



# Layering debt relief solutions to move countries from vicious to virtuous cycles of debt

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Ritu Bharadwaj, Tom Mitchell and N Karthikeyan

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## About the authors

Ritu Bharadwaj is a principal researcher in IIED's Climate Change Group (ritu.bharadwaj@iied.org)

Dr Tom Mitchell is IIED's executive director (tom.mitchell@iied.org)

N Karthikeyan is a development economist who focuses on climate change, natural resource management, safe drinking water, sanitation, elderly care and microfinance.

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- Supporting public planning processes in delivering climate-resilient development outcomes for the poorest.
- Supporting climate change negotiators from poor and vulnerable countries for equitable, balanced and multilateral solutions to climate change.
- Building capacity to act on the implications of changing ecology and economics for equitable and climate-resilient development in the drylands.

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International Institute for Environment and Development  
Third Floor, 235 High Holborn, London WC1V 7DN, UK  
Tel: +44 (0)20 3463 7399  
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Severe climate impacts are burdening countries worldwide, particularly the Least Developed Countries and Small Island Developing States. Each disaster adds to their existing debt, hindering recovery and trapping them in an unsustainable cycle. This paper explores the need to break this cycle through existing debt relief options, covering the link between climate impacts and soaring debts, financing requirements in post-disaster scenarios, analysis of available relief options, and the potential of layering different debt and climate finance measures.

## Contents

<b>Summary</b>	<b>4</b>	<b>5 Multilayered comprehensive debt support needed</b>	<b>18</b>
<b>1 Why the climate and debt crises need to be addressed together</b>	<b>6</b>	How can multilayered debt relief work in practice?	18
<b>2 How the climate crisis is pushing countries deeper into debt</b>	<b>8</b>	Advantages of layering debt relief and climate financing options	23
Risks of climate impacts and sovereign debt default for LDCs and SIDS	8	Key considerations for layering of debt relief options	24
Rising cost of capital for climate-vulnerable countries threatens debt sustainability	9	<b>6 Way forward</b>	<b>27</b>
<b>3 Impact of sovereign debt on countries' vulnerability and type of support needed</b>	<b>11</b>	<b>Annex</b>	<b>28</b>
Impact of sovereign debt default on social spending and vulnerability	11	List of countries considered for the correlation/regression analysis	28
Post-disaster financing needs of countries	12	Database sources	29
<b>4 What debt relief and support mechanisms are available and what is working where and how</b>	<b>14</b>	<b>References</b>	<b>30</b>
Debt relief efforts are limited and not fit for purpose	14		
Innovative debt relief solutions are available, but their scope is limited	15		

# Summary

Rising sea levels have submerged many coastal areas; floods are increasing in magnitude and breaching existing barriers, destroying lives, livestock and property; and more intense and frequent cyclones are leaving communities unable to protect themselves. These climate impacts are precipitating climate and debt crises for poor countries. As such, the two crises need to be addressed together.

This paper analyses existing debt relief options and possible solutions to help tide countries over climate disasters, manage their debt crisis and rebuild better. It illustrates how climate impacts are driving up sovereign debts and the effect this has on countries' vulnerability and social spending. It unpacks the post-disaster financing needs of Least Developed Countries (LDCs) and Small Island Developing States (SIDS) and how lack of support undermines recovery. It analyses innovative debt relief options available to countries. Finally, it explains how layering of different debt relief and climate finance options might work.

## Key findings

The increasing frequency and intensity of climate events are straining national budgets and forcing countries to borrow more to finance disaster response, rebuilding and recovery efforts. As the frequency and severity of extreme events continue to rise, LDCs and SIDS are becoming increasingly vulnerable to their impacts year after year. As such, they are forced to borrow additional money, which further increases risk of over-indebtedness.

Climate vulnerability also has significant implications for sovereign borrowing costs. For credit rating agencies, higher climate risks create a greater risk of default. This raises the cost of capital for climate-vulnerable countries and threatens debt sustainability. Consequently, poorer countries exposed to climate impacts have to bear the additional burden of higher interest rates. Higher interest rates based on climate vulnerability are predicted to cost the most vulnerable countries US\$168 billion over the next decade.

The rising cost of capital is expected to push LDCs into a vicious cycle of unsustainable debt distress, increasing risk of debt default and undermining their

ability to invest in social protection programmes. Such programmes are crucial to enhancing climate resilience in vulnerable communities. Resources needed to respond to the climate crisis, the COVID-19 pandemic and other national needs are increasingly being diverted to debt repayments.

When a country is hit by a climate disaster, different types of funding support are needed to help it recover from both climate and debt crises. Its funding needs can be typically divided into three phases: immediate relief and support; medium-term recovery; and longer-term resilience building. Lack of support in any of these phases can negatively impact the population and the economy, undermine their capacity for coping with such disasters in future and push countries into downward spirals of debt.

There is no established insolvency mechanism for countries at risk of default to initiate debt relief negotiations with creditors. Instead, countries have relied on prevailing practices, contracts or patchy debt relief options emerging from international negotiations and conventions. But with the emergence of more private creditors, such global initiatives have had limited uptake and feasibility.

Beyond these efforts, other innovative options are available:

**A pause clause** allows a debtor country to temporarily suspend or delay its debt repayments to creditors during times of economic or financial crisis.

**Parametric insurance of sovereign debt** would repay debt on behalf of a country during a climate crisis, allowing it time to recover during that period.

**Debt reprofiling** modifies terms and conditions of debt obligations without necessarily reducing the overall amount owed.

**Debt swaps** enable a debtor country to exchange its outstanding debt with a creditor country or organisation for investments in environmental conservation, social development or other priorities.

**Resilience bonds** issued by governments, municipalities or organisations raise capital for projects that enhance resilience to climate change and natural disasters.

These innovative debt measures also have limitations: each has different costs and delivers different levels of support during a crisis; they can only work well in certain contexts; and each is suitable for supporting different phases of recovery but not all.

## Recommendations

Multilayered, comprehensive debt support is needed. For countries with unsustainable debt, one debt relief measure alone cannot restore solvency unless it involves a sufficiently large share of a country's debt and substantial relief. So far, no debt relief measure has come close to achieving this.

A combination of debt relief would work best in restoring solvency and addressing recovery needs in the short, medium and long term. Measures to support climate investment would need to be further layered to support longer-term resilience and protection from future climate impacts. For example, the pause clause and parametric insurance can support immediate relief and recovery; debt reprofiling, combined with debt swaps, can provide medium-term relief and support investment in climate resilience; and resilience bonds can ensure sustained support for climate adaptation, infrastructure development and disaster risk reduction.

Combining different debt relief and climate finance support can create more fiscal flexibility and less indebtedness for a country going through the disaster cycle. Depending on the context, the layered approach offers advantages such as comprehensive risk management, enhanced financial flexibility, tailored solutions for specific needs and diversification of financing sources.

The success of these measures would depend on a sound debt sustainability assessment, an evaluation of the financial implications of the various options, and alignment with climate change adaptation and mitigation strategies and overall sustainable development objectives. Finally, it should engage stakeholders to ensure transparency and coordination.

Evidence clearly shows that 'debt relief fixes' that react to an economic crisis can only be a bandage in LDCs and SIDS. They do not help them avoid being pushed into a deeper debt crisis, absorb the effects of climate risks, help them adapt to climate impacts or transform their capacities to deal with future climate impacts.

Innovative debt relief measures are available. But while they offer certain advantages, they only help address part of post-disaster financing needs. There is an urgent need to layer or combine these debt relief and climate financing options to offer more comprehensive support to LDCs and SIDS. The Global Financing Pact agenda and the commitment to create a loss and damage fund under the United Nations Framework Convention on Climate Change offer an opportunity to support development of such a solution.

We call upon the IMF and the World Bank, LDCs and SIDS facing debt crises, and creditor governments, private sector creditors and the Paris Club to take up this agenda. A collaborative effort among various stakeholders should provide a complete package of debt relief and financing options. It should address the impacts of climate change, promote resilience and support sustainable development in LDCs and SIDS facing sovereign debt crises.

## 1

# Why the climate and debt crises need to be addressed together

Many countries are facing new types and forms of climate impact with higher intensity, which they are often not well equipped to handle. With global temperatures increasing due to climate change, many of these impacts are already 'locked in' and unavoidable, at least for the next decades. Rising sea levels have submerged coastal areas; floods are increasing in magnitude and breaching existing barriers, destroying lives, livestock and property; and more intense and frequent cyclones are leaving communities unable to adequately protect themselves.

Commonly when a disaster strikes, Least Developed Countries (LDCs) and Small Island Developing States (SIDS) have to borrow money. These loans are on top of pre-existing debt to bring their economy back on track, provide urgent relief, and help communities return to some level of normality.

As the intensity and frequency of extreme events keep increasing, and without major action to protect themselves better, LDCs and SIDS are more exposed. Each time, their response often creates more debt, undermining capacity for the next crisis. They thus become trapped in an unsustainable debt cycle, further exacerbated by debt spikes created by COVID-19. For instance, the percentage of debt to overall gross domestic product (GDP) of Vanuatu jumped from 20% in 2013 to 36.5% in 2015 to 44% in 2018 after the country was hit by cyclones (UNCTAD, 2020). Most recently Vanuatu has again been hit by a pair of intense tropical cyclones, Judy and Kevin, within 48 hours of each other in March 2023, with the impacts on debt levels and repayment terms yet to be estimated.

Additionally, the increasingly constrained spending power of governments means that the money for significant resilience-building activities also needs to be in the form of loans, if indeed taking on more debt is an option. For many LDCs and SIDS, this cycle of disasters and increasing indebtedness is hard to escape, and money for repaying debts comes at the cost of lower spending on public services, social protection and other resilience measures.

This paper analyses options for breaking this cycle and the existing debt relief options, and covers the following:

1. It illustrates how climate impacts are driving up sovereign debts and how that is having an impact on countries' vulnerability and social spending.
2. It unpacks the nature of financing needs of LDCs and SIDS post-disaster and how lack of support impacts their recovery efforts.
3. It analyses different debt relief options available to countries to help them manage climate and economic shocks, and the advantages and limitations of each of those options.
4. It explains how layering of different debt relief and climate finance options might work, including innovative measures, their advantages and the key considerations for success.

