

---

LKI *Policy Briefs* are extended analyses on policy issues.

---

## **‘Debt-for-Renewables’ Swaps: How to Address Climate, Debt and Energy Sector Vulnerabilities in Sri Lanka**

Michael Iveson  
September, 2023

**Abstract :** *Sri Lanka faces an unprecedented economic crisis that threatens to undermine efforts to address climate vulnerabilities. Policymakers and experts have explored the potential of climate finance instruments, such as debt-for-nature and debt-for-climate swaps, to tackle debt and climate vulnerabilities simultaneously. This policy paper proposes a ‘debt-for-renewables’ swap as a type of debt-for-climate swap mechanism to mobilise capital for essential investments in climate-resilient energy infrastructure in Sri Lanka. Servicing external sovereign debt has significant opportunity costs for Sri Lanka’s economic development; policymakers must explore innovative ways to reallocate finance towards more productive sectors and create a more sustainable debt environment. A ‘debt-for-renewables’ swap exists at the intersection of debt, climate and energy sector challenges and has the potential to generate a large multiplier effect that also addresses structural imbalances in the Sri Lankan economy.*

---

**Michael Iveson** is a Research Fellow at the Lakshman Kadirgamar Institute of International Relations and Strategic Studies (LKI) in Colombo. The opinions in this Policy Brief are the author’s own and not the institutional views of LKI. They do not necessarily represent or reflect the position of any other institutions or individual with which the author is affiliated.



# **‘Debt-for-Renewables’ Swaps: How to Address Climate, Debt and Energy Sector Vulnerabilities in Sri Lanka**

Michael Iveson\*

## **Contents**

1. Introduction.....	1
2. Debt and Climate; Interrelated Vulnerabilities .....	1
3. Understanding Debt - for Climate and Debt - for - Nature Swaps .....	4
3.1. Debt-for Climate vs Debt-for-Nature Swaps .....	4
3.2. Debt-for-Nature Swaps in Belize and Seychelles .....	5
3.3. Challenges of Debt-for-Climate Swaps .....	6
3.4. Lessons for Sri Lanka .....	8
4. A ‘Debt-for-Renewables Swap’ in Sri Lanka .....	9
4.1 Sri Lanka’s Nationally Determined Contributions (NDCs).....	9
4.2 Structural Imbalances in Sri Lanka’s Energy Sector .....	10
4.3 The ‘Debt-for-Renewables’ Framework .....	12
4.4 Creditor Incentive Structures .....	14
5. Policy Recommendations.....	16
6. Conclusion .....	18
References .....	20

## **1. Introduction**

As the world grapples with the pressing need to mitigate and adapt to the adverse impacts of climate change, developing countries find themselves at the forefront of this global challenge. Sri Lanka faces the dual burdens of mounting debt and increasing climate vulnerabilities, necessitating innovative approaches that can address both challenges simultaneously. In recent years, several developing countries have embraced debt-for-nature swaps as financial arrangements to achieve more sustainable debt burdens. Belize and Seychelles, two notable examples, mobilised significant amounts of capital for conservation projects by redirecting debt repayments with the support of international NGOs. The scale and implementation of these agreements have signalled to debtor governments that incentive structures exist for debt swaps in the current global debt crisis and many governments, including Sri Lanka, are hoping to capitalise on climate finance for development.

Sri Lanka, like many developing nations, has been compelled to borrow substantial sums of money to finance critical infrastructure projects and support its economic development. However, this has resulted in an alarming increase in national debt, constraining the country's fiscal space and limiting its capacity to allocate resources towards climate change adaptation and mitigation measures. Climate finance instruments offer developing countries an opportunity to alleviate their debt burdens while simultaneously funding crucial climate-resilient investments.

The purpose of this paper is to highlight the intersection of Sri Lanka's debt and climate challenges and how climate finance instruments can create fiscal space to address structural imbalances in the economy. This paper posits that Sri Lankan policymakers should target the domestic energy sector and employ debt-for-climate swaps to mobilise capital for renewable energy infrastructure investments that have a significant multiplier effect on the domestic economy.

The rest of the paper is structured as follows: Section 2 examines the relationship between debt and climate vulnerabilities in Sri Lanka and the parallels to other developing countries; Section 3 describes debt-for-climate swap mechanisms, previous case studies, challenges and applications to Sri Lanka; Section 4 discusses the potential role of a 'debt-for-renewables' swap and how climate finance can be redirected towards investment in Sri Lanka's renewable energy infrastructure; Section 5 provides policy recommendations for Sri Lanka to unlock the full potential of debt-for-climate swaps; Section 6 concludes.

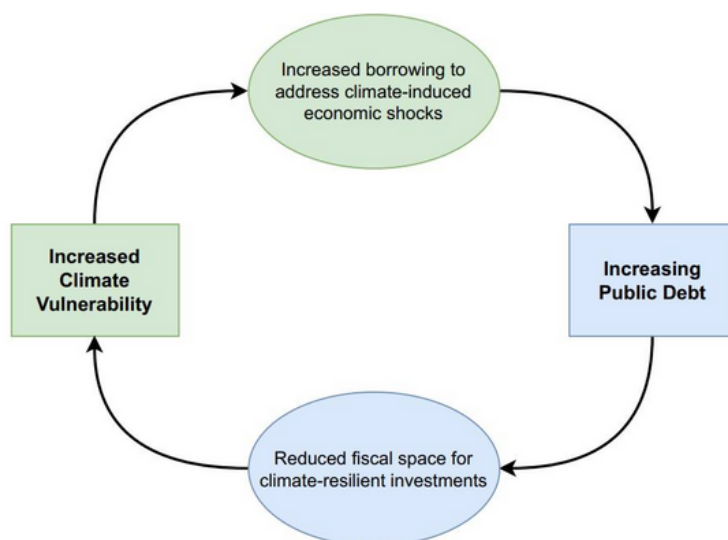
## **2. Debt and Climate: Interrelated Vulnerabilities**

In 2021, developing countries paid \$400Bn in debt service, which is more than twice the amount that they received in aid payments (Grynspar, 2023).

Servicing foreign debt is incredibly expensive for developing countries not only because of the absolute cost associated with repayments but also the significant opportunity costs. Developing countries forgo investment in essential infrastructure, social services and public investments that have high economic and social returns to service debt obligations that have no tangible economic outcomes for its citizens. Foreign debts are consuming an increasingly larger proportion of government revenues, and this will only be exacerbated by falling tax revenues due to rising unemployment and rising global interest rates driving up the price of servicing debt (International Development Committee, 2023). There is also a significant opportunity cost for developing countries concerning climate vulnerabilities. Developing countries experience significantly higher levels of climate risk and require greater investments in climate-resilient infrastructure to mitigate the effects of climate change. However, developing countries are less likely to have the fiscal space to make these essential investments which will lead to further climate-induced global inequality.

There exists a strong correlation between developing countries' vulnerability to climate change and the risk of fiscal crisis; the causality of which runs in both directions (IMF, 2022). On the one hand, developing countries with high levels of debt are unable to free up the capital necessary to mitigate climate risk, leaving them more vulnerable to the consequences of climate change. On the other hand, climate risk can exacerbate debt vulnerabilities by reducing the productive capacity of the economy both in the short run and the long run. The increased prevalence of natural disasters and droughts in developing countries causes short-term fiscal shocks, such as financing emergency relief and providing essential services to deal with crises, while also affecting longer-term economic prospects such as harming land productivity and reducing the tax base. If not managed effectively this can create a vicious cycle of debt and climate crises, which is demonstrated in Figure 1.

