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Innovative Finance for Small Island Developing States

Guidance on innovative finance for small island developing states

This report examines how innovative financing instruments, including green, social, sustainability, and sustainability-linked bonds; debt-for-nature swaps; catastrophe bonds; and climate-resilient debt clauses, can help Small Island Developing States (SIDS) face unique challenges —including climate vulnerability, limited fiscal space, and constrained access to capital — that hinder their sustainable development.

Despite their potential, the adoption of such instruments in SIDS remains limited due to high costs, fragmented implementation, and capacity gaps. The report argues for integrating them into national public financial management systems and development strategies, moving beyond isolated, donor-driven pilots. It also emphasises the need to tailor instruments to SIDS' specific contexts, such as through regional pooling or shared frameworks. Development partners should shift from deal facilitation to enabling systemic change by strengthening local capacity and institutions. With sustained support, innovative finance can become a transformative tool, enhancing financial autonomy and resilience while enabling SIDS to shape their own development pathways.

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Foreword

This document was authorised for publication by Julia Nielson, Acting Director of the Development Co-operation Directorate (DCD). It is one of several studies conducted by the OECD since 2016 on the international community's responses to the sustainable development and financing challenges faced by SIDS.

The report was authored by a team comprised of Cecilia Piemonte, Jieun Kim, Abdoulaye Fabregas, Marius Guerin and Matteo Guerraz, under the supervision of Olivier Cattaneo, Head of the Architecture and Analysis Unit.

This report is based on the authors' desk research, complemented by a survey (see Annex A) and consultations with private sector representatives from AXA XL (Stuart Barrowcliff and Iva Taylor), Rothschild & Co (Gatien Bon) and Standard Chartered (Oliver Withers); government officials from Peru (Elvis Stevens García Torreblanca) and Portugal (Ana Barreto), respectively recipient and facilitator of two bilateral debt-for-nature swaps; and development finance institutions and international organisations such as the Development Bank of Latin America (Carolina Cortés), the Asian Development Bank (Elisabetta Gentile, Jennifer Romero-Torres, Andreas Thermann, Kosintr Puongsophol and Ruben Param Soothy), the OPEC Fund (Valerie Herzog and Malak Draz Ruiz de Velasco), the World Bank (Suzy Yoon-Yildiz, Mehwish Ashraf and Erdem Atas), and IMF/PFTAC (Samir Jahjah). The Nature Conservancy's Melissa Garvey also provided valuable input. Additionally, the report benefited from country case studies and field missions to Fiji and the Maldives. Special thanks to Arinç Onat Kiliç at the University of Antwerp for his contributions.

The report has benefited from the comments and contributions of colleagues from the OECD Development Co-operation Directorate (Olivier Cattaneo, Juan Casado Asensio and Paul Horrocks); the OECD Directorate for Financial and Enterprise Affairs (Sam Foxall and Jessica Austin); the OECD Development Centre (Laura Gutierrez) and the United Kingdom's Foreign, Commonwealth and Development Office FCDO (Martin Heather and Nilen Patel).

Finally, the Development Co-operation Directorate would like to thank the government of the United Kingdom for its direct financial contribution to this study.

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Executive summary

Although underutilised in Small Island Developing States (SIDS), innovative financing mechanisms offer a promising way for them to align debt management with sustainable development and resilience efforts. With climate risks, limited fiscal space, and restricted access to affordable capital, SIDS need financial instruments tailored to their vulnerabilities. Green, social, sustainability, and sustainability-linked (GSSS) bonds, debt-for-nature swaps, catastrophe bonds, and climate resilient debt clauses (CRDCs) are among the solutions. When integrated into comprehensive development strategies, these tools can mobilise capital, relieve liquidity pressures, and enhance sustainability outcomes.

Each of these financing instruments addresses some of the unique challenges faced by SIDS, but all require favourable conditions to succeed. GSSS bonds mobilise investments aligned with environmental and social goals. Debt-for-nature swaps can ease debt burdens and simultaneously direct resources to climate and conservation, which is essential for both macroeconomic stability and climate change adaptation and mitigation. Sovereign catastrophe bonds transfer disaster risk to capital markets, ensuring rapid, pre-arranged financial relief in times of crisis. Meanwhile, CRDCs create fiscal space in the aftermath of disasters. Each instrument has advantages and drawbacks and requires specific country conditions to be viable, ranging from high-level political commitment to economic viability and institutional capacity.

Despite their potential, the adoption of innovative finance in SIDS remains limited. High transaction costs, small and dispersed project pipelines, and limited local financial and institutional capacity pose significant challenges. These financial tools are often developed in isolation, lacking integration with national budget systems or overarching debt strategies. While several SIDS have piloted transactions, these initiatives have been mainly bespoke, raising questions about replication and scalability. Consequently, innovative finance has yet to demonstrate a tangible impact on financial resilience or sustainable investment at scale within SIDS.

Development partners are critical in facilitating SIDS' access to innovative finance. Multilateral development banks (MDBs), bilateral donors, and international financial institutions have been instrumental in designing and deploying these instruments. MDBs have structured debt-for-nature swaps and catastrophe bonds on behalf of SIDS, while bilateral donors have played a key role in advancing climate-resilient clauses in sovereign loans. These partnerships have de-risked transactions, reduced entry costs, and provided proof-of-concept for various instruments. Without deeper ownership and integration into country systems, the risk remains that these instruments will remain donor-supported demonstrations rather than viable, scalable tools for long-term development finance.

Although innovative finance is often framed as a means to increase SIDS' financial autonomy, many instruments and deals still need external assistance to be viable. Guarantees, concessional resources, and technical expertise remain critical, especially during the early adoption phase. SIDS cannot bear the full cost of carrying out these deals alone. A more strategic use of concessional resources can lower transaction costs, underwrite risk, develop local capacity, generate sustainable investment pipelines, and create an enabling environment for innovative finance. Any move toward innovative finance must be

accompanied by continued and targeted support to build the ecosystems where these instruments can function effectively.

Transitioning from experimentation to systematisation would require a shift in the design, deployment, and support of innovative finance within SIDS contexts:

- **First, instruments should be integrated into the core architecture of countries' public financial management, national development plans, and medium-term debt strategies.** Rather than pursuing opportunistic or one-off transactions, SIDS and their partners should develop institutional capacity to mainstream innovative financing instruments across government.
- **Second, the approach to innovative finance must be reimagined for SIDS contexts.** This requires flexibility to rethink how each instrument could be made suitable for SIDS. For example, pooled regional bonds, shared sustainability frameworks and taxonomies, and joint implementation facilities can reduce costs and support standardisation, making innovative financing instruments better suited for small-scale, high-risk contexts.
- **Third, development partners would need to move from dealmakers to systemic enablers**. This involves strengthening SIDS' ownership, prioritising institutional and capacity development on debt management, data systems, and regulatory frameworks while ensuring that financing structures are aligned with national priorities and implementation realities.

Unlocking the potential of innovative finance in SIDS demands long-term commitment, institutional innovation, and a reframing of development co-operation towards resilience. Success should be measured by the volume of transactions and by progress in developing enabling environments, capabilities, and systems that empower SIDS to utilise these instruments effectively and sustainably. This includes developing local capital markets, embedding resilience in fiscal frameworks, and establishing the legal and regulatory structures necessary to harness sustainable finance. Innovative finance should be viewed as a transformative process that, with appropriate support, can enable SIDS to transition from vulnerability to agency in shaping their development pathways.

