

A Comprehensive Framework for Conducting Debt-for-Nature Swaps: Identifying Debtor Countries and Creditor Entities

Mikaela Swanson

E-mail: mikaswanson20@gmail.com

Accepted for Publication: 2023

Published Date: October 2023

Abstract

Over the past few decades, human activities have led to habitat destruction, pollution, climate change, overexploitation, and the introduction of invasive species, causing extensive environmental damage. To address this environmental crisis and the underlying social and economic inequalities it exacerbates, innovative financial tools like debt-for-nature swaps have emerged. Debt-for-nature swaps involve financial transactions between debtor countries and creditor organisations or nations, with debtor countries receiving debt relief in exchange for investments made in local environmental conservation initiatives. This paper provides a comprehensive framework for implementing debt-for-nature swaps to make them more appealing and economically viable by identifying key factors that must be considered when selecting participating debtor countries and creditor entities. For debtor countries, these factors include environmental importance, level of debt, and willingness and capacity. For creditor entities, these include willingness to participate, reputation, geographic scope, size and resources, financial stability, and political and legal considerations. To reinforce this proposed framework, the author draws upon case studies from previous debt-for-nature swaps as supporting evidence. This paper contributes to efforts to reduce a country's external debt burden and further environmental conservancy efforts by providing a practical roadmap for policymakers and other stakeholders to efficiently implement debt-for-nature swaps, thereby contributing to a more sustainable future.

Keywords: debt-for-nature swap, debt relief, environmental conservation, debtor countries, creditor entities

1. Introduction

Over the past few decades, human activities have led to habitat destruction, pollution, climate change, overexploitation, and the introduction of invasive species, causing significant environmental damage. Biodiversity has been decreasing at an alarming rate worldwide, with many ecosystems and species facing the risk of extinction. There has been a 68% average decline in the global populations of birds, amphibians, mammals, fish, and reptiles since 1970 [1]. However, the destruction of the environment does not only affect animals; it also has far-reaching consequences for humans and the global economy. Rising sea levels caused by climate change will displace an estimated 410 million people by 2100, wreaking havoc on the economy through infrastructure damage and the disruption of trade, commerce, and transportation [2]. Furthermore, land degradation

currently affects 50% of the global population and threatens approximately 50% of the world's GDP—\$44 trillion USD [3]. If the world continues on its current trajectory, additional land degradation the size of South America will occur by 2050. The environment plays an indispensable role in providing basic necessities such as clean air, safe drinking water, food security, and medicine, which are all imperative for human survival. If the environment continues to be destroyed and no actions are taken to address these issues, the well-being and safety of every person on the planet will be at risk.

The root of environmental destruction can be traced back to economics since the global economy prioritizes profit over environmental conservation. The foundation of our economic system rests on the idea of unrestricted growth, where businesses are expected to grow continuously and

generate profits, without taking into account the world's limited capacity and resources. Many companies place more emphasis on immediate profits than long-term viability and sustainability, which leads to the depletion of natural resources and the destruction of the environment. Moreover, there is a strong correlation between environmental destruction and social and economic inequality. Due to their lack of access to basic necessities, close proximity to hazardous sites, limited political influence over environmental regulations and policies, and reliance on natural resources, marginalized and low-income groups are frequently disproportionately affected by environmental destruction. To put it differently, economic inequality can lead to greater environmental degradation as companies and individuals with more economic power have more influence over environmental policies and regulations while the impact of environmental degradation can perpetuate economic and social inequality by undermining the livelihoods of those who depend on natural resources for their survival. As a result, addressing the issue of environmental destruction requires tackling its underlying social and economic inequalities first.

Environmental degradation has a higher likelihood of occurring in areas where countries have high external debt burdens [4]. This is due to several factors such as economic pressure, lack of investment, policy trade-offs, and reduced capacity for conservation. High levels of external debt can put economic pressure on a country, leading to a focus on revenue generation and resource exploitation, sometimes at the expense of environmental conservation. Countries with hefty debt burdens may also have limited financial resources to invest in environmental conservation efforts and other sustainable practices. Moreover, in an attempt to address debt repayment, governments may make policy trade-offs that prioritize short-term economic gains over long-term environmental sustainability.