## BOX 1. WHY THIS ANALYSIS IS RELEVANT NOW

The 'Summit for a New Global Financing Pact' proposed in June 2023 has the mandate to increase access to financing for countries more exposed to shocks and/or facing debt vulnerabilities. Similarly, the Transitional Committee created under the United Nations Framework Convention on Climate Change is looking at establishing the modalities, structure and governance of a climate change loss and damage fund.

This paper provides evidence to enable LDCs and SIDS to achieve two aims:

- (i) Present a stronger case of how their debt relief and climate financing needs are diverse; why one solution may not be sufficient to meet their needs for relief, recovery and long-term resilience building; and why different types of debt relief and funding support will need to be layered/combined to provide a more comprehensive support catering to their financing needs in different timescales to help them rebound from climate and economic shocks.
- (ii) Present practical solutions for the Summit, Transitional Committee, governments of the G20 and key institutions such as the International Monetary Fund and World Bank for dealing with the debt and climate financing issue.



## 2

# How the climate crisis is pushing countries deeper into debt

The increasing frequency and intensity of climate events are straining national budgets and forcing countries to borrow more to finance disaster response, rebuilding and recovery efforts. This section shows how climate change is increasing sovereign debts and risks of debt default in LDCs and SIDS.

## Risks of climate impacts and sovereign debt default for LDCs and SIDS

Recurring and high-intensity climate disasters can lead to a shortfall in government revenue and tax collections due to disruption of economic activities. At the same time, government spending may increase due to a sudden and significant increase in relief operations. For example, governments may need to fund emergency rescue responses and invest in rebuilding and recovery. As a result, they may need to borrow money to bridge this income and expenditure gap and continue to provide essential services and support to their citizens.

As the frequency and severity of extreme events continue to rise, countries are becoming increasingly vulnerable to their impacts year after year. As such, they are forced to borrow additional money on top of their pre-existing debt load, which further increases risk of over-indebtedness. With each event, the response

and recovery efforts often lead to a growing burden of debt, which in turn diminishes their ability to address subsequent crises effectively. This cycle perpetuates a pattern where the accumulation of debt undermines their capacity to respond to future disasters and exacerbates their overall vulnerability. Countries in the global South have seen their debts increase by 120% between 2010 and 2021, reaching their highest level since 2001 (Jones, 2022).

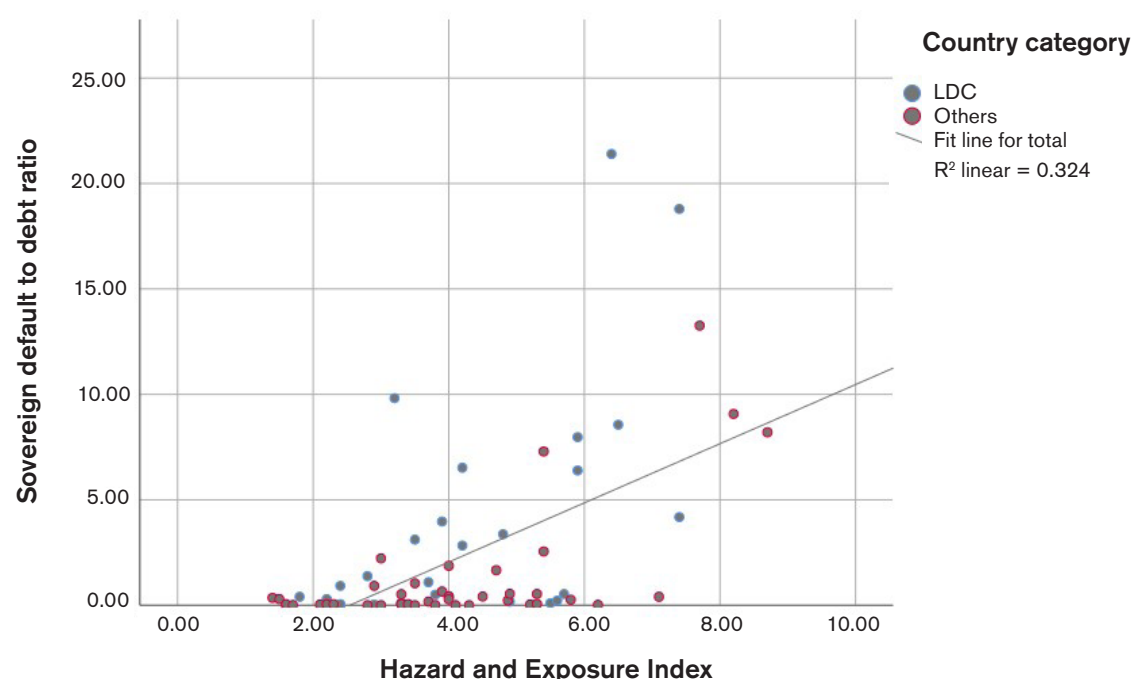
Figure 1 analyses the association between the Hazard and Exposure Index and sovereign default-to-debt ratio. The correlation coefficient values for the variables analysed are presented in Table 1.

The analysis shows that countries with a higher Hazard and Exposure Index ranking are likely to have a higher sovereign default-to-debt ratio. The average ratio of 30 LDCs considered for this analysis is 3.45 with an average ranking of 4.16. The predicted values of regression modelling between these two variables are higher for LDCs than for the other countries. LDCs are more vulnerable to the effects of climate change due to their low levels of development, weak infrastructure, and reliance on agriculture and natural resources for income. In the case of LDCs, a ranking of 10 can increase the chances of debt default<sup>1</sup> to 11.07 with countries such as Niger, Myanmar, Sudan, Mozambique and Mali most at risk. Other countries have a debt default risk of 7.66.

<sup>1</sup> Default risk: "Sovereign default risk represents the likelihood that a particular sovereign will default on its debt. While most debt defaults involve foreign debt, sovereigns may also default on domestic debt denominated in the national currency." [www.investopedia.com/terms/s/sovereign-default.asp](http://www.investopedia.com/terms/s/sovereign-default.asp)



Figure 1. Relationship between Hazard and Exposure Index and sovereign debt default



Notes: The sovereign default to debt ratio has been calculated as average sovereign default to loans from 2016–2020/sovereign debt in 2021 (Source: International Monetary Fund's Global Debt Database). The Hazard and Exposure index is calculated based on time series data from INFORM Risk database 2021.

Table 1. Correlation coefficients of Hazard and Exposure Index and sovereign default-to-debt ratio

DEVELOPMENT CATEGORY	CORRELATION COEFFICIENT	SIG.
All countries (N=71)	0.569	p=0.000
LDCs (N=30)	0.601	p=0.000
Other countries (N=41)	0.646	p=0.000

This finding resonates with the figures of the Emergency Events Database (EM-DAT), which recorded US\$2.97 trillion in losses from disasters between 2000 and 2019. As a percentage of GDP, losses to LDCs were three times greater than in high-income countries (CRED, 2020).

## Rising cost of capital for climate-vulnerable countries threatens debt sustainability

Climate vulnerability also has significant implications for sovereign borrowing costs. For credit rating agencies, higher climate risks create a greater risk of default. This raises the cost of capital for climate-vulnerable countries and threatens debt sustainability. Consequently, poorer

countries exposed to climate impacts have to bear the additional burden of higher interest rates.

An assessment (Buhr et al., 2018) for Climate Vulnerable Forum members<sup>2</sup> shows that for every US\$10 paid in interest by developing countries, an additional dollar will be spent due to climate vulnerability. This has also added more than US\$40 billion to the debt interest paid by the 40 most vulnerable nations between 2007 and 2016.

Higher interest rates based on climate vulnerability are predicted to cost the most vulnerable countries US\$168 billion over the next decade. One study (Mohaddes et al., 2021) shows that 63 sovereigns may see their credit ratings downgraded by 2030 due to climate change. This could add more than US\$200 billion to their annual interest payments on public debt.

<sup>2</sup> The Climate Vulnerable Forum is an international partnership of countries highly vulnerable to a warming planet. The Forum serves as a South–South platform for participating governments to act together on global climate change. <https://thecvf.org/>

An increasing proportion of global South debt is owed to private creditors, which tend to charge much higher interest rates than other lenders. Almost half of external debt and interest payments by low- and lower-middle-income countries is to private lenders (Jones, 2022).

This financial burden exacerbates the present-day economic challenges of poorer countries (see Box 2). The magnitude of this burden is expected to at least double over the next decade. These credit rating downgrades can be expected to increase the cost of public borrowing, making it more expensive to invest in recovery or build resilience for future impacts. The rising cost of capital is expected to push LDCs into a vicious cycle of unsustainable debt distress.<sup>3</sup>

## BOX 2. WHY SUSTAINABLE DEBT SERVICING IS IMPORTANT

For countries, sovereign debt, or public debt, is an important way to finance investments in growth and development. But governments must also continue paying or servicing their debt and this debt burden must remain sustainable. In other words, debt payments must be in tune with growth projections and revenue mobilisation. This includes social spending needs and exposure to economic/climate shocks. Unsustainable debt burden can lead to debt distress, leaving a country unable to repay or service its debts.

Debt distress can be precarious for countries and threaten their macro-economic stability, setting back their development for years. It can also curtail public spending on basic services and social protection, resulting in increased poverty and vulnerability.

<sup>3</sup> "Unsustainable debt can lead to debt distress — where a country is unable to fulfil its financial obligations and debt restructuring is required. Defaults can cause borrowing countries to lose market access and suffer higher borrowing costs, in addition to harming growth and investment." [www.imf.org/en/Publications/fandd/issues/2020/09/what-is-debt-sustainability-basics](https://www.imf.org/en/Publications/fandd/issues/2020/09/what-is-debt-sustainability-basics)

## 3

# Impact of sovereign debt on countries' vulnerability and type of support needed

Rising levels of debt also leave LDCs and SIDS with limited capacity and resources to invest in recovery, development and climate adaptation measures. In this section, we analyse how sovereign debt is impacting social spending and vulnerability of LDCs and SIDS. What financing do they need to recover sustainably from the climate and debt crises?

