der Zwan, eds. *The Routledge International Handbook of Financialization*. London: Routledge, 2020. https://doi.org/10.4324/9781315142876.
- Mitchell, Travis. *Debt Swaps for Climate Change Adaptation and Mitigation: A Commonwealth Proposal.* London: Commonwealth Secretariat, 2015. https://doi.org/10.14217/5js4t74262f7-en.
- ND-GAIN. "Country Index". ND-GAIN. Accessed May 13th, 2025. https://tinyurl.com/2c49kvrm.
- NPFM. "Summit for a New Global Financing Pact". Mission Permanente de la France Auprès des Nations Unies à New York. November 30th, 2023. https://tinyurl.com/2u2um-j6p.
- Odawara, Rei. "Debt for Nature Swaps in Small States". Internal staff report for the World Bank. 2014.
- OECD. Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data. Paris: OECD, 2021. https://doi.org/10.1787/03590fb7-en.
- Ortega-Pacheco, Daniel. "Galapagos Deal: An Ignominious Legacy". SSRN. May 19th, 2023. https://dx.doi.org/10.2139/ssrn.4455918.
- Paul, Quentin, Pierre-François Weber and Romain Svartzman. "Debt-for-Nature Swaps: A Two-Fold Solution for Environmental and Debt Sustainability in Developing Countries?". Bulletin de la Banque de France 244 (2023). https://tinyurl.com/y6wy353x.
- Picolotti, Romina, Durwood Zaelke, Korey Silverman-Roati and Richard Ferris. Debt-for-Climate Swaps. Washington DC: Institute for Governance & Sustainable Development, 2020. https://tinyurl.com/2mwwcmky.
- Rosebrock, Jens, and Harald Sondhof. "Debt-for-Nature Swaps: A Review of the First Experiences". *Intereconomics* 26 (1991): 82-7. https://doi.org/10.1007/BF02929541.
- Sarkar, Amin, and Karen Ebbs. "A Possible Solution to Tropical Troubles? Debt-for-Nature Swaps". Futures 24, n.° 7 (1992): 653-68. https://doi.org/10.1016/0016-3287(92)90074-P.

- Sheikh, Pervaze. "Debt-for-Nature Initiatives and the Tropical Forest Conservation Act: Status and Implementation". Congressional Research Service. July 24th, 2018. RL31286.
- Silver, Jennifer, and Lisa Campbell. "Conservation, Development and the Blue Frontier: The Republic of Seychelles' Debt Restructuring for Marine Conservation and Climate Adaptation Program". *International Social Science Journal* 68, n.° 229-230 (2018): 241-56. https://doi.org/10.1111/issj.12156.
- Spergel, Barry. "Reducing Debt in Small States: Is There a Role for Debt-for-Nature Swaps?". Internal consultant report for the World Bank. 2014.
- Spiegel, Shari, Oliver Schwank and Mohamed Obaidy. COVID-19 and Sovereign Debt. Washington DC: United Nations, 2020. https://tinyurl.com/yy2ctucd.
- Standing, Andre. "The Financialization of Marine Conservation: The Case of Debt-for-Ocean Swaps". *Development* 66 (2023): 46-57. https://doi.org/10.1057/s41301-023-00379-y.
- Steele, Paul, and Sejal Patel. *Tackling the Triple Crisis: Using Debt Swaps to Address Debt, Climate and Nature Loss Post-COVID-19.* London: International Institute for Environment and Development, 2020. https://tinyurl.com/3wpfvs9n.
- Swan, Cathal. "Assessing the Suitability of Countries for Debt-for-Climate Swaps: Creating and Comparing Indices". Master's thesis, Lund University, Sweden, 2022. https://tinyurl.com/52zztmbw.
- Swanson, Eric, Rose Niu, Li Zhu, Christoph Nedopil Wang and Mengdi Yue. Debt for Nature Swap: A Green Finance Tool for Dealing with Overseas Sovereign Debt. Chicago, US: Paulson Institute / Green Finance and Development Center, Fudan University, 2022.
- Thapa, Brijesh. "Debt for Nature Swaps: An Overview". International Journal of Sustainable Development and World Ecology 5 (1998): 249-62. https://doi.org/10.1080/13504509809469990.