1 Overview

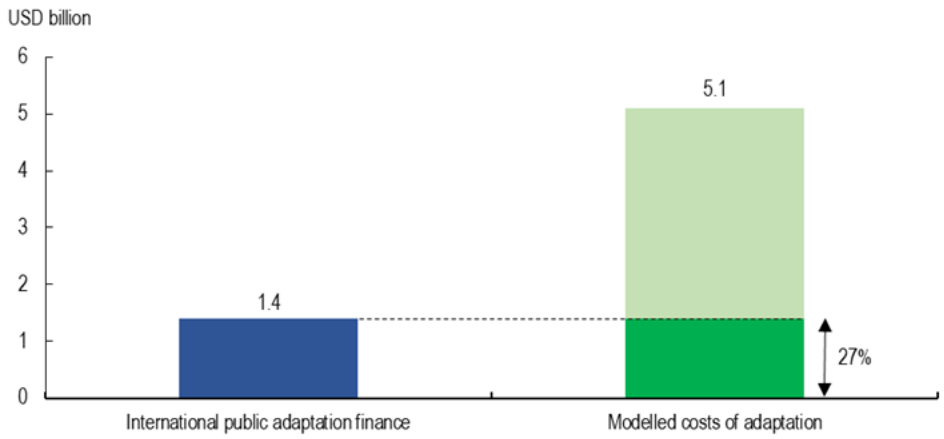
1.1. The case for innovative finance in SIDS

Small Island Developing States (SIDS) often combine high exposure to external shocks with limited options for raising finance. Their small size, remoteness, and reliance on sectors sensitive to climate change can make them more vulnerable to economic and environmental pressures than other developing countries.

Recent data show that almost half of ODA-eligible SIDS are either in debt distress or at high risk of becoming distressed. The average debt-to-GDP ratio in 2021 was 77%, above the 60% level often used as a benchmark for debt sustainability in developing economies. At the same time, the resources available for climate adaptation and biodiversity conservation fall well short of estimated needs, covering less than one-third of the total cost (Figure 1.1).

Figure 1.1. International public adaptation finance flows to SIDS cover less than one-third of the needs

Annual international public adaptation finance flows (2022) and modelled costs of adaptation in SIDS



Source: (UNEP, 2024[1]), Adaptation Gap Report 2024, https://www.unep.org/resources/adaptation-gap-report-2024

When natural disasters occur, SIDS may be forced to take on additional debt to finance recovery, further reducing fiscal space for resilience investment. This can create a reinforcing cycle where debt and vulnerability compound each other. Breaking this vicious cycle requires financing approaches that are both accessible and resilient in the face of shocks. Innovative finance instruments can help address these pressures by mobilising new sources of funding, improving debt terms, and linking finance more directly to resilience and sustainability goals.

A growing body of evidence suggests that, when carefully designed and embedded into national financing strategies, such instruments can strengthen fiscal resilience, broaden the investor base, and direct resources to priority climate and development needs.

To understand their potential role for SIDS, it is important to look at the specific innovative financing instruments that have already been used in practice and the lessons emerging from these experiences.

1.2. Key Innovative Financing Instruments for SIDS

The report examines four instruments with potential relevance for SIDS: green, social, sustainability and sustainability-linked (GSSS) bonds; debt-for-nature swaps (DNS); sovereign catastrophe bonds (cat bonds); and climate resilient debt clauses (CRDCs). See Table 1.1.

Table 1.1. Overview of four SIDS-relevant innovative financing instruments

Area	Instrument	Purpose	Definition
Financing development and conservation	Green, social, sustainable and sustainability-linked (GSSS) bonds	Mobilise funds for environmental and social projects.	GSSS bonds are financial instruments that raise capital for projects with environmental or social benefits, such as renewable energy, climate adaptation, and social infrastructure. Given SIDS' need to finance climate resilience and sustainable development while attracting private capital, GSSS bonds offer an avenue to tap into global sustainable finance markets.
	Debt-for-nature swaps (DNS)	Convert debt service into sustainable development investments.	Debt-for-nature swaps are agreements between a government and one or more of its creditors allowing countries to reduce their external debt in exchange for commitments to invest in environmental conservation and sustainability. For SIDS, which often struggle with high debt burdens and rely on their ecosystems for economic activity, debt-for-nature swaps can provide much-needed fiscal relief while promoting long-term environmental resilience.
Managing disaster risk	Sovereign catastrophe bonds (cat bonds)	Provide quick liquidity post-disaster.	Sovereign catastrophe bonds are insurance-linked securities that transfer disaster risk to capital market investors. Concretely, cat bonds provide payouts to countries in the event of natural disasters, helping them finance emergency response and recovery without increasing debt burdens. Given the high frequency of hurricanes, cyclones, and other climate-related shocks in SIDS, cat bonds offer an important tool for enhancing these countries' financial resilience.
	Climate resilient debt clauses (CRDCs)	Allow debt deferral post-disaster.	CRDCs are clauses embedded in credit contracts that allow borrowers to defer debt service payments for a pre-defined period if impacted by a qualifying natural disaster. If a natural disaster satisfies pre-agreed trigger conditions, the borrower can defer debt payments for 1 to 2 years, depending on the creditor. Deferring debt payments when natural disasters strike can help SIDS alleviate the strain on public finances and channel the unlocked funding to post-disaster recovery.

Source: Authors' design.

Although they differ in primary purpose —some aim to mobilise resources for development and conservation, others provide fiscal relief after natural disasters—, they can complement one another as part of a broader financing strategy.

GSSS bonds channel capital towards projects with environmental or social benefits. For SIDS, they offer a way of accessing sustainable finance markets to fund climate adaptation, renewable energy, or blue economy initiatives. Benefits include diversifying the investor base and signalling sustainability commitments. Challenges include high transaction costs, the need for strong project pipelines, and the

capacity to meet reporting standards. To date, uptake in SIDS has been limited, reflecting both capacity constraints and the relatively small scale of domestic capital markets.

Debt-for-nature swaps convert a portion of a country's debt into funding for environmental programmes. They can ease debt burdens while supporting conservation and resilience. So far Belize and the Seychelles have completed debt-for-nature swaps, but broader uptake amongst SIDS is limited. Constraints include complex negotiations with a variety of stakeholders and the need for robust governance of conservation funds. However, when well structured, these swaps can deliver dual benefits: fiscal space and targeted environmental gains.

Cat bonds transfer disaster risk to capital markets, providing rapid liquidity if a climate shock satisfies pre-defined trigger criteria. Jamaica is the only SIDS to have issued such a bond so far. High issuance costs and the need for precise trigger definitions have been barriers for other SIDS.

CRDCs are provisions in debt agreements allowing repayment deferral after a qualifying natural disaster. While they do not generate new funding, CRDCs offer disaster-affected countries the flexibility to redirect some public expenditure from interest servicing to disaster recovery. This frees fiscal space for recovery and resilience. Fifteen SIDS have integrated them into sovereign debt contracts, though only two have exercised them to date.

Experiences with these instruments to date provide useful insights into the enabling conditions that support their uptake, the barriers that can limit their effectiveness, and the safeguards needed to ensure they achieve their intended objectives.