Figure 1.

Region	Biodiversity Loss (measured from 1970-2018)
North America	20%
Latin America & The Caribbean	94%
Africa	66%
Europe & Central Asia	18%
Asia & The Pacific	55%

Debt-for-nature swaps are an innovative financial mechanism that can help address the issue of environmental destruction by addressing its underlying social and economic inequalities. Debt-for-nature swaps are financial transactions between a debtor country and a creditor organization or country, where the debtor country receives debt relief in return for investing in local environmental conservation initiatives. In particular, debt-for-nature swaps are a strategy for protecting environmental interests in developing countries since developing countries tend to have higher levels of biodiversity and higher debt burdens compared to developed nations. Debt-for-nature swaps, which were developed in 1987 in response to the Latin American debt crisis, have been successfully implemented in a number of nations, including Bolivia, Ecuador, Costa Rica, the Philippines, Madagascar, and Zambia, raising more than \$1 billion USD for conservation in developing nations [5]. Moreover, debt-for-nature swaps contribute to social and economic equality by reducing a country's debt burden, investing in conservation initiatives, and including local groups and communities in the decision-making process, creating a more stable economy and sustainable future for the country and its population.

While some individuals praise debt-for-nature swaps for their ingenious solution of using international finance to further conservancy efforts, critics argue that they should stop being carried out because they perpetuate social and economic inequalities and are merely a band-aid solution to a long-term problem. Some individuals argue that debt-for-nature swaps do not actually provide any long-term benefits for a country's economy or the environment and fail to address the underlying issues of economic degradation. These problems are undermining the effectiveness and appeal of debt-for-nature swaps as a method for financing conservation. However, these concerns can be addressed by establishing a standardized framework for conducting debt-for-nature swaps—something that has been largely unexplored and unaddressed.

In this paper, I will build a cohesive framework for implementing debt-for-nature swaps, identifying ways to increase their attractiveness and feasibility, and therefore, contributing to the sustainable management of natural resources while addressing the financial burden that debtor countries face. I will discuss identifying potential participating debtor countries and creditor institutions using case studies to support my arguments.

2. Identifying Debtor Countries

To identify potential participating debtor countries, several important factors must be considered including environmental importance, level of debt, and the country's willingness and capacity.

2.1 Environmental Importance

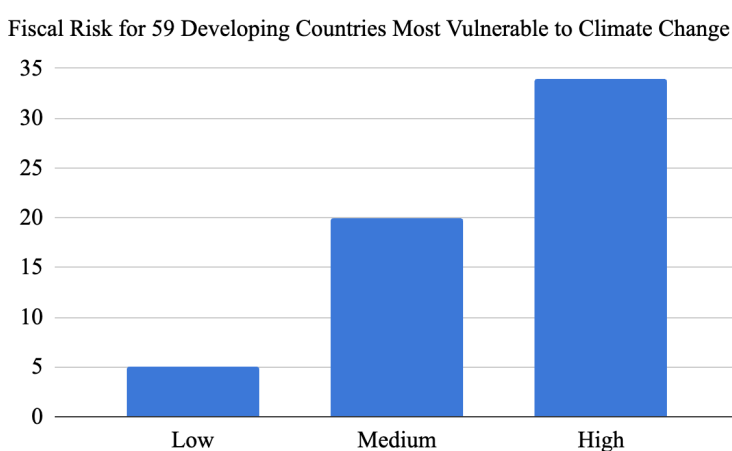
Debt-for-nature swaps should give priority to nations of great ecological value, such as those with high levels of biodiversity, rare species, or essential ecosystems. By prioritizing nations with more significant ecological importance, the debt-for-nature swap is maximizing the impact of its funds on environmental conservation since these areas are more likely to affect the environment on a global scale. Consider the Amazon rainforest—the largest rainforest in the world that spans 9 South American countries. In terms of biodiversity, the Amazon rainforest harbors 10% of the world's known species including 40,000 plant species, 5,600 fish species, 1,300 bird species, and 430 mammalian species—many of which are indigenous to the region [6]. It also plays a central role in maintaining the Earth's ecosystem by producing 20% of the world's oxygen and contains 90-140 billion metric tons of the world's carbon emissions [7]. Furthermore, the Amazon rainforest is important for regulating the global water cycle and maintaining regional climates because it is responsible for a significant portion of the world's carbon and water cycles [8]. Because of the importance of the Amazon rainforest in environmental conservation, the Tropical Forest Conservation Act (TFCA) between the United States and Brazil in 1998 established a debt-for-nature swap in which a fund was created to protect the Brazilian Amazon in exchange for the cancellation of a portion of Brazil's debt [9].