## Impact of sovereign debt default on social spending and vulnerability

The increased public default-to-debt ratios undermine the ability of LDCs to finance investments in social protection programmes such as poverty reduction, livelihood security, food, nutrition, health and education. Many of these investments are crucial to enhancing climate resilience in vulnerable communities. Resources needed to respond to the climate crisis, the COVID-19 pandemic and other national needs are increasingly being diverted to debt repayments. These diversions can have social impacts; without strong safety nets, the most vulnerable may not have adequate mechanisms to cope with the climate crisis.

Figure 2 analyses the relationship between sovereign default-to-debt ratio and social assistance spending.

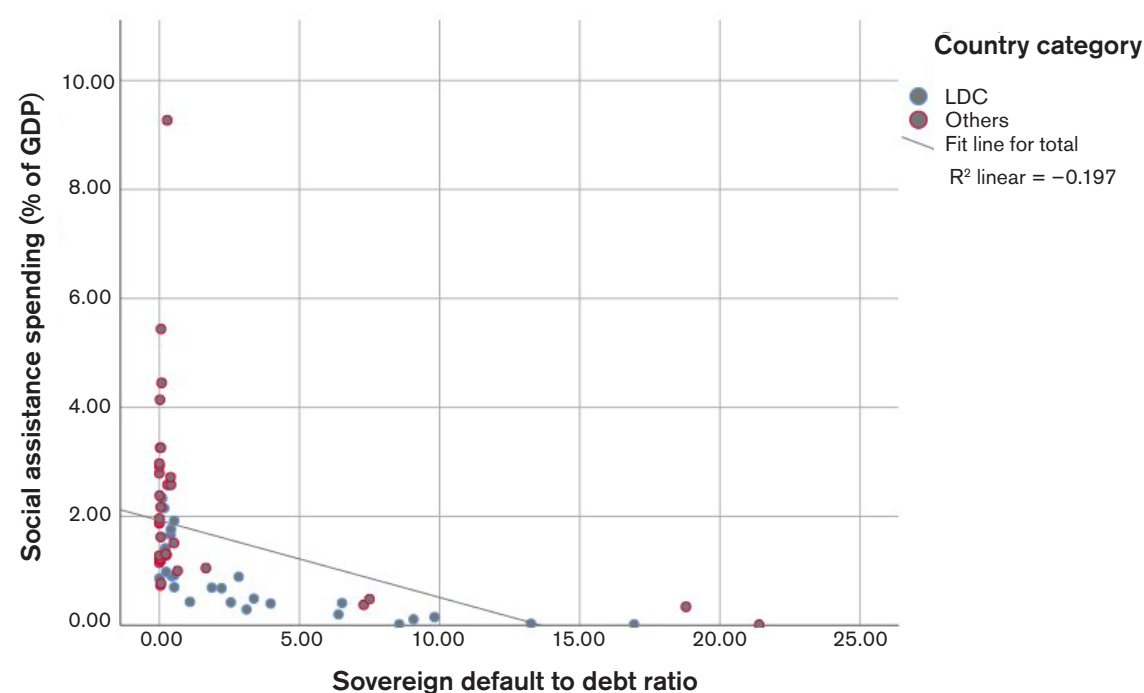
Correlation coefficient values of these two variables are presented in Table 2.

The correlation analysis shows that countries with a higher sovereign default-to-debt ratio are likely to spend less on social assistance. The degree of negative association is particularly stark in the case of LDCs. The correlation coefficient value for LDCs ( $-0.697$ ) is significantly higher than the value for developed and developing countries ( $-0.366$ ). The projected values based on the regression modelling confirms this pattern.

The 27 LDCs considered for this analysis have an average default-to-debt ratio of 3.53 with average social assistance spending of 0.82% of GDP. In the case of LDCs, the projected value of such spending decreases to 0.14% of GDP when the ratio becomes 10. For the same default-to-debt ratio, the projected social assistance spending is 1.08% for developed and developing countries. This projection, based on the regression modelling, lists Guinea-Bissau, Cambodia, Tanzania, Togo and Myanmar (all LDCs) as the countries most vulnerable to reducing their spending on social assistance.

This finding is in line with experience from the COVID-19 pandemic, which shows that governments have differing capacity and fiscal space to respond

Figure 2. Relationship between sovereign default to debt ratio and social assistance spending



Note: Data on social spending were drawn from the World Bank's ASPIRE (The Atlas of Social Protection Indicators) database for the year 2021.

Table 2. Correlation coefficients of sovereign default-to-debt ratio and social assistance spending

DEVELOPMENT CATEGORY	CORRELATION COEFFICIENT	SIG.
All countries (N=61)	-0.443	p=0.000
LDCs (N=27)	-0.697	p=0.000
Other countries (N=34)	-0.366	p=0.033

to crises. In all cases, social spending is the first to take the hit, contributing to a more protracted crisis in the case of LDCs. For example, developed countries, backstopped by their central banks, came up with huge fiscal response packages. These amounted to 18% of their GDP and that too at low interest rates (UN, 2022). Availability of fiscal space enabled them to not only roll out measures immediately but also to channel resources towards strengthening social protection. But developing countries, especially LDCs, were constrained in their social spending (Debrun et al., 2020).

LDCs already have lower ratings on human development, economic and environmental vulnerability. They represent around 90% of the countries with poverty rates higher than 40% in 2021 (Development Initiatives, 2021). Further reductions in social spending can have long-term negative impacts on human development indicators in LDCs, such as poverty, education and health outcomes. Climate change will push 132 million people into extreme poverty by 2030 (Jafino et al., 2020). A combination of climate and debt issues can further increase these projections.

## Post-disaster financing needs of countries

When a country is hit by a climate disaster, different types of funding support are needed to help it recover from both climate and debt crises. Their funding needs can be typically divided into three phases: immediate relief and support; medium-term recovery; and longer-term resilience building. Lack of support in any of these phases can negatively impact the population and the economy, undermine their capacity for coping with such disasters in future and push countries into downward spirals of debt, as explained below:

**(i) Immediate** access to funds is needed to save lives, launch rescue operations, prevent further harm and restore essential services to those affected or displaced after a disaster. But limited resources can pose significant challenges for a country to initiate these relief and rescue efforts. For example, when Cyclone Idai hit Mozambique in 2019, lack of immediate rescue efforts led to significant damage and loss of lives. The official death toll exceeded 1,000, with countless others injured

or missing (The Economist, 2019). Many people were stranded on rooftops and in trees, awaiting rescue for days. Lack of access to clean water, food and medical supplies in the aftermath of the cyclone led to further loss of lives. Along with severe loss of life and damage to infrastructure, the cyclone also exposed Mozambique to a financial crunch. The country's debt-to-GDP ratio was 104% before the cyclone in 2018, which increased to 120% in 2020, immediately after the crisis (World Economics, n.d.).

**(ii) Short to medium term** recovery after a disaster requires funding to restore livelihoods and restart economic activities. Delay or lack of funding can have detrimental consequences in the long run. For example, immediate relief and rescue efforts were mobilised after super Typhoon Haiyan (Typhoon Yolanda) in 2013. But the subsequent medium-term recovery and reconstruction in the Philippines faced challenges. These resulted in prolonged suffering and hindered the country's ability to fully bounce back from the disaster. The estimated total loss and damage caused by Typhoon Haiyan in the Philippines was US\$12 billion (Study Smarter, n.d.). The typhoon damaged about 1.14 million houses (Tajima and Shimozone, 2016), displacing millions of people. As of 2017, around 205,000 families (approximately 1 million people) were still living in temporary shelters or inadequate housing conditions (Salazar, 2017). The typhoon affected the livelihoods of around 5.9 million workers, including 2.6 million farmers and 2.5 million fisherfolk (Brookings Institution, 2015). The lack of comprehensive and timely efforts in medium-term recovery hindered the country's ability to fully recover and rebuild, leading to prolonged suffering and increased vulnerability in affected communities. The debt-to-GDP ratio of the Philippines increased by 10 percentage points in 2020 following the impact of Typhoon Haiyan (Allado et al., 2022).

**(iii) Longer-term** adaptation and resilience building require substantial funds for repairing and rebuilding damaged assets such as homes and creating climate-resilient infrastructure and livelihoods to minimise or avoid future climate impacts. Lack of such funding can pile debt on countries as they keep getting exposed to climate impacts without any defensive measures to deal with them. For example, in Dominica, Tropical Storm Erika caused damages equivalent to 96% of GDP in

2015, which increased the country's external debt. Two years later, while the country was still recovering from Erika, Hurricane Maria caused US\$1.3 billion in damages. This was equivalent to 226% of its GDP, resulting in declining fiscal performance and increased expenditure on recovery (Thomas and Theokritoff, 2021). Dominica had to take on more debt not just to service previous debts but also to spend on recovery from the hurricane. This debt burden represented a significant portion of the country's GDP and limited the financial resources available for post-disaster recovery and longer-term resilience building.

Across Caribbean SIDS, extreme weather events resulted in average losses of 109% per unit GDP in 2019 (Thomas and Theokritoff, 2021). These losses pushed these countries into vicious cycles of indebtedness. The continued debt-servicing obligations and budgetary limitations have hindered their ability to invest in critical infrastructure, housing and social services necessary for building resilience against future climate events.

LDCs and SIDS need financial assistance in all three phases of post-disaster recovery to allow them to adequately prepare, cope and recover from the recurring climate crisis. But, while the flow of climate finance is already constrained, they cannot even use their own budgets effectively to respond to the climate crisis; these budgets are increasingly diverted to repay debt. Many of these post-disaster investments in relief and recovery are crucial to enhancing long-term climate resilience in vulnerable communities. Lack of investment can, in turn, lead to an even larger adaptation gap. It can prevent countries from breaking out of the downward spiral of multiple disasters that cause loss and damage and further debt. To break this cycle, sufficient government budgets need to be freed to allow them to invest in recovering after a disaster, enhancing long-term resilience. This, in turn, will reduce vulnerability, limiting loss and regaining debt sustainability.

These countries are being pushed into a deeper debt crisis due to climate change — an issue they did not create. This is clearly against the principles of climate justice and thus LDCs and SIDS must be provided with debt relief and resilience-building support.