1.3 Lessons from SIDS experiences

Experience from early adopters offers a set of practical insights that apply across different instruments. Enabling conditions include:

- Political momentum at the highest levels, ensuring alignment with national development and resilience priorities.
- Integration into national strategies, such as medium-term debt frameworks, budgetary processes, and sector plans (e.g., climate or biodiversity strategies).
- Regulatory readiness, including legal frameworks that enable issuance of bonds, formalisation of debt clauses, or establishment of trust funds for debt swaps.
- Institutional capacity, including skilled staff in ministries of finance, environment, and planning who can manage transactions and reporting.

Common constraints include:

- High transaction costs that are disproportionately large for small economies, particularly for complex structuring and verification.
- Limited fiscal space and creditworthiness, which restrict access to capital markets.
- Small, fragmented project pipelines, making it harder to package investments at the scale required.
- Capacity gaps in financial structuring, investor engagement, and sustained compliance.

Risks and safeguards involve:

- Increased vulnerability if financing terms are unfavourable or add to unsustainable debt burdens.
- Sustainability-washing, where proceeds are not used for stated purposes, undermining credibility.

While these enabling conditions, constraints and safeguards apply broadly across SIDS, their practical relevance and the pace of adoption vary considerably from one region to another. Understanding these regional patterns helps explain why some SIDS have moved faster with certain instruments than others. Examining these regional variations provides important context for interpreting the uptake and impact of innovative finance across different SIDS groups.

1.4 Regional Trends and Disparities

Caribbean SIDS have been lead adopters of multiple instruments. Examples include Belize and The Bahamas with debt-for-nature swaps, Jamaica with catastrophe bonds, and several countries integrating CRDCs into new loan agreements. Factors enabling uptake include comparatively better-developed capital markets, access to regional insurance pools such as the Caribbean Catastrophe Risk Insurance Facility, and established relationships with international investors and development partners.

African and Indian Ocean SIDS have been more selective. While the Seychelles has pioneered the first sovereign blue bond and completed a debt-for-nature swap, broader uptake has been limited. Smaller economies in this group often face higher proportional transaction costs, narrower investor bases, and limited familiarity with their markets among international financiers.

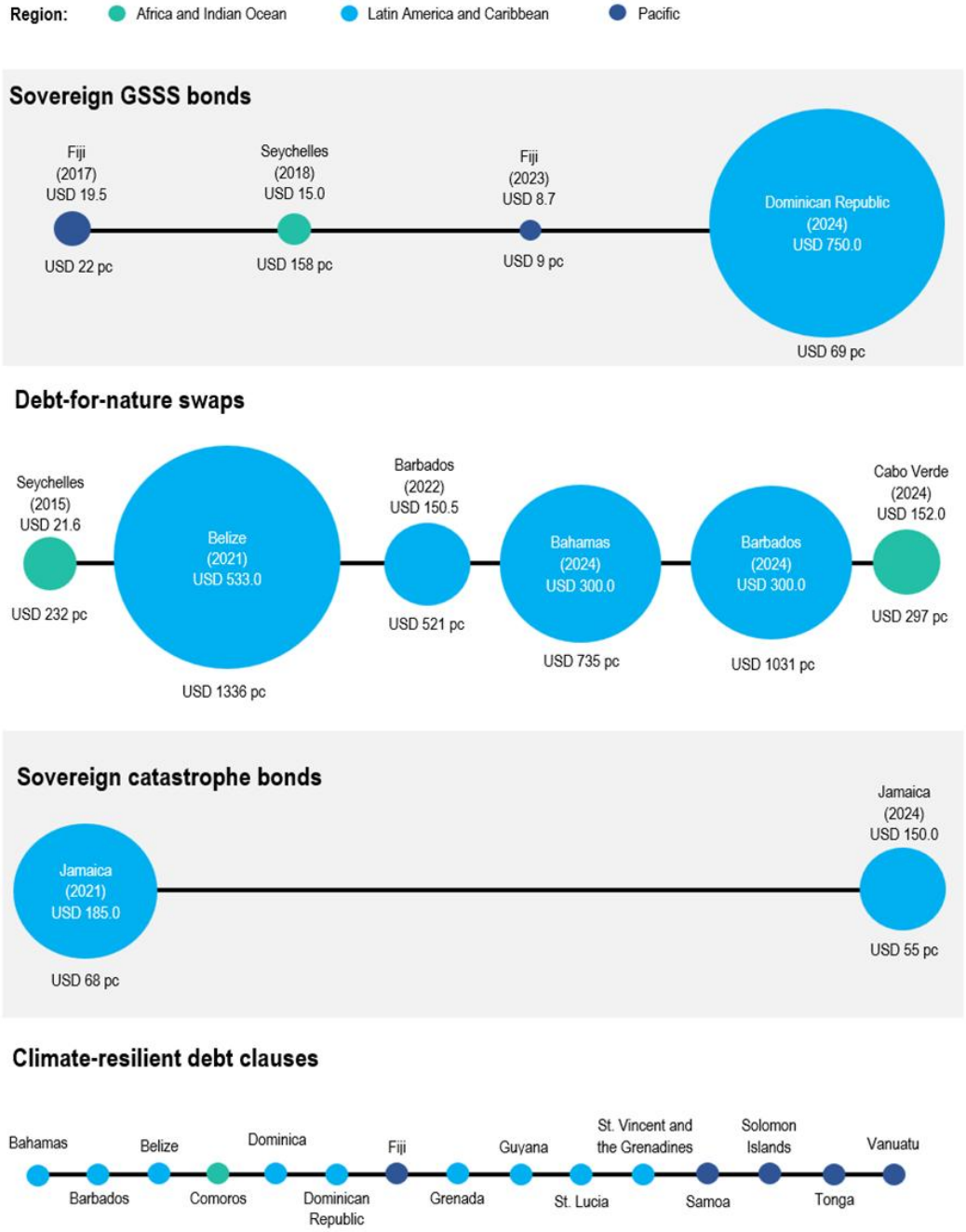
Besides CRDCs, Pacific SIDS show the slowest uptake of innovative financing instruments. Fiji has issued both a green bond and a blue bond, but other Pacific countries have yet to engage substantially with capital market-based instruments. Smaller domestic financial sectors and higher perceived investment risk contribute to these challenges (Figure 1.2).

Safeguards involve rigorous due diligence, independent verification, clear governance arrangements, and contingency planning. Without targeted technical and financial support, these differences risk widening financing inequalities between regions, potentially reinforcing existing economic disparities.

These regional patterns also influence the type of support SIDS request from development partners, both in the structuring of individual transactions and in building the enabling environment needed for broader adoption.

Figure 1.2. The adoption of innovative finance in SIDS is progressing slowly and unevenly

Innovative financing instruments implemented in SIDS, volume in USD million and USD per capita (2014-24)



Note: For all financing instruments but CRDCs, the size of the bubbles corresponds to the volume of financing by country for each instrument. For CRDCs, bubble size is not indicative (as volume depends on individual loan amounts). Sovereign bonds issued as part of DNS transactions are excluded from the sovereign GSSS bonds. For Cabo Verde's DNS, only USD 13 million have been swapped so far, pending assessment.
Source: Authors' design and per capita calculations based on (Chandrasekhar and Quiroz, 2024[2]); (Climate Bonds Initiative, 2025[3]); https://thedocs.worldbank.org/en/doc/43a111757d3b1ff1cabde80ee7eb0535-0340012021/original/Case-Study-Jamaica-Cat-Bond.pdf; and see source in Table 6.1.