Figure 1: The Vicious Cycle of Debt and Climate Crises

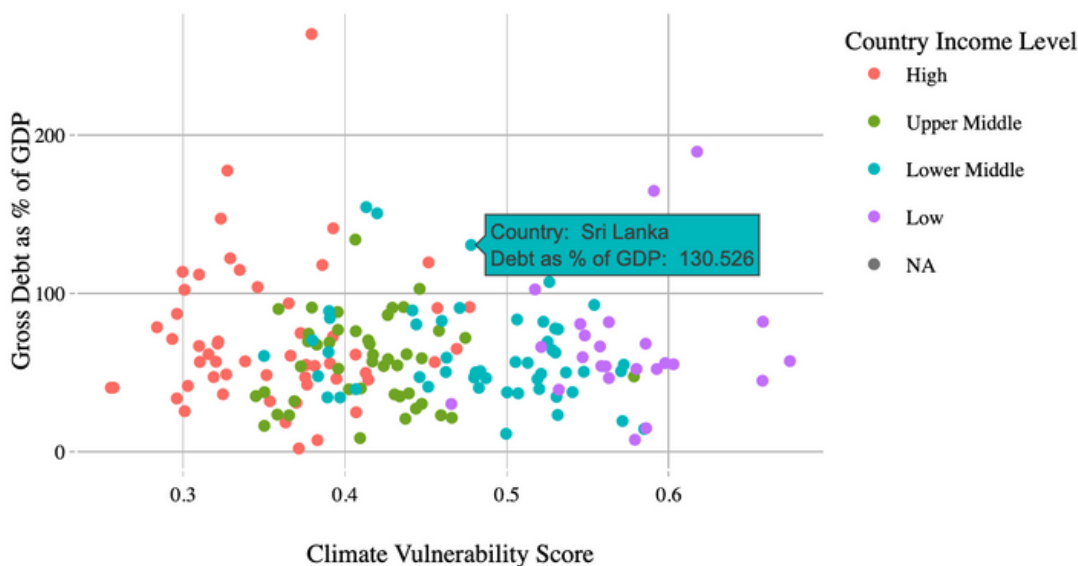


Source: Author

The Asian Development Bank’s climate risk country profile recognises Sri Lanka as climate-vulnerable; according to the 2021 ND-GAIN Index, a measurement index that summarises a country’s vulnerability to climate change alongside its readiness to improve resilience, Sri Lanka is ranked 124th for vulnerability and 99th for readiness out of 185 and 194 countries, respectively (ADB, 2020; University of Notre Dame, 2021). With respect to vulnerability, a lower rank represents greater climate vulnerability, placing Sri Lanka in the top third of countries most vulnerable to the consequences of climate change. As for readiness to improve resilience, a higher rank translates to better preparedness to adapt to the consequences of climate change. Sri Lanka ranks in the bottom 50% for this indicator. Despite facing greater vulnerabilities, Sri Lanka is less prepared to overcome these climate challenges.

Given that these indices were calculated before the ongoing economic crisis, Sri Lanka’s unsustainable debt burden and limited fiscal space will have further reduced its capacity to fund investments that build resilience against climate change, and it is expected that its readiness index will be lower when the most recent iteration is published. Figure 2 shows the relationship between the climate vulnerability index and gross debt as a % of GDP, demonstrating a clear positive correlation between climate vulnerability and debt distress for all countries, including Sri Lanka.

Figure 2: The Relationship Between Debt and Climate Vulnerabilities



Source: Hebbale (2022)

The relationship between Sri Lanka's climate and debt vulnerabilities demonstrates the urgent need for the government to incorporate environmental considerations into their debt restructuring negotiations. Addressing fiscal imbalances requires strong attention to climate vulnerability and how to mitigate future economic shocks induced by the consequences of climate change. Although these two challenges can be tackled individually through separate mechanisms, combining fiscal adjustment and climate finance can create better incentive structures for governments to fulfil their debt and climate obligations. This requires innovative approaches to debt relief and environmental conservation through climate finance mechanisms, of which debt swaps are a two-pronged solution for heavily indebted countries.

### **3. Understanding Debt-for-Climate and Debt-for-Nature Swaps**

#### **3.1: Debt-for-Climate vs Debt-for-Nature Swaps**

A debt-for-climate swap is a mechanism that enables heavily indebted countries to restructure their external debt onto more favourable terms in exchange for environmental commitments. They are a voluntary mechanism that involves creditors cancelling or reducing unsustainable debt while creating obligations for the debtor to protect the local environment (Gordon, 2022). Debt-for-climate swaps come in different forms but are typically associated with bilateral and tripartite swaps; bilateral swaps involve bilateral creditors redirecting debt repayments to mutually agreed conservation projects, whereas tripartite swaps involve an NGO as a financial intermediary (Soutar and Coup, 2022). In the past, tripartite swaps have involved NGOs lending money to debtors to repurchase their debt at a discounted rate while requiring that a portion of the mobilised capital be used to fund environmental investments.

Previous debt swap agreements, such as in Seychelles and Belize, have focussed on biodiversity and environmental conservation projects, which classifies them as debt-for-nature swaps. Debt-for-nature swaps and debt-for-climate swap mechanisms are very similar because they restructure debt repayments and reallocate funds towards more productive investments with environmental commitments. Debt-for-nature swaps in Belize and Seychelles provide strong examples of how these instruments have reduced debts owed in foreign currencies and released funds to local environmental conservation authorities in the domestic currency in one transaction. This reduced the foreign exchange burden for these heavily indebted countries and provided the necessary capital to invest in environmental infrastructure, specifically in the blue economic sectors.

The main difference between the two types of agreements is that debt-for-nature swaps typically address conservation targets and environmental protection whereas debt-for-climate swaps are proposed as instruments to invest in climate change adaptation and mitigation. Although developing countries have not yet employed debt-for-climate swaps to complement domestic debt restructuring, discussions have emerged between the governments of Portugal and Cabo Verde indicating that they have developed a framework for the world's first debt-for-climate swap, which involves ocean conservation and renewable energy investments (Kelly et al., 2023).

### 3.2: Debt-for-Nature Swaps in Belize and Seychelles

A recent example of a debt-for-nature swap was in Belize in 2021, where the Central American nation experienced a significant increase in its debt-to-GDP ratio, from 100% to 125%, because of falling tourism revenues during the COVID-19 pandemic, and faced a severe risk of defaulting on its sovereign debt. The Belizean government borrowed \$364M from The Nature Conservancy, a US-based NGO, and used the funds to repurchase its only international bond, valued at \$553M, at a discounted rate of 55 cents on the dollar. This discount mobilised around \$180M to fund ocean conservation projects and protect the Belize Barrier Reef System (Owen, 2022). The agreement also required the Belizean authorities to fulfil specific environmental obligations, namely, to spend \$4M per year on marine conservation until 2041 and double its marine-protection parks from 16% to 30% of oceans by 2026. Through a single mechanism, Belize reduced its national debt by 10% of GDP and unlocked essential funding to protect its local environment.