2.2 Level of Debt

Debt-for-nature swaps must also take into account a country's level of debt. The debtor country must have a high level of debt which makes it difficult for the country to meet its debt obligations and invest in environmental conservation measures without the aid of another country or institution. With the debtor country having a high level of debt, debt-for-nature swaps are able to maximize addressing environmental and economic issues at the same time. With high levels of debt, a country will not be able to invest in environmental conservancy projects. Debt-for-nature swaps are a solution to this problem because they can provide these projects with funds that otherwise would not be available. Moreover, creditor countries or institutions may be more open to participating in a debt-for-nature swap with a nation that has a high level of debt since a large debt burden

suggests that the debtor nation may only have limited financial resources, increasing the likelihood that it will not repay its debts. High levels of external debt increase the likelihood of debt crises—the inability of a country to meet its debt obligations—and loan default, with a report by the World Bank finding that the probability of a debt crisis increases significantly once external debt exceeds 60% of GDP [10]. To put it differently, high levels of external debt are a common characteristic of countries experiencing loan default and debt crises. According to another World Bank report, due to their slow economic growth, subpar export results, and susceptibility to external shocks, many low-income countries have limited capacity to service their debt [11].

Figure 2. 34 of the 59 developing countries most vulnerable to climate change are also at a high risk of fiscal crises.



Debt-for-nature swaps offer a chance to lower a nation's debt load while also funding sustainable development and conservation, which can help to stabilize a nation's economic situation. Furthermore, a country's high debt levels may be linked to environmental destruction. According to a report by the United Nations Environment Programme, unsustainable debt levels can result in the destruction of natural resources and increasing stress on biodiversity and ecosystems [12]. Another report published in the *Global Environmental Change* journal found that the governments of low-income nations may place a higher priority on debt repayment than environmental protection as a result of high debt levels, further exacerbating environmental destruction [13]. Environmental destruction also contributed to higher levels of debt as it can undermine economic growth and exacerbate poverty, making it more difficult for a country to meet its loan obligations and raising the risk of loan default [14].

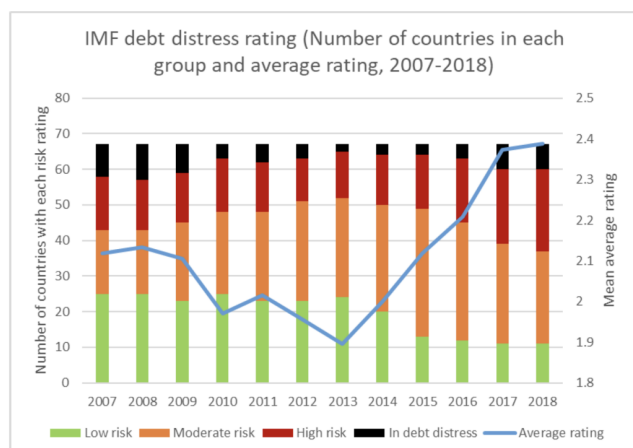
Debt-for-nature swaps can be used to address both economic and environmental issues at once by addressing a