1.5 The role of development partners

Development partners have played an important role in enabling SIDS to access innovative finance instruments. They have helped to design and structure transactions, including providing underwriting support and offering guarantees that reduce perceived risk for investors. Concessional finance has been used to improve the affordability of deals, while transaction costs —such as legal fees, credit ratings, and independent verification— have often been covered through donor grants or blended finance arrangements. Capacity development support has included technical assistance to strengthen institutional capabilities in financial structuring, investor engagement, and monitoring/reporting systems.

While these interventions have been valuable for opening the door to new financing approaches, their impact is often limited to the scope of individual transactions. A common challenge is that knowledge and skills gained during a single deal are not always institutionalised, creating dependence on external advisors for subsequent transactions. Moving from one-off deals to a more systemic use of innovative finance therefore requires shifting the focus from deal-making to system-enabling. This means investing in the institutions, skills, legal frameworks, and market infrastructure within SIDS that allow them to independently design, execute, and manage instruments, integrate them into broader public financial management, and replicate successes without external reliance.

Drawing from this analysis, several concrete actions can enhance the effectiveness, scale, and sustainability of innovative finance for SIDS.

1.6 Recommendations

Building on the analysis and lessons learned, the following actions can help strengthen the role of innovative finance in addressing the challenges faced by SIDS:

1. Integrate innovative finance into core public financial management systems and medium-term debt strategies. This ensures instruments are aligned with national fiscal and development objectives, rather than operating as isolated initiatives. Such integration also improves the likelihood that proceeds are channelled to priority investments and monitored effectively.
2. Tailor instruments to SIDS contexts. Regional pooling arrangements, shared frameworks, and joint facilities can help achieve economies of scale, reduce transaction costs, and expand market access for smaller economies. These collaborative approaches can also improve bargaining power when negotiating with creditors or investors.
3. Expand technical assistance and capacity building. Training, institutional support, and knowledge exchange should cover all aspects of instrument design, monitoring, and management. Peer learning among SIDS with similar challenges can be especially effective in accelerating adoption.
4. Use concessional resources strategically. Concessional funding can be used to lower transaction costs, de-risk investments for private sector participation, and develop project pipelines that meet market standards. This targeted use of concessional capital can unlock larger volumes of commercial finance.
5. Strengthen local capital markets and regulatory frameworks. Developing the domestic environment for sustainable finance can enhance investor confidence and create more opportunities for local issuance. This includes improving transparency, adopting international sustainability standards, and supporting domestic financial institutions.
6. Measure success beyond transaction volume. Assessment should focus on the resilience gains achieved, the strengthening of institutional capacity, and the sustainability of outcomes over the

long term. By emphasising quality and impact over quantity, SIDS can ensure that innovative finance delivers lasting benefits rather than short-term wins.

2 Setting the scene: the promise of innovative finance for SIDS

2.1. Why SIDS need innovative finance

2.1.1. The paradox of SIDS finance: great needs, limited resources

Small island developing states (SIDS) face a paradox of high financing needs but limited access to resources, driven by their unique structural characteristics. The geographical remoteness, small population size, and close relationship to the ocean shape SIDS's opportunities and constraints. These characteristics underpin a range of structural challenges, including undiversified economies, high costs of public service delivery, and heavy dependence on international trade. While the ocean provides significant economic potential through fisheries, tourism, and emerging blue economy sectors, SIDS also face acute vulnerabilities due to rising sea levels, loss of endemic biodiversity and extreme weather events. Even among countries most in need[1], SIDS stand out as having the highest exposure to climate change, ecosystem collapse, land degradation and natural disasters (Table 2.1).

Table 2.1. SIDS are more vulnerable to climate change than their peers

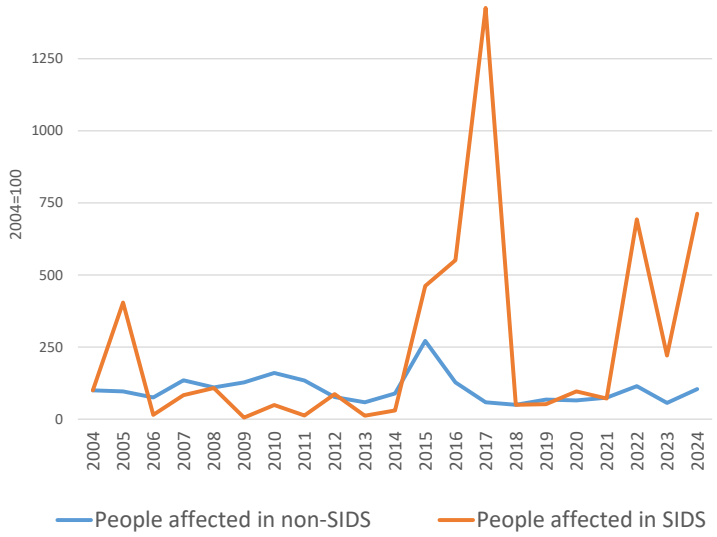
Country group	NDGain average score
Small island developing states (SIDS)	43.4
Landlocked developing countries (LLDCs)	40.3
Fragile and conflict-affected contexts (FCACs)	38.0
Least developed countries (LDCs)	37.2

Note: The table presents the average NDGain score of different groups of countries most in need. The NDGain indicator reflects countries' exposure, sensitivity and capacity to adapt to the adverse effects of climate change.
Source: Authors' design based on NDGain (2025) https://gain.nd.edu/our-work/country-index/.

[1] The term "countries most in need" is used by the OECD Development Assistance Committee (DAC) to refer to countries facing significant development challenges. This includes least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs), and fragile or conflict-affected contexts (FCACs).

SIDS' economic and environmental vulnerabilities generate significant financing needs, particularly for resilient infrastructure and disaster recovery. Due to their limited economies of scale and heavy dependence on imported goods and services, the cost of delivering public services is disproportionately high in SIDS. When disasters strike, the fiscal burden is immense: governments must finance immediate relief and long-term reconstruction efforts. Furthermore, infrastructure investment must account for climate resilience, given the heightened risk of hurricanes, cyclones, coral bleaching and coastal erosion, which require upfront investments (Figure 2.1). SIDS must also invest in climate mitigation to fill their nationally determined contributions (NCDs) engagements and protect and sustainably manage their unique biodiversity to meet National Biodiversity Strategies and Action Plans (NBSAPs).