The Belizean debt-for-nature swap is backed by a blue bond with a payback period of 19 years and an initial 10-year grace period on principal payments. International investors were cautious about investing in the debt-for-nature swap as revenues were not guaranteed and Belize still faced significant debt challenges. However, the blue bonds were backed by the US International Development Finance Corporation which gave Belize a strong credit rating, and this improved investor confidence and insured the bond (GFI, 2022). The debt-for-nature swap restructured a significant portion of Belize's national debt onto more favourable terms while also providing direct debt relief in the form of a discounted repurchase agreement. This structure made repayments more manageable and reduced the nation's risk of default.

Another successful example of a debt-for-nature swap was in Seychelles. In 2012, Seychelles committed to increasing its marine protection from 0.04% to 30% of its Exclusive Economic Zone (EEZ) by 2020 (Government of Seychelles, 2012). Because of the importance of the blue economic sector to Seychelles' long-term economic development, the government committed to funding large-scale conservation projects, and this required a robust blue economic strategy to maximise the potential of its rich natural resources.



However, Seychelles continued to suffer from the longer-term economic consequences of the global financial crisis, which limited the fiscal space available for essential public investments in marine conservation. Seychelles' debt-to-GDP ratio exceeded 150% and the government faced pressing challenges to address climate and debt vulnerabilities simultaneously with limited fiscal resources.

In 2018, Seychelles agreed to a debt-for-nature swap with The Nature Conservancy (TNC) which restructured \$21.6M of public debt at a discounted rate of 93.5% of its original value. The newly established Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) repurchased the debt and sovereign debt repayments are allocated to this fund to finance ocean conservation projects (Commonwealth, 2020). SeyCCAT provides more generous repayment terms to the government of Seychelles, and provides cash flow relief on repayments to relieve fiscal pressures. Unlocking this financing enabled the Seychelles government to maintain its ambitious ocean conservation targets. The fund also supported the development and implementation of a Marine Spatial Plan (MSP), which established a clear regulatory framework for the blue economy and ensured that ocean conservation and sustainability were at the heart of Seychelles' economic growth (Wang and Wang, 2020).

Although the debt-for-nature swap was small in absolute terms, it acted as a catalyst for Seychelles to establish other climate finance mechanisms for ocean conservation. The deal signalled to investors that Seychelles were committed to meeting their ambitious marine conservation targets and the establishment of an MSP reinforced investor confidence in the blue economy. The implementation of a clear, sustainable strategy for the blue economy acted as a springboard for Seychelles to launch the world's first sovereign blue bond in 2018, which combines private and public investment to expand marine protected areas and promote sustainable fishing practices.

### 3.3: Challenges of Debt-for-Climate Swaps

Despite mobilising significant capital for marine conservation and relieving developing countries of unsustainable debt repayments, there are still some challenges of debt swap deals that must be considered. The main factors constraining the implementation of debt swaps in developing countries concern the high transaction and monitoring costs associated with the agreements. Debt swaps are tied to suitable investment projects, which must be identified, structured, implemented, and monitored. This involves time-consuming negotiations between creditors and debtors and imposes significant costs on domestic and international institutions due to the complexity of the agreements. Furthermore, the bespoke nature of each agreement requires creditors to familiarise themselves with each specific project, a time - consuming process that could be avoided if there were universal performance indicators and monitoring standards (Chamon et al., 2022).

The complexity of debt swaps raises questions about the efficiency of such instruments and whether implementing these projects and restructuring debt in one transaction is the most effective allocation of funds.

However, it is important to recognise that alternative debt restructuring negotiations also impose significant costs on debtors and creditors. Debt restructuring processes require several different parties, advisors, policymakers and legal experts to finalise agreements and these transactions are inherently expensive. The challenges of debt restructuring negotiations are not unique to debt-for-climate swaps and negotiators must aim to maximise the benefits and minimise the costs of debt restructuring agreements. Debt-for-climate swaps have the potential to offset high transaction costs through realising environmental benefits that contribute to an economic multiplier effect far beyond the initial benefits of restructuring debt. Furthermore, transaction costs and inefficiencies should naturally decrease over time as climate finance instruments are more widely employed and a blueprint is developed. This could also be complemented by uniform performance indicators that create a transparent monitoring environment for creditors that minimises the administrative burdens and builds institutional capacity (Chamon et al., 2022).

An additional concern raised in a statement by the Coalition for Fair Fisheries Arrangement describes the powerful influence that is given to NGOs through debt-for-nature swaps (CFFA, 2022). Developing countries must not overextend themselves to satisfy demanding conditionalities set by NGOs in exchange for debt relief. Debt-for-climate swaps must properly evaluate the impact of these top-down conditionalities on local communities in areas that require conservation while ensuring that decision-making processes empower local communities and support political accountability. Developing countries must receive support from these organisations but also be given policy autonomy in their economic recovery. If developing countries establish agreements with unrealistic environmental targets to tackle unsustainable debt, they risk falling short on their debt and climate obligations. This would exacerbate debt and climate pressures in the long run and compromise relationships with creditors. To mitigate the potential risk of overextending themselves, developing countries should use debt-for-climate swaps to facilitate the pursuit of already-established environmental targets. Governments should prioritise their environmental outcomes and utilise debt-for-climate swaps as a mechanism to secure consistent flows of capital to support their environmental action, rather than valuing them purely as a debt relief instrument.

These are important considerations for developing countries as debt-for-climate swaps are often portrayed as a ‘win-win solution’ for debt relief and environmental conservation; while they are mutually beneficial agreements, this is not necessarily the full picture.

Debt-for-climate swaps are useful for debt restructuring in countries with a high risk of default; however, these must be complemented by other debt restructuring alternatives, fiscal responsibility and, where available, unconditional debt relief. Recognising the challenges of debt-for-climate swaps does not suggest that they are an ineffective mechanism but rather it highlights the challenges that must be addressed to deliver the best environmental and debt restructuring outcomes for the economy.

### 3.4: Lessons for Sri Lanka

The case studies of Belize and Seychelles demonstrate the importance of a strong tourism sector in attracting investors to climate finance. Ocean conservation and blue economic investments have direct economic benefits on the tourism sector and will preserve future demand, which brings significant multiplier effects to the blue economy in the long run. The tourism industry guarantees a sustainable source of government revenue and assures creditors that debtor governments will be able to service their debt obligations alongside environmental commitments. Sri Lanka could certainly capitalise on the tourism sector through a debt swap, ensuring that a sustainable tourism model protects the island's coastline, national parks, and biodiversity, which all contribute significantly to foreign tourist demand.

Debt-for-nature swaps are most effective when they unlock financing for already-established environmental commitments. Debtor governments must identify the significant opportunity costs associated with debt repayments and demonstrate to creditors that returns can be generated by redirecting this capital to more productive areas of the economy. If a debtor government has ambitious environmental commitments that will not be achieved due to limited fiscal space, this is where debt swaps have the greatest potential for economic, social, and environmental benefits. This was clear in Seychelles, where, although the agreement did not lead to a large amount of direct debt relief, it showcased the government's clear conservation strategy and the long-term benefits associated with it.