country's underlying social and economic inequalities. For countries with significant levels of external debt, the expense of debt repayment could be a significant financial burden. Debt-for-nature swaps can help to decrease this burden by reducing the amount of debt that the country must repay and freeing up resources that could be used to finance conservation initiatives. Debtor nations may also be persuaded to take action to protect their natural resources in order to reduce their debt load through debt-for-nature swaps. This can be especially important for nations that might not have the resources or political will to prioritize conservation efforts on their own. A report published in the *Conservation Letters* journal examined 13 debt-for-nature swaps and found that the respective countries had made considerable gains in biodiversity conservation [15]. Debt-for-nature swaps can also promote long-term sustainability by linking debt reduction with environmental protection.

By encouraging debtor nations to protect their natural resources, debt-for-nature swaps can help to ensure that conservation measures are maintained in the future. A case study on debt-for-nature swaps in Costa Rica by the Global Environmental Facility provides support for this claim [16]. A debt-for-nature swap between Costa Rica and the United States in 2007 aided in the preservation of the nation's forests, the reduction of greenhouse gas emissions, and the advancement of sustainable development. As a result of the deal, Costa Rica was able to divert debt repayments into initiatives to conserve forests, which increased the amount of forest cover and lowered deforestation rates. The debt-for-nature swap benefited the nation's economy and social welfare by increasing ecotourism and generating money for nearby communities through sustainable forest management.

Many of the planet's most environmentally important places are found in developing countries with significant levels of external debt. Debt-for-nature transactions can help to protect these areas and their biodiversity, which benefits the entire planet. According to a World Wildlife Fund report, 85% of the 36 global biodiversity hotspots are located in developing countries [17].

Figure 3.



2.3 Willingness & Capacity

Debt-for-nature swaps must also consider a country's willingness and capacity. For a debt-for-nature swap to be successful, there should be government support, public approval, political stability, and social equity. The government should support conservation efforts and be ready to work with international organizations to implement conservation programs. Countries should be politically stable as politically stable countries are more likely to be able to honor international agreements and fulfill the commitments required in a debt-for-nature swap.

The proposed swap between Madagascar and the United States in 2009 is one illustration of a debt-for-nature swap that failed due to a lack of government support [18]. In accordance with the agreement, Madagascar would get a \$17 million debt reduction from the United States in return for a pledge to safeguard its forests and other natural resources. Due to Madagascar's political unrest and the lack of backing from the government, the contract was never finalized. At the time, the Madagascar government was going through a political crisis, thus the nation's officials were more concerned with other matters than conservation initiatives. The debt-for-nature swap was never put into effect because it was unable to secure the requisite backing from the Malagasy government.

The debt-for-nature swap between the United States and Haiti in the 1980s is one instance where political unrest in debtor nations has jeopardized the success of such agreements [19]. In 1987, the US and Haiti agreed to a debt-for-nature swap that would relieve Haiti's debt in return for the establishment of protected areas and the adoption of sustainable land use methods. The agreement mandated the establishment of a network of national parks to safeguard the last remaining woods in Haiti and to create ecotourism-based job possibilities for the neighborhood. The agreement's conservation measures were, however, impossible to put into action due to Haiti's political unrest. The democratically elected government of Haiti was overthrown in a coup in 1991, which resulted in years of political unrest and violence. Because of the ensuing instability, it was challenging for the Haitian government to enact environmental laws and safeguard the new national parks from activities like illegal logging and other ones that endangered the nation's natural resources. As a result, the debt-for-nature swap's planned outcomes were not met, and Haiti's environment worsened.