Figure 2.1. SIDS populations are disproportionately affected by weather events



Note: non-SIDS refers to non-SIDS ODA-eligible developing countries.
Source: EMDAT (2024), Public EM-DAT platform

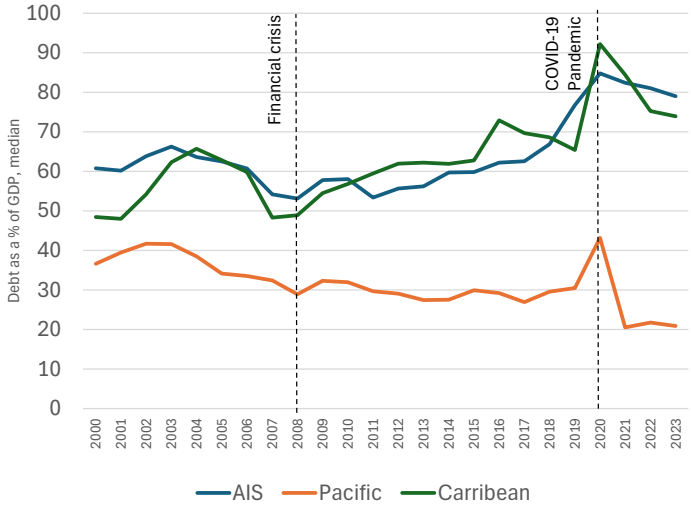
High public expenditure needs have contributed to rising debt burdens, constraining fiscal space for development. The combination of recurrent natural disasters, reliance on external markets, and limited revenue generation has led to significant fiscal pressures. As of 2025, almost half of ODA-eligible SIDS (44%) are in debt distress or at high risk of becoming distressed[2] (IMF, 2025[4]). Recent crises, such as the COVID-19 pandemic, have exacerbated existing fiscal challenges in many of these countries. For example, the average debt-to-GDP ratio in SIDS reached 77% in 2021[3], exceeding the 60% benchmark considered sustainable for developing countries (World Bank, 2010[5]) (Figure 2.2). Ultimately, this debt burden constrains the fiscal space available for critical health, education, and resilient infrastructure

[2] The Development Assistance Committee (DAC) recognises thirty-two SIDS eligible for concessional finance (ODA). These are Belize, Cabo Verde, Comoros, Cuba, Dominica, Dominican Republic, Fiji, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Micronesia, Montserrat, Nauru, Niue, Palau, Papua New Guinea, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tomé and Principe, Solomon Islands, Suriname, Timor-Leste, Tonga, Tuvalu, and Vanuatu.

[3] Note that while SIDS' average indebtedness level is high, debt profiles can vary significantly across the country grouping. For example, while Barbados' debt-to-GDP ratio exceeded 30% in 2022, the Dominican Republic's was at 14% (OECD/IDB, 2024[43]).

investments. Moreover, as creditworthiness deteriorates, SIDS face increasing borrowing costs and reduced access to international capital markets, further limiting their financing options[4].

Figure 2.2. AIS and Caribbean SIDS have seen their indebtedness levels increase in the last 15 years

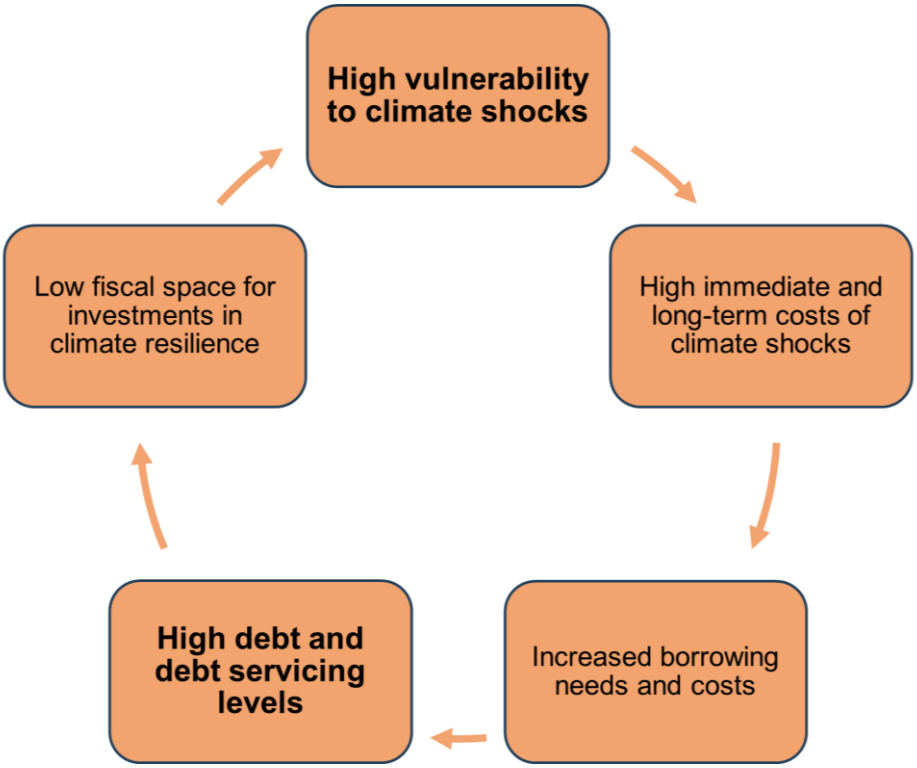


Note: The 2021 decrease in the Pacific debt-to-GDP median levels is mainly due to a massive decrease in Nauru's debt levels. AIS refers to the Atlantic, Indian Ocean, and South China Sea, and data refers to ODA-eligible SIDS.
Source: IMF (2025) General government gross debt as a share of GDP
https://www.imf.org/external/datamapper/GGXWDG_NGDP@WEO/OEMDC/ADVEC/WEOWORLD.

The dual burden of severe climate shocks and high indebtedness can create a vicious cycle exacerbating debt and resilience challenges in SIDS. In 2022, the V20 coalition of vulnerable countries raised the problem of climate-debt vicious cycles, in which climate shocks worsen debt burdens, constrain investment in long-term resilience, and trap vulnerable economies in a spiral of climate and debt vulnerability (V20 Group, 2022[6]). Growing evidence now supports the existence of such cycles in disaster-prone developing nations (Bedossa, 2023[7]; Alayza, Laxton and Neunuebel, 2023[8]; Expert Review on Debt, Nature and Climate, 2025[9]). This dynamic is particularly pronounced in SIDS, where recurrent natural disasters inflict substantial economic damage, compelling already-indebted governments to borrow further to finance recovery (Bharadwaj et al., 2023[10]). Extreme weather events also have long-lasting negative effects on economic activity and tax revenues, which can lead to credit rating downgrades and higher borrowing costs, further compounding debt burdens (Buhr et al., 2018[11]). As debt servicing absorbs an increasing share of national budgets, fiscal space for investments in climate resilience shrinks. This leaves SIDS more exposed to future disasters and reinforces the cycle of climate and debt vulnerability (Figure 2.3).

[4] The recent increase in tariffs and the rise in deportations, which are reducing remittance flows, are adding to the constraints on available financing options.

Figure 2.3. Disaster-prone and indebted SIDS can get trapped in a climate-debt vicious cycle



Source: Adapted from Expert Review on Debt, Nature and Climate (2025[9]), Healthy Debt on a Healthy Planet: Towards a Virtuous Circle of Sovereign Debt, Nature and Climate Resilience, https://debtnatureclimate.org/reports/healthy-debt-on-a-healthy-planet-towards-a-virtuous-circle-of-sovereign-debt-nature-and-climate-resilience/.

2.1.2. Structural constraints render traditional financing models insufficient for SIDS

Unlike other countries, SIDS remain heavily dependent on external concessional finance throughout their development. As countries develop, they typically diversify their sources of finance and reduce their reliance on external public finance. A common pattern is the gradual decline of concessional external financing, such as official development assistance (ODA), as countries transition towards greater reliance on domestic resources and private finance (Piemonte et al., 2019[12]). By contrast, SIDS remain heavily dependent on ODA throughout their development trajectory. In some Pacific SIDS, for instance, ODA grants account for more than 20% of GDP (OECD, forthcoming[13]), underscoring their persistent reliance on external support and their challenges in attracting private investment and mobilising domestic resources.