## 4

# What debt relief and support mechanisms are available and what is working where and how

## Debt relief efforts are limited and not fit for purpose

Apart from climate risks, the debt default risks of LDCs and SIDS are compounded by other factors such as increasing borrowing costs, the COVID-19 pandemic and the most recent Ukraine crisis. The International Monetary Fund (IMF) warns that 30 and 60% of emerging-market and low-income countries, respectively, may struggle to repay their debts or could face imminent challenges in doing so (Georgieva, 2022).

But unlike for individuals or companies, there is no established insolvency mechanism for countries at risk of default to initiate debt relief negotiations with creditors. Instead, countries have relied on prevailing practices, contracts or patchy debt relief options emerging from international negotiations and conventions (Aboneaaj et al., 2022).

One early precedent and success story of debt relief emerged from the United States' 'Brady Plan' developed for Mexico in 1989. The plan offered creditors three choices to restructure their debt: reduce principal, reduce interest, or maintain both and provide new loans. Most creditors took the first two options. The reduced debt service burden on the country combined with economic reforms helped improve economic growth for Mexico (Aboneaaj et al., 2022).

In 1996, the World Bank, IMF and other bilateral creditors, led by the United States, launched the Heavily Indebted Poor Countries Initiative (HIPC). This aimed to reduce the external debt burdens of qualifying countries. Over the years, HIPC has provided debt relief packages to 37 countries, including 31 in Africa, resulting in about US\$76 billion in debt service relief (IMF, n.d.a).

Bilateral creditors, including the United States, have played a significant role in funding debt relief under HIPC, with multilateral institutions and select private creditors also contributing. But despite the success in reducing bilateral debt burdens, countries still faced the



challenge of servicing multilateral debt. In response, the Multilateral Debt Relief Initiative (MDRI) was established in 2005. The MDRI aimed to provide 100% debt relief for claims from the IMF, the World Bank's International Development Association (IDA) and the African Development Bank (IMF, 2019).

While the MDRI achieved substantial reductions in multilateral debt, creditor countries agreed to compensate the international financial institutions for the forgone reflows associated with the relief. But countries have not met these obligations and arrears. In 2022, for example, the United States had 2,000 million unmet MDRI commitments that it had promised to pay to the African Development Fund (AfDF) and to IDA (Aboneaaj et al., 2022).

While HIPC, MDRI and some earlier debt relief measures met with some success, the efforts are limited and not fit for purpose. In response to the COVID-19 pandemic, the IMF offered support through the Catastrophe Containment and Relief Trust, while the G20 created the Debt Service Suspension Initiative (DSSI). DSSI postponed rather than cancelled debt payments, making future recovery even more difficult for these countries. In November 2020, the G20 and the Paris Club<sup>4</sup> set up the Common Framework for Debt Treatments (MEF, n.d.). This sought to restructure sovereign debt according to traditional Paris Club terms (going beyond the postponement of debt payments under DSSI). But uptake of the Common Framework has been limited as it lacks clear steps and timelines for bringing the creditors and parties of debt restructuring together. Only three countries (Chad, Ethiopia and Zambia) have sought relief (Aboneaaj et al., 2022).

Recent debt relief measures have limited uptake and feasibility due to the changing landscape of global creditors. The initial effectiveness of HIPC and MDRI was based on multilateral and Paris Club lenders owning the bulk of poor countries' debt. But in the years since, more private creditors have owned a greater share of HIPC debt stocks. These creditors include bondholders, state-owned enterprises and non-Paris Club lenders, namely China. The new actors, particularly China, are more inclined to pursue independent negotiations for debt restructuring rather than conform to Paris Club principles. This evolving profile of creditors has posed challenges and debt relief efforts have failed to create consensus between the main creditors.

## Innovative debt relief solutions are available, but their scope is limited

Beyond existing efforts of the World Bank, G20 and the IMF for debt relief, some other innovative options are available:

**Pause clause**, also known as a moratorium or standstill provision, is a contractual provision that allows a debtor country to temporarily suspend or delay its debt repayments to creditors during an economic or financial crisis. The pause clause provides flexibility to debtor countries by granting them a grace period to address immediate challenges and implement necessary economic reforms without the burden of debt servicing (Mustapha et al., 11 April 2023). This temporary relief can allow the country to redirect financial resources towards critical areas such as recovery efforts, social welfare programmes and economic stabilisation. The clause helps alleviate short-term financial pressures and provides breathing space for the debtor country to implement effective policies and restore economic stability before resuming debt payments.

**Parametric insurance of sovereign debt** (Bharadwaj et al., 2023) involves parametric insurance coverage for debt by a country. Insurance would repay debt on behalf of a country during a climate crisis, allowing it time to recover during that period. This would go far beyond a debt moratorium, where the debt remains and keeps accumulating. Here, debt repayment would continue as normal through the insurance mechanism, freeing the country to focus on relief and recovery. It can act as a safeguarding mechanism, provide immediate liquidity, and have fewer transaction costs than a sovereign debt restructuring process, which often ties relief to several conditions. It can also bring stability in capital markets and help bring private creditors to the table.

**Debt reprofiling** is a financial strategy to modify terms and conditions of debt obligations without necessarily reducing the overall amount owed. It involves extending maturity dates, adjusting interest rates or restructuring payment schedules to provide temporary relief to debtor countries facing financial challenges. Debt reprofiling aims to improve sustainability of debt burdens by aligning repayment obligations with a country's economic capacity. This allows for more manageable debt servicing and creates space for implementation of long-term recovery and development plans (IMF, n.d.b).

<sup>4</sup> The Paris Club is an informal group of creditor countries whose objective is to find sustainable solutions to sovereign debt payment difficulties. It operates according to six foundational principles: solidarity, consensus, information sharing, case-by-case, conditionality and comparability of treatment.



**Debt swaps** (IIED, n.d.), also known as debt-for-nature swaps or debt-for-climate swaps, are agreements where a debtor country exchanges its outstanding debt with a creditor country or organisation for investments in environmental conservation, social development or other priorities. The debtor country can use the relieved debt amount to fund sustainable projects, such as protecting biodiversity, supporting renewable energy, or improving healthcare and education. Debt swaps provide an opportunity to both address the financial obligations of the debtor country and to promote sustainable development. In so doing, they contribute to long-term resilience and economic growth, while relieving the debt burden.

**Resilience bonds** are financial instruments to raise capital for projects that enhance resilience to climate change and natural disasters. These bonds are issued by governments, municipalities or organisations. They are backed by the revenue generated from resilience-building projects, such as infrastructure upgrades, flood mitigation measures or renewable energy installations. Investors purchase these bonds, and the

proceeds are used to fund the projects (Bascunan et al., 2020). Resilience bonds are unique in that their performance and returns are linked to specific resilience metrics, such as reduced vulnerability, enhanced adaptation capacity or improved disaster response. If the resilience goals are achieved, investors receive their principal and potential returns. Resilience bonds incentivise investment in climate resilience and provide a financial mechanism to support long-term sustainability and adaptation.

While these innovative debt measures offer relief to LDCs and SIDS, they also have limitations:

- Each has different costs and delivers different levels of support during a crisis.
- They can only work well in certain contexts.
- Each is suitable for supporting different phases of recovery but not all.

Table 3 presents the advantages and limitations of different debt relief measures and provides examples where these options have been attempted.

Table 3. Advantages and limitations of some existing debt relief options

DEBT RELIEF OPTION	ADVANTAGES	LIMITATIONS
<i>Immediate term</i>		
<p><b>Pause clause in sovereign debt</b></p> <p>Example: In 2020, Zambia requested a suspension of debt payments under the G20's DSSI (Paris Club, 2021) due to the economic impact of COVID-19. This allowed the country to redirect resources towards the pandemic and the economy.</p>	<p>Provides immediate relief to countries experiencing financial difficulties due to a crisis, such as a climate disaster.</p> <p>Allows countries to redirect resources towards disaster response and recovery efforts instead of servicing debt payments.</p> <p>Can provide a breathing space for countries to stabilise their economy and implement necessary reforms.</p>	<p>May lead to increased costs in the long run due to accumulating interest and extended repayment periods.</p> <p>Could impact the country's creditworthiness and access to future borrowing.</p> <p>Lack of universal adoption or standardised clauses may limit its availability in certain debt agreements.</p> <p>Can discourage investors from lending to countries.</p>
<p><b>Parametric insurance of sovereign debt</b></p> <p>Example: Although not directly parametric insurance of sovereign debt, the Caribbean Catastrophe Risk Insurance Facility (CCRIF) paid out \$15.6 million to 13 member countries in 2017, including Antigua and Barbuda, after they were impacted by Hurricane Irma (CCRIF, 2017). The CCRIF's parametric insurance policies allowed for a quick payout to help with immediate relief efforts.</p>	<p>Provides a predictable source of funding to countries in the event of a disaster, which can help cover emergency response costs.</p> <p>Can help countries access financing quickly, without lengthy approval processes.</p> <p>Can provide a measure of stability and certainty to investors, which can make lending to developing countries more attractive.</p>	<p>Premium costs can be relatively high, especially for countries with higher risks.</p> <p>Can be difficult to determine the appropriate level of coverage needed, which can lead to under-insurance or over-insurance.</p> <p>The effectiveness of parametric insurance depends on accurate and reliable data for trigger activation.</p>