A robust civil society that can support and take part in conservation programs should exist within the nation. The Biodiversity Conservation Network initiative in Madagascar is one illustration of a debt-for-nature swap that failed due to a lack of public support [20]. In exchange for the

preservation of Madagascar's biodiversity, the project sought to relieve the country of its debt. However, because of a lack of public support and a failure to involve local communities in conservation efforts, the project was a failure. Many residents of Madagascar were opposed to the project because they believed it to be an invasion of their sovereignty and a threat to their way of life. As a result, neither the project nor the promised debt reduction for Madagascar was carried out.

The social equity implications of conservation measures should also be considered, to ensure that vulnerable populations are not disproportionately affected. The debt-for-nature swap that took place between Bolivia and the United States in the 1990s is one illustration of the need to take social equality into account while undertaking such transactions [21]. The Bolivian government consented to create the Madidi National Park, which included a region of crucial biological importance, as part of the trade. Indigenous populations, who had long since resided in the area and relied on its resources for their survival, were compelled to relocate as a result of the park's formation. This prompted "eco-colonialism" charges and demonstrations from indigenous communities who said they had not received fair consultation or compensation for the loss of their resources and territory.

3. Identifying Creditor Institutions

To identify potential participating creditor entities, several important factors must be considered including willingness to participate, reputation, flexibility, geographic scope, size and resources, financial stability, and political and legal considerations.

3.1 Willingness to Participate & Reputation

Creditor entities must be willing to participate in a debt-for-nature swap as not all creditor organizations are best suited for or are willing to engage in a debt-for-nature swap. It is crucial to take into account the creditor entity's reputation. Dealing with lenders who have a solid reputation for ethical practices and responsible lending is crucial.

A debt-for-nature swap agreement was agreed upon by the government of Madagascar and the US nonprofit organization Conservation International (CI) in 2007 [22]. In accordance with the agreement, Madagascar would be relieved of \$26 million in debt in return for a promise to preserve and safeguard the nation's biodiversity. Yet, due to CI's track record of working with extractive companies and backing conservation initiatives that have come under fire for uprooting indigenous populations, the arrangement was divisive from the start. Environmental and social justice organizations expressed worry that the deal could result in

the forceful relocation of indigenous peoples and would place conservation above the rights of local communities. The Malagasy government responded by suspending the arrangement in 2009, citing reservations about CI's role.

3.2 Flexibility

Creditor organizations for debt-for-nature swaps should be flexible in regard to payment since doing so enables debtor nations to achieve their conservation objectives without compromising vital public services like healthcare that are necessary for the good of a community. By providing flexible repayment terms, creditor parties can lessen the financial load on debtor nations and free up funds for conservation activities. Some examples of flexible repayment terms that will free up funds for environmental conservation include longer payback terms, lower interest rates, and smaller principal sums. If creditor entities were to become more flexible in payment, the allure of debt-for-nature swaps from the perspective of debtor countries would increase along with the likelihood that conservation efforts will be successful. Flexible repayment terms can also contribute to the development of trust between creditors and debtor entities since they show that creditors are willing to cooperate with debtor nations and support their conservation efforts, encouraging long-term relationships and raising the possibility of future cooperation on conservation-related projects.

The early 2000s debt-for-nature swap between Madagascar and the United States is one instance of a debt-for-nature swap that failed because the creditor party lacked flexibility [23]. The US government gave up \$24 million of Madagascar's debt in exchange for the nation's promise to safeguard its tropical forests in 2000. Yet the debt relief came with stringent requirements and quick repayment schedules, which Madagascar found to be too onerous. The nation struggled to keep up with the repayment schedule, which required considerable sums of foreign currency. In order to pay the debt, the nation had to take money away from vital social programs. Madagascar was unable to properly carry out its conservation promises as a result, and the debt-for-nature swap did not accomplish its intended goals.