Debt relief must be seen as an additional benefit to a debt swap, rather than the initial motivation; otherwise, developing countries risk overcommitting to environmental obligations that they cannot fulfil, which will worsen their credibility and lead to further debt problems down the line. Furthermore, debt swaps should unlock additional financing that complements public investments in other relevant sectors. If the government accesses climate financing and uses this to supplement ongoing environmental investments without any increase in overall spending, it will continue to fall short of climate targets and damage relationships with its creditors.

Debt-for-nature swaps have seen success in developing countries so far and could certainly be extended to Sri Lanka. However, a more productive implementation of climate finance instruments would be to identify sectors that have a multiplier effect on broader economic outcomes. This would highlight an even greater opportunity cost associated with servicing debt repayments and demonstrate to creditors that unlocking financing for development would have significant benefits beyond conservation and adaptation. Belize and Seychelles identified the tourism sector, among others, as a way of creating an economic multiplier effect and this is also a sector that Sri Lanka could capitalise on. However, there are substantially greater opportunity costs within the domestic energy sector and policymakers should explore ways of unlocking climate finance to promote energy sector diversification through renewable energy investments.

#### **4. A ‘Debt-for-Renewables Swap’ in Sri Lanka**

##### **4.1: Sri Lanka’s Nationally Determined Contributions (NDCs)**

Given the multidimensional benefits that would be realised by investments in domestic renewable energy infrastructure, this paper examines the potential of a ‘debt-for-renewables’ swap to support Sri Lanka’s Nationally Determined Contributions (NDCs) in the energy sector. This type of agreement would technically be classified as a debt-for-climate swap, rather than a debt-for-nature swap, as the environmental commitments do not strictly address nature conservation projects, but rather explore how renewable energy investments and accelerated coal power retirement mechanisms would be funded through debt restructuring agreements.

In 2021, Sri Lanka committed to generating 70% of its domestic electricity through renewable energy sources by 2030, with the longer-term goal of achieving a full renewable electricity supply by 2050 (Ministry of Environment, 2021). This will require significant investment in domestic renewable energy infrastructure, particularly in the wind, solar and hydroelectric sectors, and will require sustainable access to financing from both the public and the private sectors. Given the current fiscal constraints of the Sri Lankan government due to the ongoing economic crisis, with weak taxation mechanisms and high levels of external debt, it is unlikely that there will be sufficient public sector revenue to finance the necessary infrastructure investments to meet these ambitious renewable energy targets.

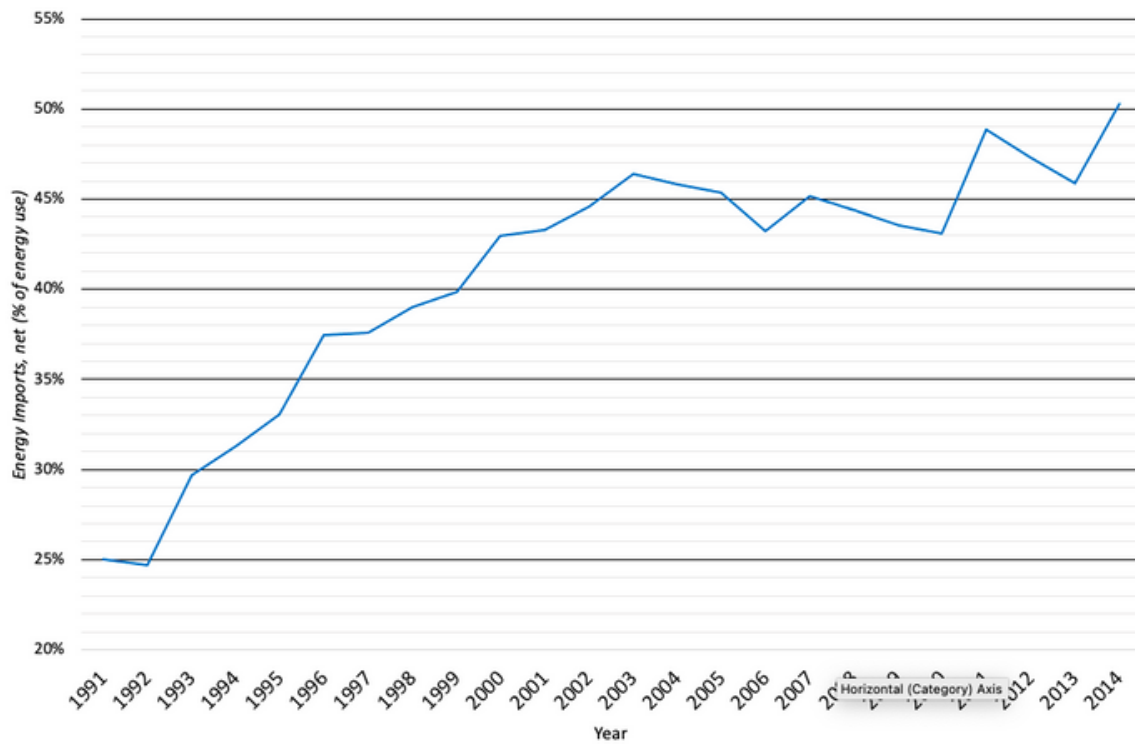
Given the current fiscal constraints of the government due to the ongoing debt crisis, and the increased likelihood that Sri Lanka will fall short of its energy sector NDCs, a debt-for-climate swap could have significant potential to unlock the funds required to invest in climate change adaptation through renewable energy infrastructure. Such an agreement could also have a significant economic multiplier effect beyond these environmental targets as it would mobilise funds to address structural imbalances that exist at the heart of the domestic energy sector.

#### 4.2: Structural Imbalances in Sri Lanka's Energy Sector

Because Sri Lanka relies heavily on fuel imports from abroad - around two-thirds of the national energy supply comes from imported natural gas and oil - energy prices are dictated by the interaction of supply and demand in the volatile global commodity markets. Moreover, global commodities are typically traded in U.S Dollars, which requires Sri Lanka to rely on foreign exchange reserves to maintain domestic energy consumption. This makes Sri Lanka's energy sector highly vulnerable to exogenous economic shocks, which materialised during the energy crisis in 2022. When a combination of the COVID-19 pandemic and the Russian invasion of Ukraine caused falling global incomes and soaring fuel prices, Sri Lanka began exhausting foreign exchange reserves to maintain essential fuel imports for the population. Eventually, when foreign exchange reserves were depleted, fuel imports became unaffordable, and this led to electricity shortages and fuel rationing.