Private investment in SIDS remains limited and volatile, reflecting structural vulnerabilities and investor concerns. Investors often view SIDS as high-risk destinations due to their exposure to climate shocks, limited economic diversification, and dependence on external financing. For example, foreign direct investment (FDI) inflows to SIDS are significantly lower than in other developing economies and have been marked by high volatility. Between 2000 and 2022, FDI and other private flows at market terms showed repeated contractions, including net outflows of USD 2.8 billion in 2018 and USD 0.9 billion in 2020 (OECD, 2024[14]). In addition, while some SIDS have turned to citizenship-by-investment (CBI) schemes as a source of external revenue – these schemes accounted for nearly 30% of GDP in Dominica

in 2021 –, they remain inherently unpredictable and subject to fluctuations in international demand and tightening regulatory scrutiny[5].

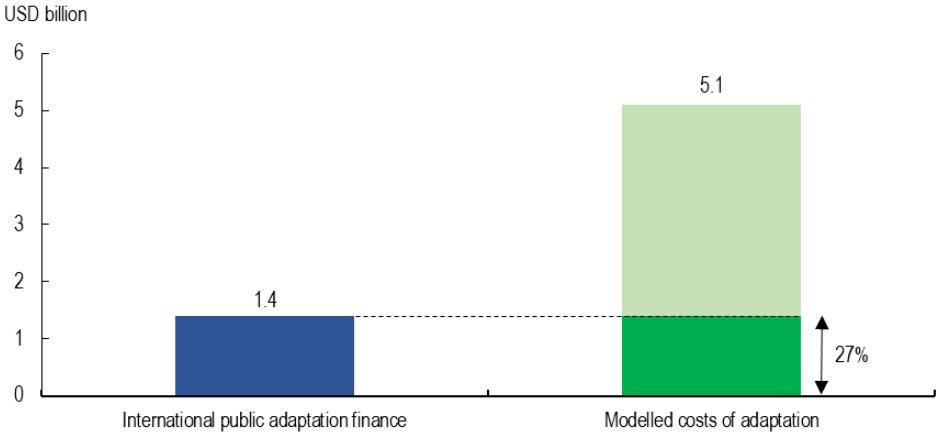
While a significant and often stable source of external finance, remittances also have limitations in supporting national development strategies. Although they contribute to household welfare, remittances primarily finance consumption rather than productive investment, and as private flows, they fall outside the remit of public budgeting and fiscal planning. As such, they cannot form a reliable foundation for financing sustainable development or public infrastructure (Piemonte, 2024[15]), although there have been attempts at co-ordinating these to contribute to development and resilience.

SIDS also face inherent limitations in mobilising domestic resources, hindering their self-sufficiency. While domestic revenue mobilisation in SIDS is relatively high as a share of GDP compared to other developing countries, it remains insufficient to meet their development financing needs (INFF Facility, 2023[16]). Structural challenges constrain opportunities for sustained revenue generation. Additionally, the domestic private sector is small and characterised by high levels of informality, limiting its contribution to tax revenues, investment and economic diversification.

The paradox of high financing needs but limited access to financial resources demands innovative financing solutions tailored to SIDS' unique circumstances. Traditional financing models, which rely on increasing domestic revenue mobilisation and private investment as countries develop, are challenging to replicate in the SIDS context. Moreover, concessional support, limited by nature, is insufficient to meet their development needs (Figure 2.4), and the constrained outlook for ODA budgets (Gulrajani and Pudussery, 2025[17]) underscores the urgency for SIDS to explore and secure additional sources of finance.

Figure 2.4. International public adaptation finance flows to SIDS cover less than one-third of the needs

Annual international public adaptation finance flows (2022) and modelled costs of adaptation in SIDS



Source: (UNEP, 2024[1]), Adaptation Gap Report 2024, https://www.unep.org/resources/adaptation-gap-report-2024.

In recent years, international initiatives have increasingly promoted the development of new financing instruments to support climate adaptation, resilience, biodiversity and sustainable development. The Bridgetown Initiative (Government of Barbados, 2025[18]), the Paris Summit for a New

[5] The United States has threatened to end visa-waiver arrangements for CBI countries, especially for individuals originally from Russia and Belarus, who seek to bypass US entry sanctions. EU members, meanwhile, have given the Organisation of Eastern Caribbean States (OECS) until 2025 to abolish their CBI schemes or risk losing visa-free access to the EU.

Global Financing Pact (Paris Pact for People and the Planet, 2023[19]), and other high-level discussions have called for a rethinking of the global financial architecture to better serve the needs of developing countries. In this context, innovative finance has gained traction as a potential solution, offering mechanisms that leverage global financial markets and align capital flows with sustainability objectives. Given the diverse challenges faced by SIDS, no single financing solution can adequately support their sustainable development. Instead, a combination of instruments is needed to address country-specific vulnerabilities (Sustainable Development Solutions Network, 2023[20]). Box 2.1 provides further background on the evolution and definition of innovative finance and outlines key instruments that are particularly relevant for SIDS.

Box 2.1. Innovative finance: evolving concepts and promising instruments for SIDS

The definition of innovative finance, first introduced in the early 2000s, has evolved in response to changing global development needs and financial innovations. The concept of innovative finance was introduced in international debate at the 2002 Monterrey International Conference on Financing for Development (United Nations, 2002[21]). In its early years, innovative finance encompassed a variety of mechanisms designed to supplement traditional development aid, such as global levies on air travel or financial transactions, debt-for-development swaps, or advance market commitments (Leading Group on Innovative Financing for Development, 2021[22]). These instruments were applied with relative success in a few pioneer sectors, such as health. Over time, the scope of innovative finance expanded to include a wider array of mechanisms, such as blended finance and, more recently, instruments aimed at addressing global sustainability and climate challenges.

For the purposes of this paper, innovative finance refers to financing instruments that remain underutilised in SIDS despite their strong relevance to the specific challenges these countries face. This definition aligns with recent calls to reform the global financial architecture to better support climate-vulnerable and small economies. It includes financial mechanisms that have not yet been widely deployed in SIDS but are repeatedly mentioned in international policy circles as having significant potential due to their ability to address sustainability objectives and resilience-building need[6] (Bedossa, 2023[7]; Alayza, Laxton and Neunuebel, 2023[8]; Expert Review on Debt, Nature and Climate, 2025[9]). While some of these instruments are not new per se, they represent an evolution in how finance is structured and leveraged to meet the specific needs of SIDS.

This paper focuses on four innovative financing instruments that have gained prominence in global discussions as promising solutions for SIDS: green, social, sustainability and sustainability-liked (GSSS) bonds, debt-for-nature swaps, sovereign catastrophe bonds, and climate resilient debt clauses (CRDCs). While they are not the only innovative financing solutions available to these countries, they illustrate the range of mechanisms that can help unlock additional resources and enhance financial resilience. As outlined in Table 2.2, these instruments can be grouped into two broad categories: (i) those designed to finance development and biodiversity; and (ii) those aimed at managing risk and providing relief and help invest in reconstruction in the aftermath of natural disasters.