3.3 Geographic Scope

Debt-for-nature swaps should take into account the geographic reach of the creditor party since this can greatly affect the success and efficiency of the swap. To guarantee that the goals of the swap are attainable and sustainable, the creditor organization should have experience and knowledge of the region where the conservation activities will take

place. If the creditor entity is ignorant about the regional ecological circumstances, the conservation initiatives they support could not be appropriate for the particular ecosystem, which could result in failure. Likewise, if the creditor entity is unfamiliar with the regional culture and social dynamics, they might not be able to collaborate with local populations to conduct conservation initiatives, which could result in community resistance and rejection. In order to track the development of the conservation efforts and guarantee adherence to the conditions of the agreement, the creditor entity should also have a presence in the region of the debt-for-nature exchange. This calls for resources and knowledge that creditors without a local presence might not have access to.

The proposed debt-for-nature swap between the government of Cambodia and Conservation International (CI) in 2000 is one instance of a debt-for-nature swap that did not take place as a result of the creditor entity's constrained geographic reach [24]. Under the planned agreement, conservation measures would be implemented in the Cardamom Mountains region—an area with high biodiversity—in exchange for debt relief for Cambodia. The agreement ultimately failed, however, due to doubts about CI's capacity to supervise and uphold the conservation measures as well as issues with the organization's limited experience working in Cambodia. It was also stated that some Cambodian officials were uneasy about the idea of allowing a foreign organization (US-based) to play a big role in managing the nation's natural resources.

3.4 Size & Resources

It is also important to take into account the creditor entity's size and resources. Big, established creditors may be better able to manage the risks involved in debt-for-nature swaps and may have more funds available to invest in environmental conservancy initiatives.

Bolivia and the Wildlife Conservation Society (WCS) is one instance of a debt-for-nature swap that didn't take place as a result of the creditor entity's limited size and resources [25]. To safeguard the nation's forests and biodiversity, the Bolivian government indicated an interest in taking part in a debt-for-nature swap with the WCS in the early 2000s. But being a relatively small organization, the WCS lacked the funding necessary to buy Bolivia's debt at the necessary discount rate. Despite efforts to obtain more funding from other institutions, the debt-for-nature swap was unsuccessful because of the WCS's financial limitations.

3.5 Financial Stability

The creditor entity must possess the financial means and stability to carry out the swap successfully and make the long-term investments required to meet the swap's environmental objectives. It should also be able to bear the loss of a portion of the loan given the nature of these swaps. This is crucial because the swap might not go as intended if the creditor entity is not financially sound and able to afford the loss of debt. If the creditor entity were to sustain large financial losses as a result of the exchange, the creditor entity's operations could become unstable, which would make it harder for it to meet its responsibilities to other creditors and stakeholders. Debt-for-nature swaps additionally demand a long-term commitment from the creditor party. The money saved from debt forgiveness is often used to fund conservation initiatives, some of which could take decades to yield noticeable impacts. To ensure that the environmental aims of the exchange are met, the creditor company must be financially sound and have a long-term vision.

The proposed debt-for-nature swap between Costa Rica and Italy in the early 1990s is another illustration of a debt-for-nature swap that failed as a result of the creditor country's financial instability [26]. The debt would have been cancelled in exchange for Italy buying a piece of Costa Rica's debt, and Costa Rica would have used the money saved to fund environmental projects. However, the agreement did not come to fruition because of Italy's unstable financial situation. Early in the 1990s, Italy suffered significant economic difficulties, including rising inflation and a depreciating currency, and was unable to pay the money required to buy Costa Rica's debt and make investments in conservation initiatives.

3.6 Political & Legal Considerations

When undergoing a debt-for-nature swap, the creditor entity should be aware of the applicable legal entailments, rules, and regulations. This includes abiding by the debtor country's legal requirements and international rules as well. The structure of the swap must be compatible with the institutional and legal systems of the debtor nation, and adequate support must be offered to resolve any institutional or legal obstacles to the swap's success.

The proposed swap between Madagascar and the World Bank in the 2000s is one instance of a debt-for-nature swap that failed as a result of the creditor's failure to take legal factors into account [27]. The World Bank would have bought a piece of Madagascar's debt under the proposed swap, and Madagascar would have used the money it would have saved from the debt forgiveness to fund environmental projects. But, due to legal issues, the deal did not go through.