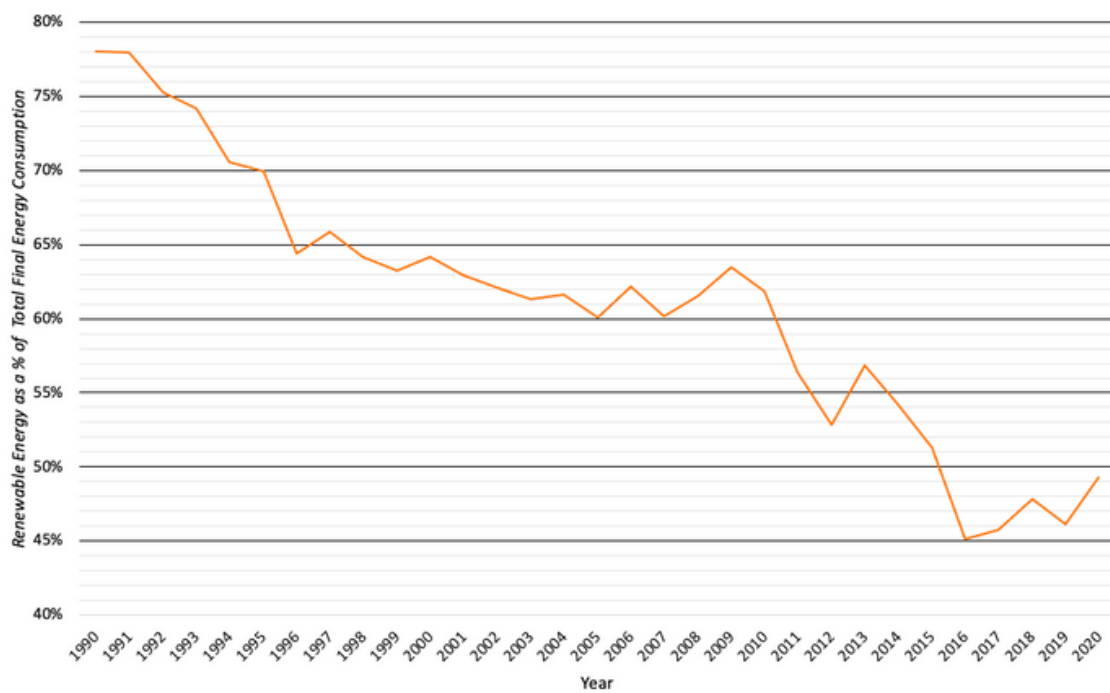
The exacerbation of this structural inefficiency has been driven by inadequate energy diversification and a lack of renewable energy infrastructure development, both in the public and private sectors. Weak governance and regulatory frameworks have been identified as significant barriers to energy sector development; a lack of transparency and uncertainty deters potential investment and hinders competition in the industry, which limits growth potential and maintains inefficiency. As energy demand has naturally increased with population growth and industrialisation processes, the domestic energy sector has failed to develop in tandem. Figure 4 shows that between 1991 and 2014, Sri Lanka's net energy imports as a share of total energy consumption increased from 25% to 50%. Parallel to this, Figure 5 shows that the share of energy generated by renewable energy sources also decreased, from approximately 77% of consumption in 1990 to an all-time low of 45% in 2016.

Figure 4: Net Energy Imports as a % of Total Energy Consumption Between 1991 and 2014



Source: World Bank Open Data (a)

Figure 5: Renewable Energy as a % of Actual Total Consumption Between 1990 and 2020.



Source: World Bank Open Data (b)

The negative correlation between energy imports and renewable energy share showcases Sri Lanka's shift towards imported fossil fuels in previous decades and how renewable energy development has not been at the heart of the domestic energy sector strategy. This has created a fragile energy sector that is now overdependent on imported fossil fuels and requires significant investment to address structural imbalances.

Underinvestment in already-established hydroelectricity infrastructure also contributed to this structural imbalance. Approximately one-third of Sri Lanka's domestic electricity is already generated through hydroelectricity, but inefficiency and ageing infrastructure have caused reliability and maintenance issues. Sri Lanka previously experienced electricity blackouts and shortages in 1996, 2001, 2006 and 2019; dry weather and low levels of rainfall were significant factors in reducing hydroelectric capacity that was unable to meet the corresponding demand for electricity (Dissanayake, 2022). This highlights the overreliance on hydroelectricity as a domestic source of electricity, as one exogenous weather shock affects a large proportion of domestic electricity generation. Efforts must be made to diversify domestic energy infrastructure and ensure that electricity generation can be smoothed when exogenous shocks affect the hydroelectricity supply.

Given that Sri Lanka has no natural endowment of fossil fuels, this diversification process must focus on other renewable energy sources. The World Bank recognises that Sri Lanka has significant potential for wind and solar energy infrastructure but without a comprehensive strategy for energy diversification and renewable infrastructure development, Sri Lanka's energy sector will continue to deteriorate. Addressing structural imbalances requires an integrated, holistic approach that enhances renewable energy development, improves energy efficiency, upgrades current hydroelectric infrastructure, and promotes private sector participation through strong governance and regulatory frameworks. With limited fiscal space and other economic constraints, this is where climate finance can support the effective implementation of such crucial developments.

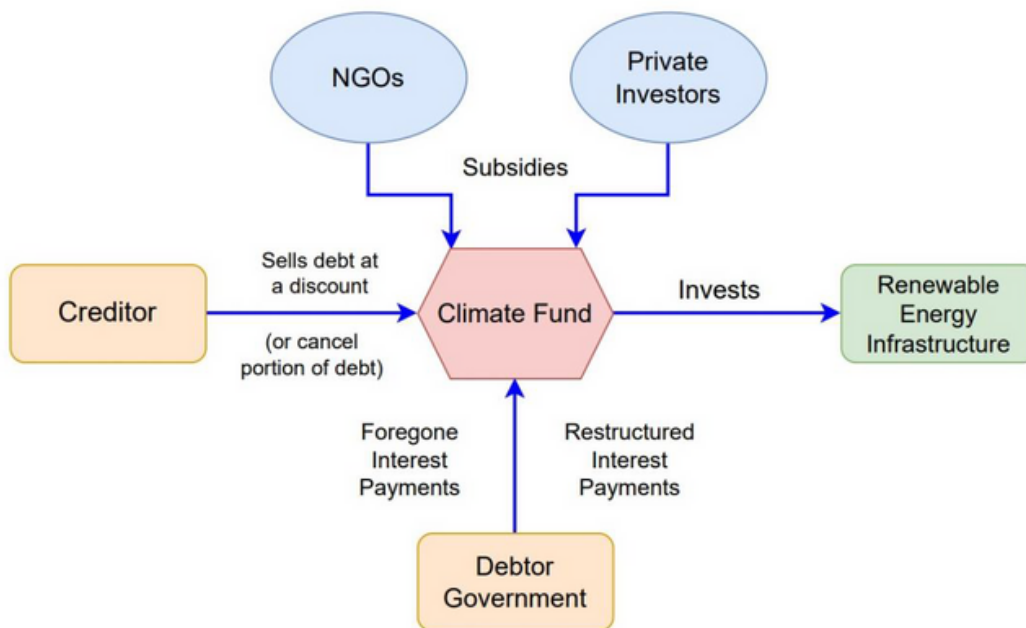
#### 4.3: The 'Debt-for-Renewables' Framework

Given that Sri Lanka's external debt is dominated by ISBs owed to private creditors, a tripartite swap would be the most appropriate mechanism to restructure debt onto more favourable terms. The recent examples of Belize and Ecuador show that there is an appetite for private creditors to take a significant haircut on debt in debt-distressed countries, but also that financial institutions and environmental organisations are willing to repurchase distressed debt if additional environmental commitments are attractive.

Haircuts on debt translate to creditors partly forgiving a share of Sri Lanka’s external debt, conditional on additional commitments as part of the debt restructuring agreement.