DEBT RELIEF OPTION	ADVANTAGES	LIMITATIONS
<i>Short to medium term</i>		
<p><b>Debt reprofiling</b></p> <p>Example: In 2020, Argentina restructured \$65 billion of its sovereign debt, pushing back repayment deadlines and reducing interest rates (Hoyos, 2020). This was done to help the country avoid default and address its ongoing economic crisis.</p>	<p>Provides immediate relief by restructuring debt obligations, reducing interest rates or extending repayment periods.</p> <p>Enhances fiscal sustainability and improves debt service capacity.</p> <p>Can help prevent defaults, avoiding possible negative consequences for both the country and its creditors.</p>	<p>May lead to credit rating downgrades and increased borrowing costs.</p> <p>Requires cooperation and negotiations with creditors, which can be complex and time-consuming.</p> <p>Restructuring agreements may involve conditionality and policy reforms imposed by creditors.</p>
<p><b>Debt swaps</b></p> <p>Example: In 2020, Seychelles announced plans to swap \$30 million of its sovereign debt in exchange for the protection and restoration of marine ecosystems. In 2022, Belize's national debt refinancing unlocked \$180 million for an ocean conservation site (the Belize Barrier Reef Reserve System) (UNESCO, 2023). This debt-for-nature swap was designed to help the country address the impacts of climate change on its economy and environment.</p>	<p>Can provide additional financial resources for nature conservation and climate-related projects or initiatives.</p> <p>Reduces debt burdens and debt service obligations.</p> <p>Incentivises environmental conservation and sustainable development through debt-for-nature/climate swaps.</p>	<p>Requires cooperation from creditors and negotiations for debt restructuring.</p> <p>The amount of debt relief may be limited compared to the overall debt burden.</p> <p>Debt swaps may have specific eligibility criteria or conditions that limit their applicability.</p>
<i>Long term</i>		
<p><b>Resilience bonds</b></p> <p>Example: In 2019, the government of Mexico issued a \$485 million catastrophe bond to help cover losses from earthquakes and tropical cyclones (World Bank, 2020). The bond was designed to provide the country with financial resources to quickly respond to disasters and support its long-term resilience efforts.</p>	<p>Can provide a way to finance climate resilience and adaptation projects in developing countries, which may not have the resources to invest in these projects on their own.</p> <p>Can help attract investment from a wider range of investors, including those motivated by environmental and social objectives.</p> <p>Can provide a measure of predictability and stability to investors, which can make it easier for countries to access financing in the future.</p>	<p>Requires a well-developed and reliable pipeline of climate resilience projects to attract investors.</p> <p>Structuring and issuance costs can be relatively high.</p> <p>Vulnerable to market conditions and investor sentiment, which may impact bond pricing and demand.</p>

## 5

# Multilayered comprehensive debt support needed

For countries with unsustainable debt, one debt relief measure alone cannot restore solvency unless it involves a sufficiently large share of a country's debt and substantial relief. So far, no debt relief measure has come close to achieving this. A combination of debt relief would work best in restoring solvency and addressing recovery needs in the short, medium and long term. Measures to support climate investment would need to be further layered to support longer-term resilience and protection from future climate impacts.

Table 3 shows that the effectiveness and suitability of these debt relief measures may vary depending on the circumstances and requirements of each country. They may only be suitable for one phase of post-disaster recovery and not all. On the other hand, a combination of debt relief options such as the pause clause in sovereign debt, parametric insurance, debt reprofiling, debt swaps and resilience bonds may provide a more comprehensive and sustainable solution (see also Figure 3):

**1. Immediate relief and recovery:** The pause clause in sovereign debt allows countries to temporarily suspend debt payments, providing immediate relief and freeing up financial resources to address urgent needs after a climate disaster. Meanwhile, parametric insurance can provide quick payouts for debt repayment based on pre-determined triggers, enabling countries to use their budgets for emergency response and recovery efforts.

**2. Debt restructuring and reprofiling:** Debt reprofiling, such as extending repayment terms or reducing interest rates, can provide medium-term relief by easing the debt burden and allowing countries to allocate resources towards recovery and resilience

building. It can be combined with debt swaps, where a portion of the debt is exchanged for investments in climate resilience projects. This provides additional funding and aligns debt restructuring with climate goals.

### 3. Long-term resilience and climate financing:

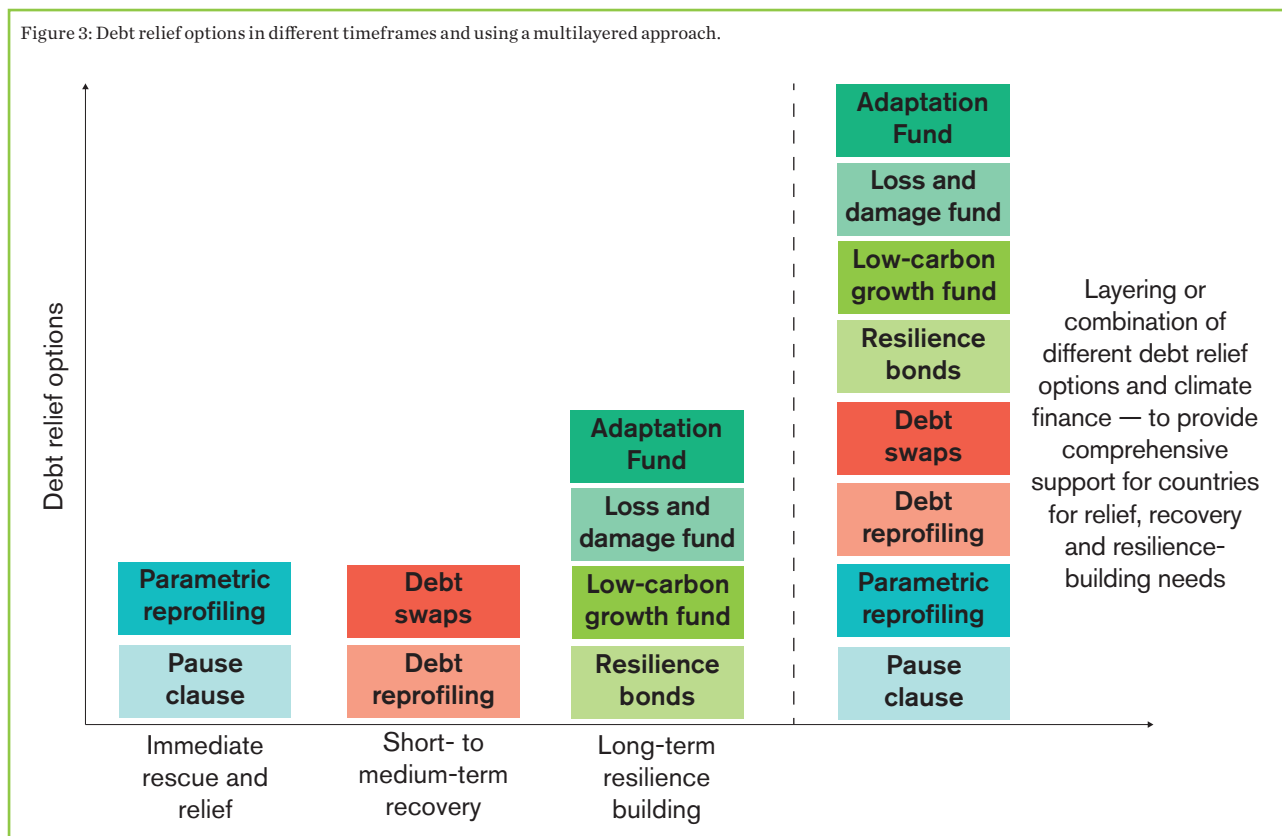
Resilience bonds can attract investment for climate resilience projects and initiatives. By issuing resilience bonds, countries can secure long-term financing for resilience building, ensuring sustained support for climate adaptation, infrastructure development and disaster risk reduction. Besides this, countries will also need access to climate finance for adaptation, addressing loss and damage and supporting low-carbon growth.

## How can multilayered debt relief work in practice?

To illustrate the need for layering debt relief options in the context of LDCs, we analysed sovereign debt data of LDCs from the International Debt Statistics (IDS) of the World Bank (World Bank IDS, n.d.). In addition, we examined data of climate change loss and damage from the Emergency Events Database (EM-DAT) based on disasters between 2000 and 2022.

Armed with these data, we studied the debt profile, number and scale of disasters and their associated losses, and the change in the debt profile of countries in the years impacted by disasters. We shortlisted three countries — Mozambique, Ethiopia and Nepal — for more detailed analysis. These countries were among those most impacted by disasters (see Box 3) and had substantial debt stock.

Figure 3: Debt relief options in different timeframes and using a multilayered approach.



### BOX 3: LEADING SUCCESSFUL IMPLEMENTATION

#### Mozambique

- Major disaster types: storm, flood, earthquake
- Number of major disaster events (2000–2022): 10
- Average loss value: US\$120,95 million

#### Ethiopia

- Major disaster types: drought, flood
- Number of major disaster events (2000–2022): 6
- Average loss value: US\$226,556 million

#### Nepal

- Major disaster types: earthquake, landslide, flood
- Number of major disaster events (2000–2022): 12
- Average loss value: US\$147,208 thousand

Figure 4 presents the change in debt stock of Mozambique, Ethiopia and Nepal following major disasters since 2010. It shows that the debt of these countries increased in the years following the disaster.

To work out how debt layering might protect Mozambique, Ethiopia and Nepal from debt default, we adopted the approach detailed below.

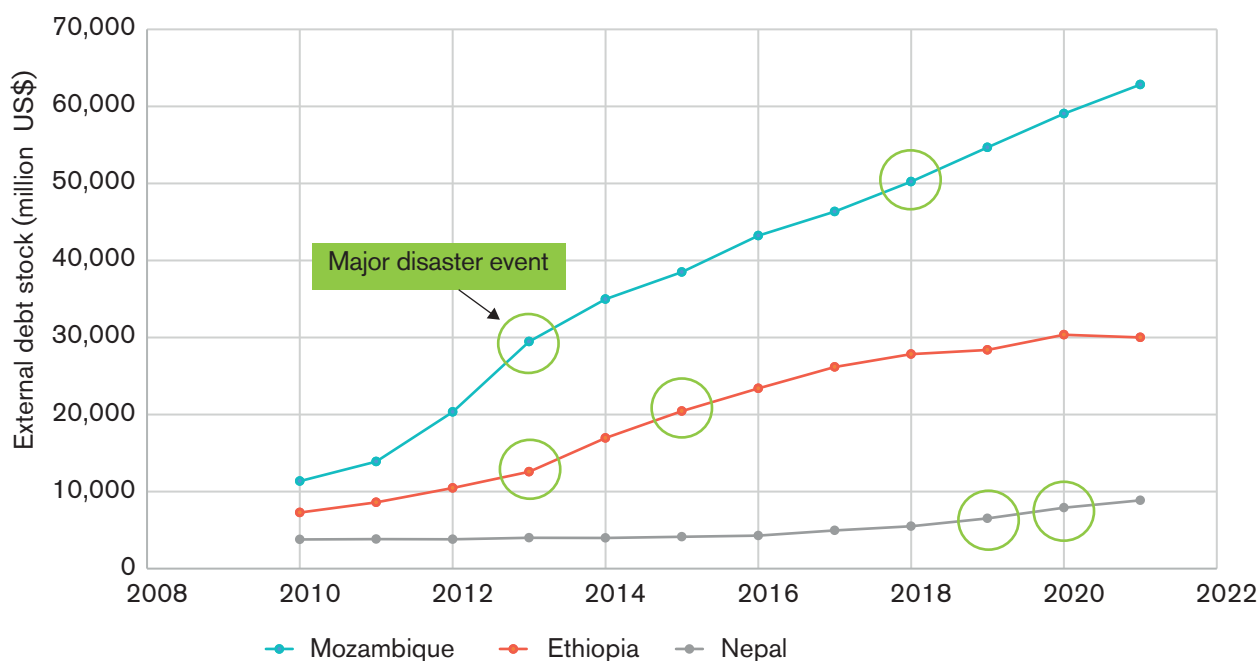
#### Stochastic modelling

We used stochastic modelling based on the EM-DAT emergency events database for Mozambique, Ethiopia and Nepal. This model can estimate and assess potential losses and impacts of large-scale disasters or catastrophic events, such as hurricanes, earthquakes or floods. In simple terms, if we want to know the probability of a hurricane causing damages exceeding US\$1 million

to a specific area, the stochastic model uses historical data, scientific analysis and other relevant information to simulate thousands of possible scenarios and calculate the likelihood of losses exceeding US\$1 million. This probability is represented as a percentage or fraction (Cebotari and Youssef, 2020).