Table 2.2. Overview of four SIDS-relevant innovative financing instruments

Area	Instrument	Purpose	Definition
Financing development and conservation	Green, social, sustainable and sustainability-linked (GSSS) bonds	Mobilise funds for environmental and social projects.	GSSS bonds are financial instruments that raise capital for projects with environmental or social benefits, such as renewable energy, climate adaptation, and social infrastructure. Given SIDS' need to finance climate resilience and sustainable development while attracting private capital, GSSS bonds offer an avenue to tap into global sustainable finance markets.
	Debt-for-nature swaps (DNS)	Convert debt service into sustainable development investments.	Debt-for-nature swaps are agreements between a government and one or more of its creditors allowing countries to reduce their external debt in exchange for commitments to invest in environmental conservation and sustainability. For SIDS, which often struggle with high debt burdens and rely on their ecosystems for economic activity, debt-for-nature swaps can provide much-needed fiscal relief while promoting long-term environmental resilience.
Managing disaster risk	Sovereign catastrophe bonds (cat bonds)	Provide quick liquidity post-disaster.	Sovereign catastrophe bonds are insurance-linked securities that transfer disaster risk to capital market investors. Concretely, cat bonds provide payouts to countries in the event of natural disasters, helping them finance emergency response and recovery without increasing debt burdens. Given the high frequency of hurricanes, cyclones, and other climate-related shocks in SIDS, cat bonds offer an important tool for enhancing these countries'

			financial resilience.
	Climate resilient debt clauses (CRDCs)	Allow debt deferral post-disaster.	CRDCs are clauses embedded in credit contracts that allow borrowers to defer debt service payments for a pre-defined period if impacted by a qualifying natural disaster. If a natural disaster satisfies pre-agreed trigger conditions, the borrower can defer debt payments for 1 to 2 years, depending on the creditor. Deferring debt payments when natural disasters strike can help SIDS alleviate the strain on public finances and channel the unlocked funding to post-disaster recovery.

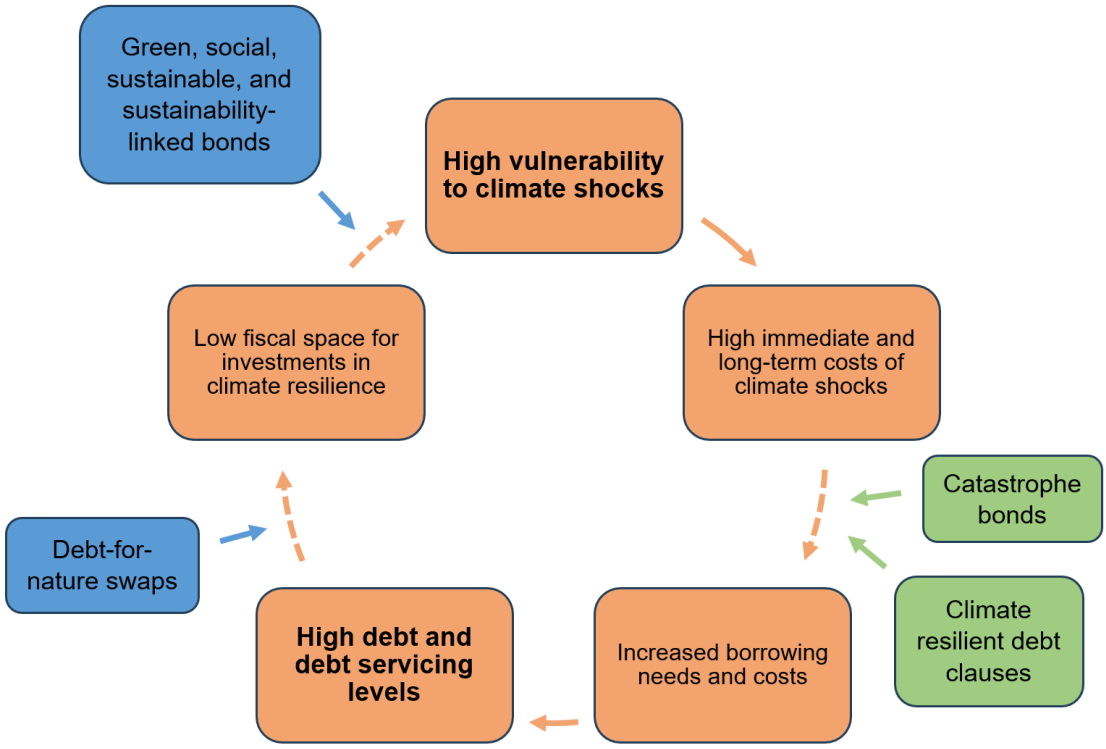
2.2. How could innovative finance help SIDS unlock new resources, overcome the climate-debt trap, and contribute to sustainable development?

Innovative financing instruments are gaining significant traction globally as governments, investors, and development partners seek solutions for pressing development and environment-related challenges. The growing scale of financing needs – particularly for climate adaptation, infrastructure and sustainable development has accelerated the demand for financing instruments that can mobilise additional resources. In recent years, global capital markets have also increasingly shifted towards sustainability-linked investments, with the historical volume of cumulative issuance of GSSS bonds (including the so-called blue bonds) surpassing USD 5 trillion, albeit with reservations regarding these instruments' actual environmental and social impact. Development finance institutions have also expanded their use of blended finance and risk-sharing instruments to improve access to capital for vulnerable countries.

Following renewed warnings by SIDS about the climate-debt vicious cycle, this paper aims to examine the potential of innovative financing instruments to help disrupt it. In 2025, former Governor Jwala Rambarran of the Central Bank of Trinidad and Tobago reiterated the pressing challenge of climate-debt traps (Rambarran, 2025[23]). Several experts and research groups have hailed innovative financing tools as the key to disrupting the cycle of rising debt and climate vulnerability (Bedossa, 2023[7]; Alayza, Laxton and Neunuebel, 2023[8]). Among the most frequently cited innovations are green, social, sustainability, and sustainability-linked bonds; debt-for-nature swaps; sovereign catastrophe bonds and climate resilient debt clauses – which helped inform the selection of tools explored in this paper. As SIDS' use of these innovative tools could further accelerate, this paper takes stock of real-world experiences and evaluates their potential to overcome climate-debt traps (Figure 2.5)

[6] A wider landscape of innovative finance options available to SIDS may include mechanisms such as Sovereign Wealth Funds for resilience (Alan Gelb; Silvana Tordo; Håvard Halland; Noora Arfaa; Gregory Smith, 2014[124]), the mobilisation of dormant accounts (OECD, 2021[125]), the introduction of new domestic or international levies (Leading Group on Innovative Financing for Development, 2021[22]). SIDS can also explore carbon markets mechanisms – where carbon credits and offsets are traded – to support emissions reduction efforts and boost financial inflows (UNDP, 2022[129]). Blue carbon markets, which value the carbon sequestration potential of coastal and marine ecosystems, offer promising opportunities for SIDS to leverage their natural assets for climate finance (World Bank, 2023[130]). Besides cat bonds and CRDCs, other common pre-arranged disaster financing tools offered by development partners include contingent disaster loans and grants, as well as sovereign insurance risk pools. Pre-arranged financing tools vary in their financial structure, payout terms and disaster coverage. The suitability of these tools is therefore country-specific, depending notably on climate risk profile and additional indebtedness capacity. Nonetheless, adopting a diverse set of disaster preparedness tools is likely to maximise the scope of natural disasters covered and SIDS' set of possible financing options following disasters, boosting their ability to respond effectively. Please consult Mustapha and Benson (2024[84]) for an evaluation of each of the major pre-arranged disaster financing tools. Taking stock of these additional options – along with their respective benefits, challenges, and key design considerations – can support the development of more effective and tailored financial strategies for SIDS.