The mechanism through which a ‘debt-for-renewables’ swap would restructure debt and support climate commitments is very similar to already-existing debt-for-nature swap mechanisms that have been employed in many different case studies, explained in Section 3. Figure 6 shows the general structure of a tripartite debt-for-climate swap, with climate fund capital invested in renewable energy infrastructure. Foregone debt repayments create newly freed-up funds that facilitate public sector investments in renewable energy infrastructure, which contribute to the diversification of the domestic energy sector. Rather than Sri Lanka allocating these funds to unproductive debt repayments to its private creditors, the restructuring process enables the government to channel these funds into the renewable energy sector and make much-needed investments in domestic infrastructure that generate long-term revenues. This supports the government’s ambitious renewable energy targets while also creating an economic multiplier effect that creates local job opportunities, a more reliable energy sector, and a reduction in foreign exchange reserve pressures.

Figure 6: Structure of a ‘Debt-for-Renewables’ Swap



Source: Author



A ‘debt-for-renewables’ swap also generates a direct revenue stream for creditors that enables climate-resilient infrastructure investments. As part of diversifying the energy sector and supplying clean electricity to the national grid, creditors stand to benefit from revenues generated through the sale of electricity and thus secure guaranteed debt repayments in this form. This can make debt servicing more sustainable in the long run as more generous interest rates, longer-term repayment schedules and improvements in the productive capacity of the economy relieve pressure on the government to overextend itself to service external debt. Much like how tourism taxes and revenues reassured creditors in Belize’s and Seychelles’ debt-for-nature agreements, the Sri Lankan government can leverage revenue shares from renewable energy sales as a guarantee of creditor repayment and thus improve their credibility in the markets.

#### 4.4: Creditor Incentive Structures

The recent debt-for-climate agreement between Cabo Verde and Portugal highlights the potential for a bipartite swap between Sri Lanka and its bilateral creditors. The Portuguese government agreed to forgive shares of Cabo Verde’s bilateral debt in exchange for commitments to biodiversity conservation and renewable energy development (Goncalves, 2023). Negotiations are still in their early stages, but this initial agreement indicates that the incentive framework for such a deal exists, whereby debtor and creditors nations stand to benefit from such an exchange. Sri Lanka must also explore the opportunity of a debt-for-climate swap with its major bilateral creditors; namely, China and India.

As of 2021, China committed to no longer building coal-based power plants in its Belt & Road recipient countries. While this policy decision is much more complex than just environmental priorities - especially given China’s domestic coal investment strategy - it does indicate that Chinese investors and creditors are aware of the economic risks associated with coal-based industry abroad (Nedopil, 2023). The increasing price of coal compared to the decreasing cost of renewables, alongside other non-economic factors, is creating more incentives for China to transition away from coal-based infrastructure investments and begin diversifying its portfolio abroad.

A ‘debt-for-renewables’ swap would provide an opportunity for China to facilitate investments in energy diversification projects through debt repayment restructuring without direct capital injections. Furthermore, in combination with a more generous debt restructuring agreement and debt forgiveness, it increases the likelihood that Sri Lanka will continue to service its bilateral debt to China and reduces the risk of another default. Given the current debt pressures facing the Chinese economy and the dangerous state of the global debt crisis, China must explore alternative debt restructuring agreements with its bilateral partners to ensure it receives debt service payments (Yue and Nedopil Wang, 2021; Nedopil Wang, 2023).

A ‘debt-for-renewables’ swap with Sri Lanka certainly has the potential to mutually benefit both parties through investment diversification and a more sustainable debt agreement.

India could also benefit from a similar exchange with Sri Lanka. The recent approval by the Board of Investment of Adani Group’s \$442 million investment in wind energy infrastructure in the northwest of Sri Lanka demonstrates that there is Indian interest in the Sri Lankan energy sector (Reuters, 2023). The scale of such an investment suggests economic potential far beyond the Sri Lankan domestic market and, given the geographical proximity to India, creates opportunities for Sri Lanka’s energy sector through overland connections to India. These discussions recently emerged from within the Sri Lankan government in June 2023 when the energy minister announced energy sector integration as a priority by 2030 (EconomyNext, 2023). This reaffirms the possibility of integrating the Sri Lankan and Indian energy sectors, of which a significant component would be renewable energy infrastructure. This process is still very far away, but it does demonstrate the potential incentives that exist for Indian-Sri Lankan energy sector interconnectivity. India could utilise a debt-for-climate swap with Sri Lanka to facilitate investments in renewable energy, which has the potential to supply the southern Indian energy market on generous terms in the long run and support India’s renewable energy capacity targets.

The economic benefits associated with energy autonomy also make a debt-for-renewables swap a suitable mechanism for debt restructuring in Sri Lanka. The energy crisis of 2022 demonstrated the urgent need for Sri Lanka to develop a more reliable source of domestically generated electricity, both for energy sector stability and foreign exchange sustainability. Insulating Sri Lanka’s small open economy from the volatile global commodity markets will improve macroeconomic stability and reduce the likelihood of future foreign exchange crises, which would also contribute to improving Sri Lanka’s credibility in the international financial markets. This occurred in Belize when the debt-for-nature swap resulted in an upgrade to the country’s sovereign credit rating, which enabled cheaper government borrowing and better access to development finance on the international markets (Amorim, 2023).

The CEB has drafted plans for the domestic energy sector that stretch into 2041 but given the fiscal constraints faced by the Sri Lankan government in the ongoing economic crisis, the government must explore innovative solutions to multidimensional economic challenges. Engaging with private and bilateral creditors in this regard is crucial; the incentive structures exist for mutually beneficial debt-for-climate swaps in Sri Lanka, but creditors and policymakers must understand the broader economic benefits of such a deal and how addressing domestic structural imbalances is a significant component of a successful debt restructuring agreement.

## 5. Policy Recommendations

As debt-for-climate and debt-for-nature swaps emerge as innovative and potentially superior instruments for climate-positive debt restructuring agreements, Sri Lankan policymakers must create an economic environment that attracts private creditors, investors, and bilateral partners to engage in these complex negotiations. Following the analysis of the potential multidimensional benefits that Sri Lanka could realise through employing a ‘debt-for-renewables’ swap, or debt-for-nature and climate swaps more generally, this report makes 4 recommendations:

1. Develop a robust framework for energy sector diversification through renewable energy infrastructure.

Debt-for-nature swaps have typically been more successful when fiscal space is created to fulfil already-established environmental obligations. Employing climate finance mechanisms is most efficient when environmental frameworks are already in place. Sri Lanka’s current energy sector development strategy is unclear and requires serious consolidation to assure creditors and external stakeholders that diversification is achievable, especially given current fiscal constraints. With a more robust energy sector diversification framework, Sri Lanka indicates to private creditors that mobilising capital into this area will be effective in pursuing renewable energy targets and addressing structural imbalances in the domestic energy sector. This requires communicating clear commitments to retiring coal-fired power plants, integrating renewable energy suppliers into the national electricity supply, and allocating public funds to invest in existing renewable energy infrastructure.