For our analysis, we developed a stochastic model to work out the probability distribution and values of losses and damages caused by natural disasters based on the historical data. We used the frequency and volume of these losses and damages to simulate and predict the potential consequences of the disasters, including the extent of economic losses. The model output provided insights into the potential financial impacts of catastrophic events, which helped inform how debt relief strategies might be layered to mitigate default.

Figure 4: Change in external debt profile in years after countries are hit by a disaster.



### Estimation of loss exceedance probability

Loss exceedance probability (LEP) in stochastic models refers to the likelihood or probability of experiencing losses beyond a certain threshold or level. It helps estimate the chance of a stochastic event causing damages that exceed a specific predefined amount (CASACT, 2020). For example, a LEP of 5% indicates a 5% chance of experiencing losses beyond US\$1 million due to a hurricane. This information helps governments and other stakeholders assess the potential financial risks and decide on emergency response plans and investment in mitigation.

LEP is a critical component of stochastic models as it provides insights into the potential severity and frequency of catastrophic events, aiding in risk management and decision-making processes. We worked out the LEP for the three countries by running 10,000 simulations. For illustration, Figure 5 provides the loss exceedance curve based on the disaster data of Mozambique. At a 5% LEP, the loss and damage value may surpass US\$414.86 million. At a 50% LEP, the loss value is projected to exceed US\$120.48 million.

In the context of LEP and stochastic models, the attachment point refers to the threshold or level at which losses are considered to start accumulating or be counted. It represents the minimum loss value

that needs to be exceeded for it to be included in the calculations of the LEP (CASACT, 2020). For example, we could set the attachment point at US\$1 million for hurricane risks in a specific region. This means that LEP calculations will only consider hurricanes that cause losses of more than US\$1 million. Any hurricane causing losses below this threshold will not be included.

We worked out the attachment point for the three countries. This helped us define the scope and severity of events that can be considered for triggering debt relief measures and to focus on losses significant or relevant for debt relief. Figure 6 classifies all the disasters faced by Mozambique, Ethiopia and Nepal and defines their attachment point based on severity of events. We used these attachment points to define the assumptions for debt relief measures.

### Layering of debt measures

To work out the layering of debt relief measures, we assumed that the sovereign (Mozambique, Ethiopia and Nepal) would experience a default in loan repayment at a LEP of 50%. At that point, it can seek debt relief options to mitigate the associated default risk. The attachment point for debt relief payouts would occur when the LEP reaches 5%. We have also assumed annual repayment of the sovereign debt over 20 years with an interest rate of 5%. Box 4 presents existing debt stock and assumptions considered for the three countries.

Figure 5: Loss exceedance curve (an illustration for Mozambique).

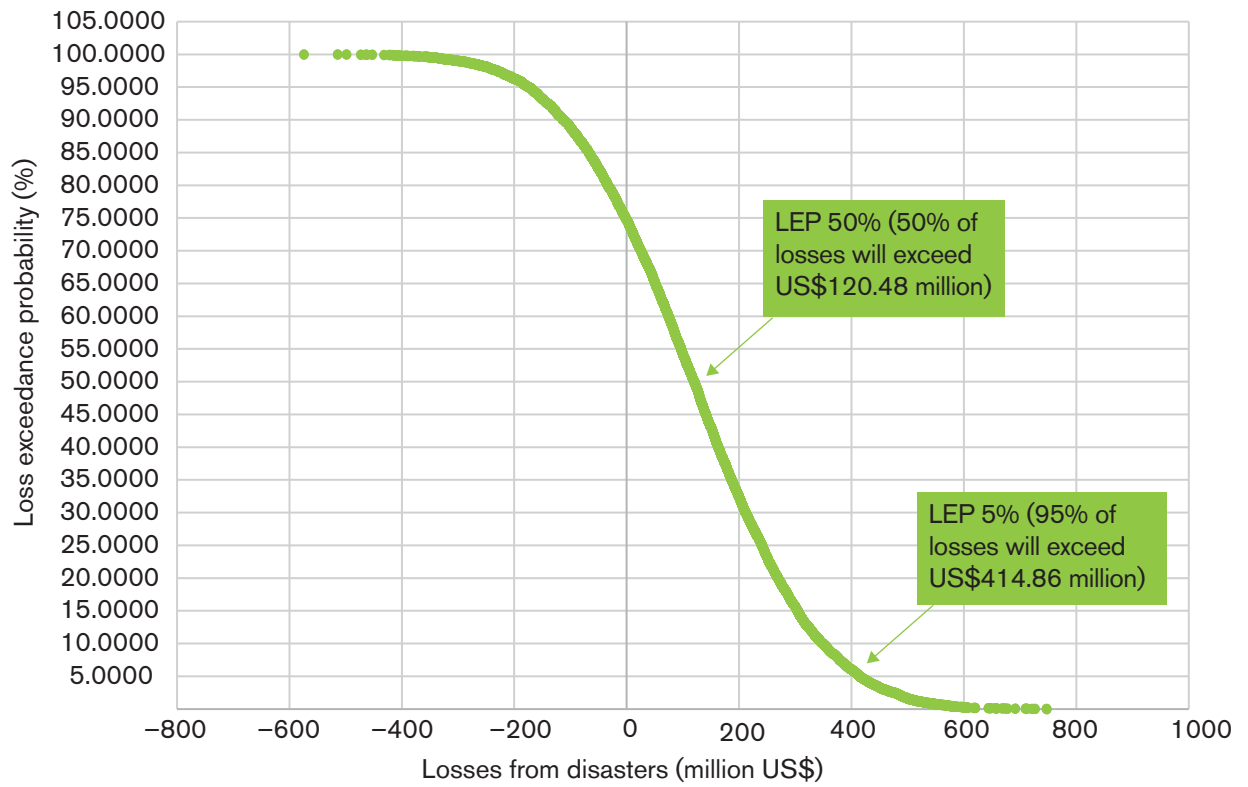
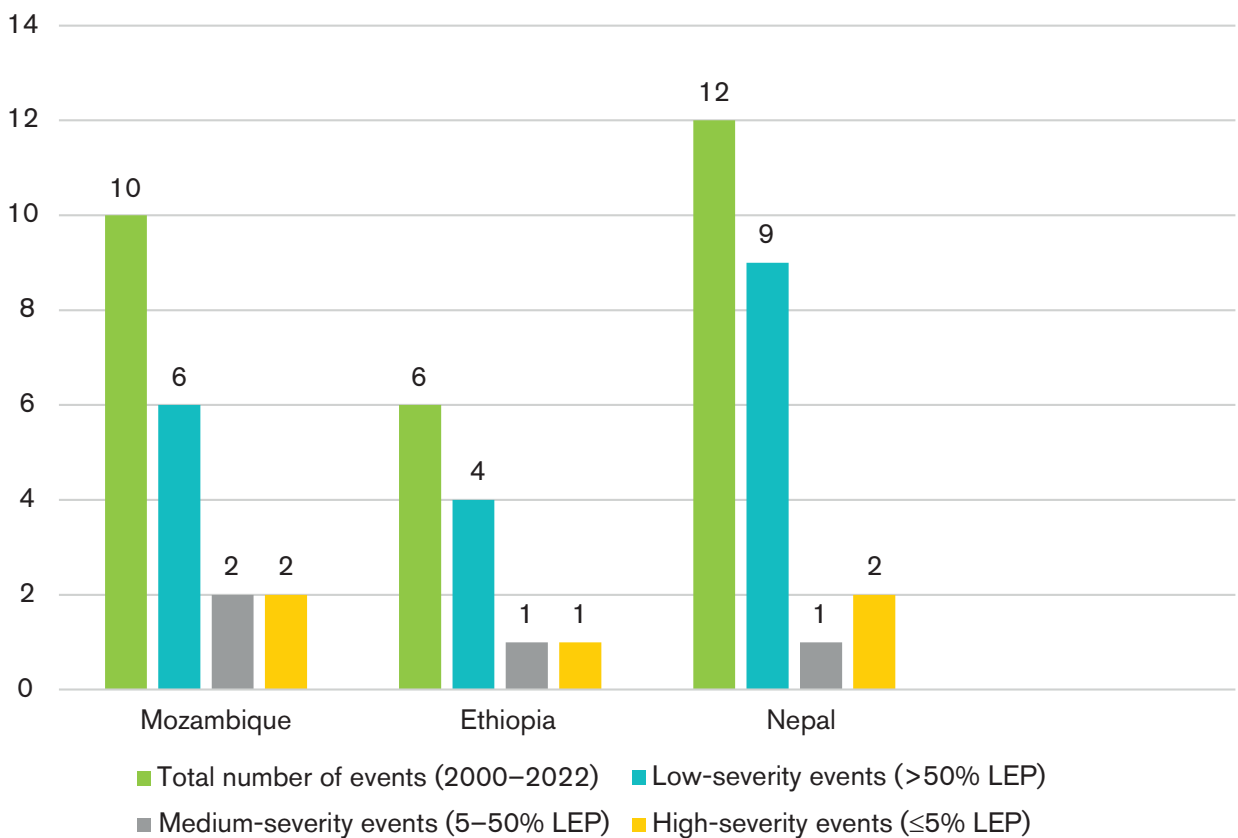


Figure 6: Classification of disaster based on severity from 2000–2022.