The conservation organizations that were supposed to gain from the exchange as well as the Madagascar government did not possess the legal capacity to receive land rights transfers from non-Malagasy parties. The World Bank did not fully take into account this legal issue and did not offer enough assistance to address the legal obstacles to the swap.

Creditor entities should also take into account political considerations when proposing a debt-for-nature swap. Debt-for-nature swaps mandate the involvement and diligence of numerous stakeholders, including the government of the debtor nation, the creditor organization, and local communities. These stakeholders might not be able to make the long-term investments required to accomplish the environmental and economic goals of the swap without governmental stability and support. The debtor country should have a stable political environment, a government that is committed to environmental conservation efforts, and a community with the political will to implement and enforce the agreed-upon initiatives. The conservation and environmental initiatives funded by the debt-for-nature swap may have an impact on local communities; thus, these communities should be involved in their planning and execution. The creditor party must guarantee that the interests and concerns of the local community are adequately addressed while also taking into account the existing social and political dynamics. Priorities may change and participants may lose interest in the swap's objectives as a result of political unrest or a change in the government. The creditor entity must evaluate the risks and difficulties to the long-term viability of the debt-for-nature swap while taking into account the political climate of the debtor nation.

The proposed swap between Argentina and the US in the early 2000s is one instance of a debt-for-nature swap that failed because the creditor entity neglected to take the political climate of the debtor nation into account [28]. The failure of the swap was caused by the United States' inadequate consideration of the political climate and the government's priorities. Argentina's political climate was turbulent at the time due to the nation's economic crisis and social unrest. Environmental issues were neither the government's top priority nor the public's top worry as the administration worked to address the nation's debt crisis and stabilize the economy. The effectiveness of the debt-for-nature swap was hampered by a lack of political backing and the government's unwillingness to place environmental protection high on its agenda. The swap called for large investments in environmental initiatives and regulatory changes, but the government was unable to make these commitments because of the economic and social difficulties it was facing. The United States ignored these

political considerations and did not offer enough assistance to remove the political obstacles standing in the way of implementing a debt-for-nature swap.

Acknowledgements

I would like to thank Mr. Sunny Ubale and Mr. Keivan Aghasi for their invaluable guidance and unwavering support throughout the entire research process. Their expertise and mentorship has been instrumental in shaping this research and has inspired me to continue pursuing a career in business and finance. I am sincerely thankful for their dedication and commitment to my academic journey.

References

- [1] "Living Planet Report 2020." *WWF*, World Wildlife Fund, 10 Sept. 2020, www.worldwildlife.org/publications/living-planet-report-2020#:~:text=The%20findings%20are%20clear%3A%20Our,planet%20loom%20closer%20than%20ever.
- [2] "Sea Level Rise: Everything You Need to Know." *World Economic Forum*, www.weforum.org/agenda/2022/09/rising-sea-levels-global-threat/.
- [3] "Chronic Land Degradation: UN Offers Stark Warnings and Practical Remedies in Global Land Outlook 2." *UNCCD*, www.unccd.int/news-stories/press-releases/chronic-land-degradation-un-offers-stark-warnings-and-practical.
- [4] Anukwonke, Charles. "Debt for Nature Swap as an Option to Forest Conservation: a Case of Nigeria". 2015.
- [5] Linstroth, J.P. *Environment, Humanism, Science, and Tolerance*. 2022.
- [6] "About the Amazon." *WWF*, https://wwf.panda.org/discover/knowledge_hub/where_we_work/amazon/about_the_amazon/.
- [7] D'Almeida, Cassiano, et al. "The effects of deforestation on the hydrological cycle in Amazonia: A review on scale and Resolution." *International Journal of Climatology*, vol. 27, no. 5, 2007, pp. 633–647, <https://doi.org/10.1002/joc.1475>.
- [8] Mason, Paige. "Inadequacies of the Amazon Fund: Evaluating Brazil's Sovereignty in the Context of Promising Market Mechanisms and the Need for International Oversight to Protect the Amazon Rainforest". *Touro International Law Review*, vol. 13, 2010.
- [9] World Bank. *Global Economic Prospects*, www.worldbank.org/en/publication/global-economic-prospects.