A clear energy sector diversification strategy also creates opportunities to attract private investment into renewable energy infrastructure. A strong commitment to renewable energy supply in the domestic market signals to private investors that there will be opportunities for returns on investment and creates better incentive structures for their participation in this sector. Supply-side economic development is vital for insulating Sri Lanka’s energy sector from future crises and reducing the overdependence on foreign exchange revenue for essential energy supply. The private sector also has an important role to play in this diversification process, but the environment must be attractive to private investors. A clear renewable energy strategy provides this clarity.

## 2. Establish a coordinated response to deal with creditors on debt-for-climate swaps.

Developing a robust strategy for debt-for-climate mechanisms requires strong coordination between Ministries, particularly the Ministry of Finance, the Ministry of Environment, and the Central Bank of Sri Lanka, to establish clear responsibilities and priorities for engaging with creditors. Given the high transaction costs and diverging priorities of government ministries, a cross-government strategy to identify debt-for-climate priorities is vital to ensure that processes are streamlined ahead of engagement with creditors. A clear strategy for engaging with bilateral, multilateral, and private creditors will create a more constructive environment for creditors to participate in.

Debt-for-nature and debt-for-climate swaps are most effective when mobilising funds for already-established environmental targets as these commitments are more binding for debtor governments. Therefore, Sri Lankan policymakers must work with climate finance experts to explore the compatibility of current environmental targets with debt-for-climate instruments. This involves analysing incentive structures, funding requirements and the opportunity costs of debt service payments, to present effective solutions to creditors.

## 3. Explore 'Debt-For-Renewables' as an innovative form of debt-for-climate swaps.

The scale of debt-for-nature swaps in Belize and Ecuador indicate that high transaction costs can be overcome to develop climate-positive debt restructuring frameworks if funds are allocated to productive sectors. This should inspire sovereign debtors to explore new sectors for debt-for-climate, of which renewable energy investments can certainly be a component in Sri Lanka. Sri Lanka's policymakers must recognise the multidimensional benefits of energy sector diversification and convey these opportunities to private and bilateral creditors to better understand potential incentive structures for such an exchange.

As established in the analysis, there are certainly incentive structures that exist for Sri Lanka's bilateral and private creditors to engage in some form of debt-for-climate swap, especially regarding renewable energy sector diversification, but communicating this effectively to private creditors will be a challenge. Sri Lankan policymakers must engage with and better understand the priorities of each creditor regarding debt relief and debt-for-climate swaps and become more familiar with the possible mechanisms.

Sri Lanka faces structural imbalances in the energy sector that must be addressed through energy sector diversification and renewable energy infrastructure investment. The government also has targets for renewable energy in the domestic electricity sector, which appears challenging in the current economic climate. Policymakers must explore new ways of unlocking capital to fulfil these climate targets and a 'debt-for-renewables' swap could be an effective instrument that would also signal to investors and creditors that Sri Lanka is committed to pursuing its environmental targets.

#### 4. Combine Climate Finance Negotiations with other Debt Relief Instruments & Calls for Debt Cancellation

Sri Lankan policymakers must explore innovative solutions to the pressing fiscal and climate crises. However, the international community also has an important role to play in ensuring that Sri Lanka emerges from these twin crises with sustainable economic prospects. Climate finance instruments can mobilise capital for climate investments and conservation, but these must not be misconstrued as pure debt relief instruments. Debt-for-nature and debt-for-climate swaps are effective ways of remobilising capital but are less efficient than traditional forms of debt relief and climate-conditional grants. A debt-for-climate swap in Sri Lanka must not be motivated by debt relief. Rather, it must be employed as an instrument to create fiscal space for essential environmental investments that would otherwise be foregone due to the ongoing economic crisis.

A debt-for-climate swap in isolation is not sufficient to deal with the pressing environmental challenges facing Sri Lanka and the shortcomings of climate commitments. The international community must recognise these challenges for Sri Lanka - and other developing countries facing debt and climate distress - and combine debt restructuring processes with access to concessional climate finance and climate grants. Creditors must also recognise the significant opportunity costs facing developing countries when servicing unsustainable debt burdens and consider the implications for longer-term economic recovery. If the financial system does not empower developing countries to pursue sustainable economic growth, it risks prolonging the vicious cycle of debt and climate crises that has exacerbated vulnerabilities in debt-distressed developing countries.

#### **6. Conclusion**

This report presents a 'debt-for-renewables' swap as an innovative mechanism that should be explored in the emerging debt-for-nature and debt-for-climate discussions in Sri Lanka. As debt swap mechanisms emerge as solutions to the debt and climate crises facing developing countries, policymakers must recognise the implications of such climate finance instruments. As discussed, debt swaps are most effective when mobilising capital for already-established environmental targets. Sri Lanka's ambitious NDCs for the domestic electricity sector face significant challenges due to the fiscal constraints imposed by the ongoing economic crisis and the government must unlock the necessary finance to fulfil these climate commitments.

Sri Lanka has strong environmental commitments for the domestic electricity sector, faces significant foreign exchange vulnerabilities due to its overdependence on imported fuel, and must restructure its debt onto more sustainable terms. A ‘debt-for-renewables’ swap exists at the intersection of these economic challenges. Sri Lankan policymakers must engage directly with debt-for-climate swap mechanisms and target the domestic energy sector to realise the potential benefits of these instruments. Climate finance instruments have the potential to complement debt restructuring negotiations and contribute to a more sustainable debt environment for Sri Lanka. They must be employed as effectively as possible and this requires managing the trade-off between complexity, which incurs significant transaction costs on debtors and creditors, and innovation, to maximise the environmental, fiscal, and broader economic benefits of such instruments. Agreements must prioritise environmental commitments and ensure that funding is mobilised to fulfil these.

Debt-for-climate swaps must not be framed a debt relief vehicle. Rather, they must aim to remove the opportunity cost associated with unproductive debt repayments to creditors and channel funds into investments that realise an economic and environmental multiplier effect. This will create a more sustainable debt environment through more generous repayment terms and an improvement in the productive capacity of the economy. If implemented effectively, Sri Lanka can set an example to the international community through efficient, targeted investments in climate-positive infrastructure, while also enabling an essential transition towards greater energy autonomy and green economic recovery. Employing climate finance to invest in renewable energy and other climate-resilient infrastructure is vital to address vulnerabilities but these must be complemented by other forms of debt restructuring and calls for debt forgiveness. Solutions to the Sri Lankan debt crisis require a comprehensive, transparent, and coordinated response from all lenders to create a more sustainable debt structure for economic recovery, without undermining global campaigns for debt justice.

*\*Michael Iveson is a Research Fellow at LKI. He joined LKI in February 2023 and holds two Master’s degrees in Economics and Development Economics from the University of Edinburgh and SOAS University of London, respectively.*

## References

ADB (2020) Climate Risk Country Profile: Sri Lanka. Asian Development Bank. Available at: <https://www.adb.org/sites/default/files/publication/653586/climate-risk-country-profile-sri-lanka.pdf>

Amorim, C. (2023) Debt-for-nature swaps: Because the environment is worth it, Uxolo. Available at: <https://www.uxolo.com/articles/7161/debt-for-nature-swaps-because-the-environment-is-worth-it>

Chamon, M. et al. (2022) 'Debt-for-climate swaps: Analysis, design, and implementation', IMF Working Papers, 2022(162), p. 1. doi:10.5089/9798400215872.001.