To work out the layering, we defined the following conditions:

**Parametric insurance (PI):** When the LEP reaches 5%, the payout is activated, and the insurer disburses an amount equivalent to the yearly repayment instalment.

**Pause clause (PC):** For LEP greater than 5% and equal to or less than 50%, the creditor grants the debtor the option to temporarily suspend repayment for six months.

**Debt swap (DS):** The creditor country or organisation agrees to relieve 10% of debt stock for investment in climate/nature or resilience building.

**Debt reprofiling (DR):** For LEP greater than 5% and equal to or less than 50%, the creditor extends the repayment period from 20 years to 25 years.

**Resilience bond (RB):** The resilience bond helps countries raise capital for projects that enhance resilience to climate change and natural disasters, equivalent to around 10–15% of countries' debt stock.

Figure 7 presents the layering of debt relief measures based on these conditions for Mozambique, Nepal and Ethiopia.

Such a layering can help Mozambique, Ethiopia and Nepal alleviate the risk of debt default and promote sustainable recovery as these measures would contribute to immediate relief, short to medium recovery, and long-term resilience building as follows:

- With parametric insurance in place, the insurance paid out when the LEP reaches 5% will provide immediate financial relief to the country, allowing it to meet debt obligations without depleting its resources or borrowing further.
- The pause clause will allow grant countries to suspend repayment for six months, providing a breathing space that allows them to redirect financial resources towards post-disaster recovery.
- Debt swap will allow the debtor country to allocate the relieved amount towards the underlying causes of the debt crisis while promoting sustainability.
- The extension of the repayment period through debt reprofiling will help reduce the immediate burden on the debtor country, providing more time to generate revenue, rebuild the economy and allocate resources towards recovery and resilience building.
- Finally, the resilience bond will allow countries to raise additional financing to invest in long-term resilience measures, such as infrastructure improvements, early warning systems and community preparedness. This can mitigate the impacts of future disasters and reduce the risk of future debt crises.

The analysis in this section is based on certain assumptions; the calculations might vary depending on data for interest rate, repayment terms, conditions of different creditors and so on. It illustrates why one debt relief measure might only provide partial support to a country struggling with debt default and not be enough to stop the vicious cycle of indebtedness. At the same time, it suggests why layering might be needed.

## BOX 4. ASSUMPTIONS FOR LAYERING OF DEBT RELIEF MEASURES

### Mozambique

- Debt stock considered for analysis: US\$62,819.10 million
- Repayment period: 20 years
- Equated yearly instalment: US\$5,040.77 million
- Condition default: when the loss and damage value of the disaster reaches US\$120,475 million (50% LEP)
- Total default at 50% LEP: US\$20,163.08 million

### Ethiopia

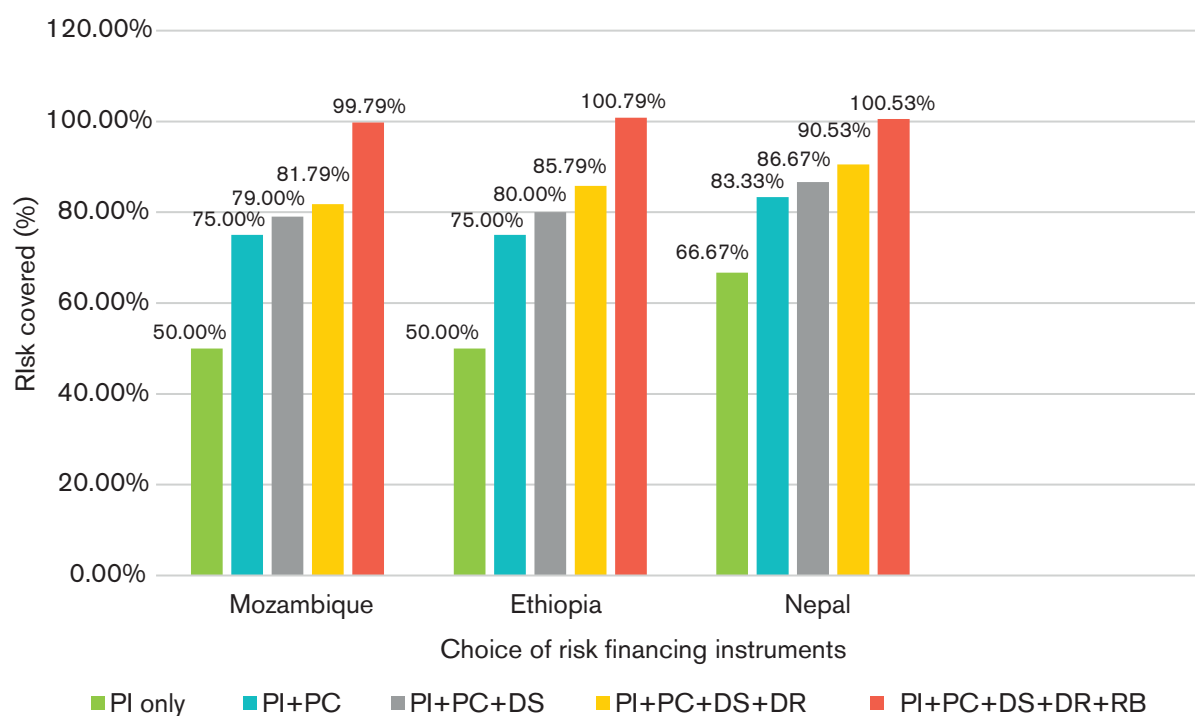
- Debt stock considered for analysis: US\$30,017.50 million
- Repayment period: 20 years
- Equated yearly instalment: US\$2,408.68 million
- Condition default: when the loss and damage value of the disaster reaches US\$217,850 million (50% LEP)
- Total default at 50% LEP: US\$4,817.36 million

### Nepal

- Debt stock considered for analysis: US\$8,856 million
- Repayment period: 20 years
- Equated yearly instalment: US\$710.63 million
- Condition default: when the loss and damage value of the disaster reaches US\$149,328.60 million (50% LEP)
- Total default at 50% LEP: US\$2,831.89 million



Figure 7: Layering of risk financing instruments to cover debt default risks.



## Advantages of layering debt relief and climate financing options

A combination of different debt relief and climate finance support can create more fiscal flexibility and less indebtedness for a country going through the disaster cycle. It can be advocated as part of the risk layering approach alongside other risk mitigation and support mechanisms, such as humanitarian assistance and official development assistance (ODA). Some advantages offered by the layering approach are discussed below.

### Comprehensive risk management

Different debt relief measures address different aspects of risk management. Parametric insurance provides coverage against specific climate-related events, such as cyclones or droughts, allowing countries to access immediate funds for response and recovery. Debt reprofiling and swaps provide opportunities to restructure debt payments and secure more favourable terms, easing the burden of repayment. Resilience bonds, on the other hand, enable countries to raise funds specifically for climate resilience projects. Layering these measures allows for a comprehensive

approach to risk management, considering both immediate and long-term needs.

This layered approach will also recognise the multidimensional nature of climate impacts and the diverse financial needs that arise at different stages of recovery and resilience building. It will allow countries to access various sources of funding, align debt restructuring with climate objectives and leverage private investment for sustainable solutions.

### Enhanced financial flexibility

Layering multiple debt relief measures will provide LDCs and SIDS with increased financial flexibility. Each measure will be able to tackle a specific aspect of debt management, allowing countries to access immediate relief, insurance coverage, restructuring options and innovative financing mechanisms. By combining these measures, countries can optimise their financial resources, manage debt obligations effectively and allocate funds towards recovery and resilience-building initiatives. By layering different options, a country can also have a more robust financial safety net that can help them better manage future crises and minimise the negative impacts of climate change on their economy and community.

## Tailored solutions for specific needs

Each debt relief measure serves a purpose and can be tailored to meet the unique needs and circumstances of a country. Layering these measures provides a more customised approach to debt management and climate resilience. For example, a country may opt for parametric insurance to cover immediate response costs. At the same time, it could pursue debt reprofiling to ease debt burdens and free up resources for longer-term recovery. The combination of measures allows countries to design a comprehensive strategy that aligns with their specific requirements.

## Diversification of financing sources

The combination of debt relief measures will provide LDCs and SIDS with more diversified sources of finance. Parametric insurance and resilience bonds, for instance, offer alternative channels for accessing financial resources beyond traditional borrowing. Besides this, countries will also need access to humanitarian assistance, climate finance and ODA support. By diversifying their sources of funding, countries can reduce reliance on a single avenue and create a more robust and sustainable financial framework to address climate-related challenges.

## Key considerations for layering of debt relief options

Advantages of debt relief options may vary depending on the specific context and implementation. Additionally, the success of layering the measures would rely on effective coordination and collaboration among stakeholders, particularly different types of creditors, including private creditors. It would also require careful consideration of each measure's terms and conditions to ensure they complement each other and align with the country's adaptation goals and priorities. Some key considerations for layering of debt relief options to design an effective model appear below.

## Debt sustainability assessment

The aim of combining debt relief and climate finance is to alleviate a country's debt burdens and improve its debt sustainability outlook. In other words, it allows a country to continue paying its debt based on growth rate and tax and revenue collection. Assessing debt sustainability typically involves analysing a country's ability to service its debt obligations without endangering its long-term fiscal health. Therefore, the design of integrating different debt support measures should consider factors such as debt-to-GDP ratio, debt service payments, debt maturity profiles and the country's capacity to generate enough revenue to continue paying its debt.