- [10] World Bank. “Global Waves of Debt: Causes and Consequences”. 2021.
- [11] Global Resources Outlook. “Natural Resources for the Future We Want”. 2019.
- [12] Lukšić, Igor, et al. “Innovative Financing of the Sustainable Development Goals in the countries of the western balkans.” *Energy, Sustainability and Society*, vol. 12, no. 1, 2022, <https://doi.org/10.1186/s13705-022-00340-w>.
- [13] Essl, Sebastian Michael, et al. “Debt in Low-Income Countries: Evolution, Implications, and Remedies.” *SSRN*, 26 Mar. 2019, papers.ssrn.com/sol3/papers.cfm?abstract_id=3360153.
- [14] Rubin, Steven. “International Conservation Finance: Using Debt Swaps to Foster Conservation of Biodiversity”. *The Journal of Social, Political, and Economic Studies*, vol. 19, 1994.
- [15] Hamlin, Timothy. “Debt-for-Nature Swaps: A New Strategy for Protecting Environmental Interests in Developing Nations”. 1989.
- [16] Hansen, Stein. “Debt-for-nature swaps – Overview and discussion of key issues”. *Ecological Economics*, vol. 1, 1989.
- [17] Knicley, Jared. “Debt, Nature, and Indigenous Rights: Twenty-Five Years of Debt-for-Nature Evolution”. *Harvard Environmental Law Review*, vol. 79, 2012.
- [18] Alagiri, Priya. “Give Us Sovereignty or Give Us Debt: Debtor Countries’ Perspective on Debt-for-Nature Swaps”. *American University Law Review*, vol. 41, 1991.
- [19] Macekura, Stephan. “Crisis and Opportunity: Environmental NGOs, Debt-for-Nature Swaps, and the Rise of ‘People-Centred’ Concentration”. *Environment and History*, vol. 22, 2016.
- [20] Hrynik, Tamara. “Debt-for-Nature Swaps: Effective but not Enforceable”. *Case Western Reserve Journal of International Law*, vol. 22, 1990.
- [21] Sheikh, Pervaze. “Debt-for-Nature Initiatives and the Tropical Forest Conservation Act (TFCA): Status and Implementation”. 2018.
- [22] Didia, Dal. “Debt-for-nature swaps, market imperfections, and policy failures as determinants of sustainable development and Environmental Quality.” *Journal of Economic Issues*, vol. 35, no. 2, 2001, pp. 477–486, <https://doi.org/10.1080/00213624.2001.11506382>.
- [23] Lewis, A. “The Evolving Process of Swapping Debt for Nature”. *Colorado Journal of International Environmental Law and Policy*, vol. 10, 1999.
- [24] Leon, David. “Expanding the Scope of the Tropical Forest Conservation Act: Exchanging Foreign Debt for Sustainable Development”. *University of Miami International and Comparative Law Review*, vol. 11, 2003.
- [25] Hawkins, Ann Patrick. “Swapping Debt for Nature: Emergence of a New Global Structure?” 1990.
- [26] Reilly, William. “Using International Finance to Further Conservation: The First 15 Years of Debt-for-Nature Swaps”. *Oxford University Press*. 2006.
- [27] Asiedu-Akrofi, Derek. “Debt-for-Nature Swaps: Extending the Frontiers of Innovative Financing in Support of the Global Environment”. *SMU Scholar*. 1991.
- [28] Mussa, Michael. “Argentina and the Fund: From Triumph to Tragedy”. *Institute for International Economics*, vol. 67, 2002.