- Thapa, Srijesh, and Brijesh Thapa. "Debt-for-Nature Swaps: Potential Applications in Nepal". *International Journal of Sustainable Development and World Ecology* 9, n.° 3 (2002): 239-55. https://doi.org/10.1080/13504500209470120.
- The Nature Conservancy. "The Nature Conservancy Announces Its Third Global Debt Conversion in Barbados". *The Nature Conservancy*. September 21st, 2022. https://tinyurl.com/mwkxy7b4.
- Theophile, Karin. Debt-for-Nature Swaps and Alternative Financial Instruments for Financing Environmental Programs. Washington DC: US Department of Agriculture Forest Service, 1994.
- Thomas, Adelle, and Emily Theokritoff. "Debt-for-Climate Swaps for Small Islands". *Nature Climate Change* 11 (2021): 889-91. https://tinyurl.com/yd7ektxb.
- UN FAO. Global Forest Resources Assessment 2020. Rome: FAO, 2020.
- UN Global Crisis Response Group. "Global Impact of War in Ukraine on Food, Energy and Finance Systems". *Global Crisis Response Group*. April 13th, 2022. https://tinyurl.com/mrnzz7n8.

- UNDP. Achieving Debt Sustainability and the MDGs in Small Island Developing States: The Case of the Maldives. New York: UNDP, 2010. https://tinyurl.com/3jnvajs7.
- UNEP. The State of Biodiversity in Latin America and the Caribbean: A MidTerm Review of Progress towards the Aichi Biodiversity Targets. New York: UNEP, 2016. https://tinyurl.com/4ykcwve2.
- UNESCO. Education for All: First Meeting of the Working Group on Debt Swaps for Education (27-28 November 2006, Paris), Final Report. September 2007. ED/EFA/RP/2007/19.
- US Global Monitoring Laboratory. "Trends in CO₂, CH₄, N₂O, SF₆". Global Monitoring Laboratory. Accessed May 12th, 2025. https://tinyurl.com/6mnt985c.
- V20. "V20 Statement on Debt Restructuring Option for Climate-Vulnerable Nations". V20. October 27th, 2021. https://tinyurl.com/mrywwep8.
- Volz, Ulrich, Shamshad Akhtar, Kevin Gallagher, Stephany Griffith-Jones, Jörg Haas and Moritz Kraemer. *Debt Relief for a Green and Inclusive Recovery: A Proposal*. Berlin: Heinrich-Böll-Stiftung / School of Oriental and African Studies-University of London / Boston University, 2020.
- Von Bechtolsheim, Matthias. "Debt for Nature Swaps in German Financial Co-Operation". *KfW Entwicklungsbank*. 2004. https://tinyurl.com/5n8kspxy.
- Warland, Linde, and Axel Michaelowa. Can Debt for Climate Swaps Be a Promising Climate Finance Instrument? Lessons from the Past and Recommendations for the Future. Zurich: Perspectives GmbH, 2015. https://doi.org/10.5167/UZH-159661.
- Weary, Robert. "Financing Action on Climate Adaptation in Small Island Developing States (SIDS) via Debt-for-Adaptation Swaps, a Global Approach". *The Nature Conservancy*. 2012.
- WMO. "2023 Shatters Climate Records, with Major Impacts". World Meteorological Organization. November 30th, 2023. https://tinyurl.com/2s4t5s72.
- World Bank. "Global Growth to Slow through 2023, Adding to Risk of 'Hard Landing' in Developing Economies". World Bank Group. January 11th, 2022. https://tin-yurl.com/fhf9pzhy.
- WWF Center for Conservation Finance. "Bilateral Debt-for-Environment Swaps by Creditor". Convention on Biological Diversity. December 9th, 2003. https://tinyurl.com/yejh3aew.
- "Commercial Debt-for-Nature Swaps". Convention on Biological Diversity. December 9th, 2003. https://tinyurl.com/2rwv3p4d.
- Yue, Mengdi, and Christoph Nedopil Wang. "Debt-for-Nature Swaps: A Triple-Win Solution for Debt Sustainability and Biodiversity Finance in the Belt and Road Initiative". Green Finance & Development Center. February 1st, 2021. https://tin-yurl.com/535reexr.
- Zylicz, Tomasz. Debt-for-Environment Swap as a Game: The Case of the Polish EcoFund. Milan: Fondazione Eni Enrico Mattei, 1998.