This assessment would also need to consider: the types of climate disaster a country is exposed to; the current and future scale of its impacts; the sectors of economy, geographies and communities that could be most affected during a climate crisis; and the potential impact on GDP and tax/revenue collection and how this might impact its ability to service debts. This will help in understanding the level of debt relief, period of relief and climate finance needed to tide a country over the crisis and build long-term resilience without creating additional debt burden. It would also help assess which debt relief option might work in different phases of disaster individually or in combination. But before deciding the optimum mix of different layers of debt relief and climate finance package, a comprehensive multidimensional risk assessment would also be needed. This should identify potential risks and challenges associated with combining different debt relief options, such as the following:

- (i) Evaluate risks related to market conditions, including potential fluctuations in interest rates or exchange rates.
- (ii) Assess insurance triggers and potential limitations of parametric insurance.
- (iii) Identify legal and contractual risks associated with debt reprofiling, swaps or bond issuances.

Based on the risk assessment, the layers of different debt relief measures will need to ensure adequate mitigation strategies for potential risks to ensure the effectiveness and sustainability of the combined relief measures.

## Financial implications

The combined package of debt relief would need to evaluate the financial implications of the various options. This would require assessing the costs associated with each option alone and in combination. A benefit-cost analysis would include assessing how a pooled approach to debt relief might compare to individual support, liquidity or potential savings in debt servicing payments, and their impact on the country's fiscal space. This would need to be considered along with the creditor profile of the country or which type of creditors come on board.

Ideally, such an analysis will consider the debt profile, scale and nature of debt taken by a country after a climate crisis and how it is spent. In other words, it will look at how much new debt goes to service existing debt, provide immediate relief after a disaster or build resilience for the long term. This should also explore if the terms of debt for a country change after each climate crisis and whether the crisis has a significant implication on borrowing costs and credit rating. This should include assessing the type of creditors that countries can access or if only a particular type of creditor is available as a last resort.

The financial assessment will also need to examine the availability of additional sources of finance such as climate finance, humanitarian assistance, ODA, foreign direct investment and the form (grant, loans, concessional loan) in which they flow into the country. In addition, it should consider the feasibility of securing favourable terms, such as grants, lower interest rates or longer repayment periods in debt restructuring options.

The cost assessment would also need to carefully weigh the financial trade-offs between debt relief options and the counterfactual of not providing that support. Specifically, it should consider impact on Sustainable Development Goal achievement, risk to growth, debt default and costs of debt restructuring after a country slips into economic crisis. Such an assessment will need to use evidence on how much of a country's GDP services debt. It will need to compare debt and debt servicing over years with changes in budget allocation for different ministries for agriculture, forest, health, education and industry, among others. Finally, it needs to understand the effect of less money on the reduction of jobs created in these sectors or reduction in resilience investments. Reduced investments make it hard for these countries to anticipate, respond to and recover from climate impacts resulting in loss and damage. In these contexts, the ex post benefits of debt relief can far exceed prior investment in a combination of measures.

### Policy coherence

The debt relief package needs to ensure that selected debt relief options align with the country's climate change adaptation and mitigation strategies and overall sustainable development objectives. They must also contribute to a country's growth targets, national development priorities, Nationally Determined Contribution, National Adaptation Plan and Nationally Appropriate Mitigation Actions. Integration with existing policies and plans will enhance policy coherence and promote a coordinated approach to debt relief and resilience building.

Along with policy coherence, assessment of regulatory and legal frameworks would also be needed for implementing the chosen debt relief options. Does the country's legal system support the proposed measures? Are any regulatory reforms or adjustments needed? Addressing legal complexities and ensuring regulatory compliance would be vital for successful implementation of the combined debt relief measures.

The impact of the chosen measures will need to be assessed on:

- (i) Macroeconomic stability.** What are the potential implications of the measures on inflation, exchange rates, fiscal sustainability and debt sustainability? The package should support macroeconomic stability and avoid any effects that could hinder long-term economic growth.
- (ii) Social and environmental impacts.** How does the package of options contribute to social inclusion, poverty reduction and environmental sustainability? The measures should support equitable and sustainable development, avoiding negative consequences on vulnerable groups and ecosystems.

The debt relief measures will have to be flexible enough to accommodate evolving circumstances, and a changing policy and regulatory environment. The ability to adapt the combined relief measures will ensure they remain relevant and effective in supporting the country's recovery and resilience building. To that end, robust monitoring and evaluation mechanisms will be needed to track progress and effectiveness of the combined debt relief measures. Regular evaluation, review and feedback will help a country adjust or refine measures.

### Stakeholder engagement and coordination

When developing a package of different debt relief and financing options, stakeholder engagement and coordination will play a crucial role in ensuring the effectiveness, transparency and legitimacy of the process. This is especially true for those affected by, or with a stake in, debt relief and financing options. This will include government agencies, financial institutions, civil society organisations, local communities and international partners, particularly creditors.

The debt profile of a country includes different types of creditors, which provide debt under different conditionalities. A growing proportion of global South debt is now owed to private creditors. Since low- and lower-middle-income countries pay almost half of external debt and interest to private lenders (Jones, 2022), this group must be at the table. Excluding private sector creditors may lead to incomplete debt resolutions and hinder the country's ability to achieve long-term financial stability and sustainable development. Moreover, they need to be on board right from the early stages to explore solutions for different creditors.

Ensuring representation and participation of different types of stakeholders throughout the process will also help bring in diverse perspectives and inputs, promoting transparent communication. This will encourage expression of views, concerns and suggestions to foster an inclusive and participatory decision-making process. In this way, the debt relief package will be viable.

Along with stakeholder engagement, institutional capacity and coordination mechanisms must support effective implementation and management of the combined debt relief and financing options. This may require a comprehensive country-level diagnostic of existing institutional frameworks within LDCs and SIDS to identify potential gaps and areas for improvement. Does the country have the technical capacity and expertise to implement and manage the chosen debt relief options? Are necessary institutional structures, human resources and technical skills in place?

The process should develop plans for strengthening any capacity gaps, including training programmes or technical assistance, to ensure effective implementation of the combined relief measures. Strengthening coordination arrangement and institutional governance among relevant government agencies, financial institutions and international partners will be essential to ensure policy coherence, flow of funds and efficient implementation.

# 6

## Way forward

Evidence clearly shows that 'debt relief fixes' that react to an economic crisis can only be a bandage in LDCs and SIDS. They do not help them avoid being pushed into a deeper debt crisis, absorb the effects of climate risks, help them adapt to climate impacts, or transform their capacities to deal with future climate impacts.

Innovative debt relief measures are available. But while they offer certain advantages, they only help address part of post-disaster financing needs. There is an urgent need to layer or combine these debt relief and climate financing options to offer more comprehensive support to LDCs and SIDS. The Global Financing Pact agenda and the commitment to create a loss and damage fund under the United Nations Framework Convention on Climate Change offer an opportunity to support development of such a solution.

We call upon the IMF and the World Bank, LDCs and SIDS facing debt crises, and creditor governments, private sector creditors and the Paris Club to take up this agenda. A collaborative effort among various stakeholders should provide a complete package of debt relief and financing options. It should address the impacts of climate change, promote resilience and support sustainable development in LDCs and SIDS facing sovereign debt crises.

# Annex

## List of countries considered for the correlation/regression analysis

### ANALYSIS: RELATIONSHIP BETWEEN HAZARD AND EXPOSURE INDEX AND SOVEREIGN DEFAULT TO DEBT RATIO

#### LDCs

Angola  
Benin  
Burkina Faso  
Burundi  
Cambodia  
Congo, Republic of  
Djibouti  
Equatorial Guinea  
Ethiopia  
Gambia, The  
Guinea  
Guinea-Bissau  
Haiti  
Liberia  
Madagascar  
Malawi  
Maldives  
Mali  
Mauritania  
Mozambique  
Myanmar  
Niger  
Rwanda  
Senegal  
Sierra Leone  
Sudan  
Tanzania  
Togo  
Uganda  
Vanuatu

#### Other countries

Albania  
Argentina  
Belarus  
Belize  
Bolivia  
Bosnia and Herzegovina  
Botswana  
Cameroon  
Dominica  
Dominican Republic  
Ecuador  
Fiji  
Gabon  
Georgia  
Ghana  
Iran, Islamic Republic of  
Iraq  
Jamaica  
Jordan  
Kazakhstan  
Kenya  
Korea, Republic of  
Kyrgyz Republic  
Libya  
Mauritius  
Mongolia  
Nicaragua  
Papua New Guinea  
Peru  
Romania  
Serbia  
Seychelles  
St Vincent and the Grenadines  
Syrian Arab Republic  
Tajikistan  
Tonga  
Tunisia  
Ukraine  
Uzbekistan  
Vietnam  
Zimbabwe

## ANALYSIS: RELATIONSHIP BETWEEN SOVEREIGN DEFAULT TO DEBT RATIO AND SOCIAL ASSISTANCE SPENDING

LDCs	Other countries	
Afghanistan	Albania	Romania
Angola	Argentina	Serbia
Benin	Belarus	Seychelles
Burkina Faso	Bolivia	Tajikistan
Burundi	Bosnia and Herzegovina	Tonga
Cambodia	Botswana	Tunisia
Congo, Democratic Republic of	Brazil	Ukraine
Congo, Republic of	Cameroon	Vietnam
Djibouti	Dominica	Zimbabwe
Ethiopia	Dominican Republic	
Guinea	Ecuador	
Guinea-Bissau	Egypt, Arab Republic of	
Maldives	Fiji	
Mali	Georgia	
Mauritania	Grenada	
Mozambique	Iraq	
Myanmar	Jamaica	
Niger	Jordan	
Rwanda	Kazakhstan	
Senegal	Kenya	
Sierra Leone	Kyrgyz Republic	
Sudan	Libya	
Tanzania	Mauritius	
Togo	Mongolia	
Uganda	Papua New Guinea	
Zambia	Peru	

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Severe climate impacts are burdening countries worldwide, particularly the Least Developed Countries and Small Island Developing States. Each disaster adds to their existing debt, hindering recovery and trapping them in an unsustainable cycle. This paper explores the need to break this cycle through existing debt relief options, covering the link between climate impacts and soaring debts, financing requirements in post-disaster scenarios, analysis of available relief options, and the potential of layering different debt and climate finance measures.

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International Institute for Environment and Development  
Third Floor, 235 High Holborn, London WC1V 7DN, UK  
Tel: +44 (0)20 3463 7399  
Fax: +44 (0)20 3514 9055  
[www.iied.org](http://www.iied.org)

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