Coalition for Fair Fisheries Arrangements (CFFA) (2022). Financing the 30X30 agenda for the oceans: Debt for Nature Swaps Should Be Rejected. Available at: <https://www.cffacape.org/publications-blog/joint-statement-financing-the-30x-30-agenda-for-the-oceans-debt-for-nature-swaps-should-be-rejected>

Commonwealth (2020) Case study: Innovative financing – debt for conservation swap, Seychelles' Conservation and Climate Adaptation Trust and the Blue Bonds Plan, Seychelles (2020) Commonwealth. Available at: <https://thecommonwealth.org/case-study/case-study-innovative-financing-debt-conservation-swap-seychelles-conservation-and>

Dissanayake, I. (2022) HISTORY REPEATING ITSELF: SRI LANKA'S ELECTRICITY CRISIS, Ceylon Chamber of Commerce. Available at: <https://www.chamber.lk/index.php/news/9-media-releases/1242-history-repeating-itself-sri-lanka-s-electricity-crisis>

EconomyNext (2023) Sri Lanka-India grid connectivity to be realised by 2030: Power Minister (2023) EconomyNext. Available at: <https://economynext.com/sri-lanka-india-grid-connectivity-to-be-realised-by-2030-power-minister-122713/>

Goncalves, S. (2023) Portugal to swap \$153 million Cape Verde debt for nature investments, Reuters. Available at: [https://www.reuters.com/business/environment/portugal-swap-153-mln-cape-verde-debt-nature-investments-2023-06-20/#:~:text=Portugal%20to%20swap%20%24153%20million%20Cape%20Verde%20debt%20for%20nature%20investments,-By%20Sergio%20Goncalves&text=LISBON%2C%20June%2020%20\(Reuters\),Antonio%20Costa%20said%20on%20Tuesday](https://www.reuters.com/business/environment/portugal-swap-153-mln-cape-verde-debt-nature-investments-2023-06-20/#:~:text=Portugal%20to%20swap%20%24153%20million%20Cape%20Verde%20debt%20for%20nature%20investments,-By%20Sergio%20Goncalves&text=LISBON%2C%20June%2020%20(Reuters),Antonio%20Costa%20said%20on%20Tuesday)

Gordon, O. (2023) Are debt-for-climate swaps finally taking off? Energy Monitor. Available at: <https://www.energymonitor.ai/finance/are-debt-for-climate-swaps-finally-taking-off/>

Government of Belize Debt Conversion for Marine Conservation (2022) Green Finance Institute. Available at:

<https://www.greenfinanceinstitute.co.uk/gfihive/casestudies/government-of-belize-debt-conversion-for-marine-conservation/>

Government of Seychelles. (2012). National Preparations for the United Nations Conference for Sustainable Development, UNCSD Rio 2012. United Nations Environment Programme.

Grynspan, R. (2023) The world lacks an effective global system to deal with debt, UNCTAD. Available at: [https://unctad.org/news/blog-world-lacks-effective-global-system-deal-](https://unctad.org/news/blog-world-lacks-effective-global-system-deal-debt#:~:text=In%202021%2C%20developing%20countries%20paid,received%20in%20official%20development%20aid)

[debt#:~:text=In%202021%2C%20developing%20countries%20paid,received%20in%20official%20development%20aid](https://unctad.org/news/blog-world-lacks-effective-global-system-deal-debt#:~:text=In%202021%2C%20developing%20countries%20paid,received%20in%20official%20development%20aid)

Hebbale, C. (2022) Debt-for-Climate Swaps: Analyzing Climate Vulnerability and Debt Sustainability, RPubS. Available at: <https://rpubs.com/chebbale/973245>

International Development Committee (2023) Debt Relief in Low-Income Countries. rep. International Development Committee. Available at:

<https://publications.parliament.uk/pa/cm5803/cmselect/cmintdev/146/report.html#heading-3>

Kelly, L., Ducros, A., Steele, P. (2023). Redesigning debt swaps for a more sustainable future. IIED, London

Lo, J. (2022) Sri Lanka can't afford fossil fuels but can't afford to get off them either, Climate Home News. Available at: <https://www.climatechangenews.com/2022/07/28/sri-lanka-cant-afford-fossil-fuels-but-cant-afford-to-get-off-them-either/>

Ministry of Environment (2021) Submission of Amendment to the Updated Nationally Determined Contributions of Sri Lanka [Preprint]. Sri Lanka. Available at: <https://www.climatechange.lk/CCS2021/UpdatedNDCsSriLanka2021.pdf>

Nedopil Wang, C. (2023) China's role in addressing post-Covid debt challenges in the Global South, Panda Paw Dragon Claw. Available at:

<https://pandapawdragonclaw.blog/2023/05/04/chinas-role-in-addressing-post-covid-debt-challenges-in-the-global-south/amp/>



Nedopil, C. (2023) Lessons from China's overseas coal exit and domestic support. Available at: <https://www.science.org/stoken/author-tokens/ST-1085/full>

Owen, N. (2022) Belize: Swapping debt for nature, IMF. Available at: <https://www.imf.org/en/News/Articles/2022/05/03/CF-Belize-swapping-debt-for-nature>

Rankings // Notre Dame Global Adaptation Initiative // University of Notre Dame (2021) Notre Dame Global Adaptation Initiative. University of Notre Dame. Available at: <https://gain.nd.edu/our-work/country-index/rankings/>

Soutar, R. and Koop, F. (2022) Debt-for-nature swaps: What are they and how do they work? Dialogo Chino. Available at: <https://dialogochino.net/en/trade-investment/47862-explainer-what-is-debt-for-nature-swap/>

Sri Lanka Investment Board approves \$442 MLN Adani green wind power plants (2023) Reuters. Available at: <https://www.reuters.com/business/energy/sri-lanka-investment-board-approves-442-mln-adani-green-wind-power-plants-2023-02-22/>

Wang, Y. and Wang, Z. (2020) Blue Finance Case Study – The Republic of Seychelles' innovative use of Debt for Nature Swap promotes marine protection., Blue Finance Case Study – the Republic of Seychelles' innovative use of debt for nature swap promotes marine protection. Available at: <https://iigf-china.com/blue-finance-case-study-the-republic-of-seychelles-innovative-use-of-debt-for-nature-swap-promotes-marine-protection>

World Bank Open Data (a) Energy imports, net (% of energy use) - Sri Lanka. World Bank Open Data. Available at: <https://data.worldbank.org/indicator/EG.IMP.CON.S.ZS?end=2014&locations=LK&start=1991&view=chart>

World Bank Open Data (b) Energy consumption in Sri Lanka. Renewable energy consumption (% of total final energy consumption) - Sri Lanka. World Bank Open Data. Available at: <https://data.worldbank.org/indicator/EG.FEC.RNEW.ZS?locations=LK>

Yue, M. and Nedopil Wang, C. (2021) Debt-For-Nature Swaps: A Triple-Win Solution for Debt Sustainability and Biodiversity Finance in the Belt and Road Initiative (BRI)? Green Finance & Development Center. Available at: <https://greenfdc.org/debt-for-nature-swaps-in-the-belt-and-road-initiative-bri/>