Figure 2.5. Innovative financing tools can help disrupt climate-debt traps in SIDS



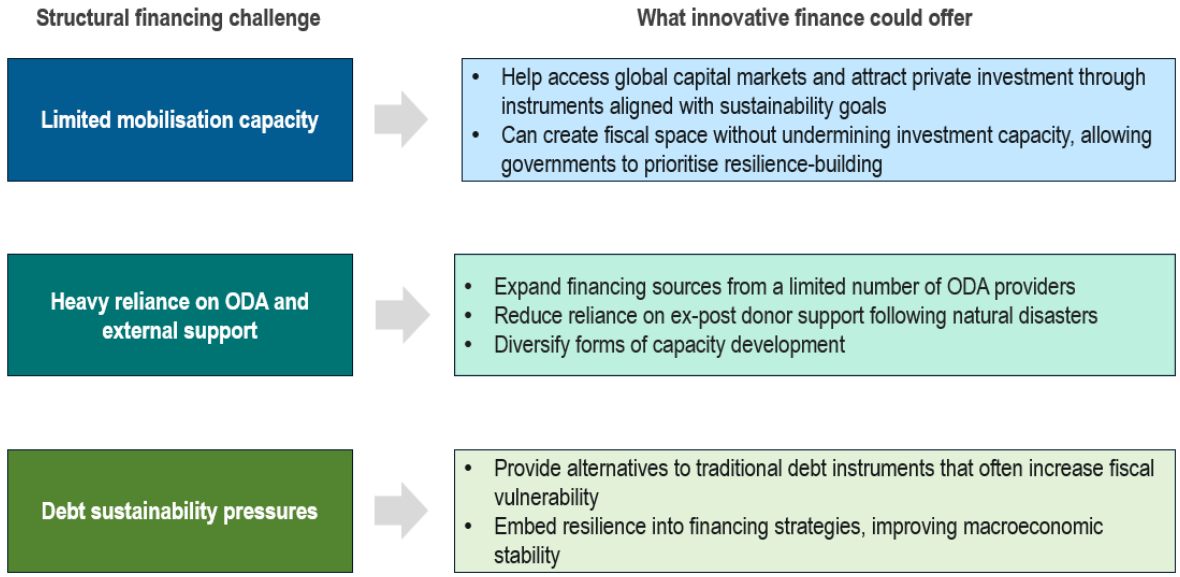
Source: Adapted from Expert Review on Debt, Nature and Climate (2025[9]), Healthy Debt on a Healthy Planet: Towards a Virtuous Circle of Sovereign Debt, Nature and Climate Resilience, https://debtnatureclimate.org/reports/healthy-debt-on-a-healthy-planet-towards-a-virtuous-circle-of-sovereign-debt-nature-and-climate-resilience/.

By focusing on resilience-enhancing nature conservation projects, GSSS bonds and DNS can restore ecosystems and disrupt the cycle of underinvestment in climate resilience. Nature-based interventions are widely recognised as an important part of the disaster risk resilience toolkit (United Nations Office for Disaster Risk Reduction, 2021[24]). Mangrove restoration, for example, can reduce the severity of floods, storms, and coastal erosion, and is often considered a cost-effective and dependable solution for reducing disaster-related damage (Vicarelli et al., 2024[25]). When designed to support ecosystem restoration, the blue economy, and climate resilience, GSSS bonds and DNS can potentially deliver multiple co-benefits. The Bahamas' 2024 debt-for-nature swap, which focuses on mangrove restoration, offers a practical example of how integrated financing approaches can simultaneously address debt, nature, and climate challenges (Box 4.1).

Catastrophe bonds and climate-resilient debt clauses help disrupt the climate-debt vicious cycle by limiting new borrowing needs following natural disasters. Countries with pre-arranged catastrophe bonds receive a sizable payout if a qualifying natural disaster occurs, significantly reducing new borrowing needs for post-disaster recovery. While the volume of unlocked financing is smaller in the case of CRDCs, they also help contain debt accumulation following climate shocks. Some funds that would otherwise have been used to service new post-disaster debt can be reallocated to climate resilience investments, further disrupting the climate-debt trap.

Expanding access to innovative finance could allow SIDS to attract new investments and optimise fiscal management. Without access to affordable financing, SIDS' structural constraints risk reinforcing a climate and debt vulnerability cycle. Innovative finance offers an opportunity to address SIDS' structural financing challenges by enabling governments to unlock new sources of capital, reduce borrowing costs, and improve the financing terms available to them (Figure 2.6).

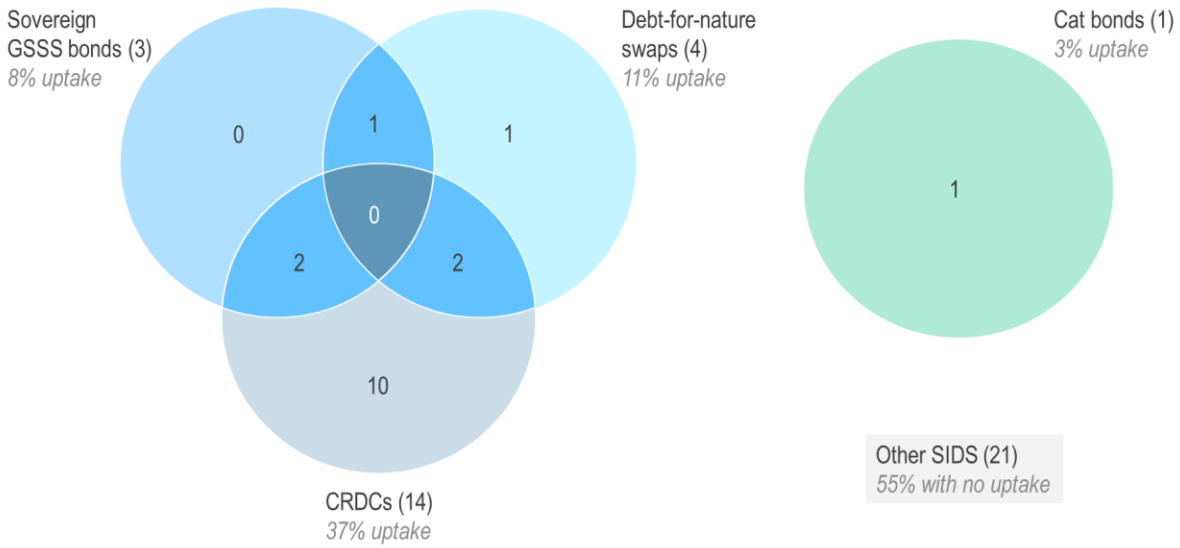
Figure 2.6. Innovative finance could help SIDS overcome some of their financing constraints



Despite growing interest in innovative financing mechanisms, their uptake in SIDS has been slow and uneven. While many SIDS could benefit from such mechanisms, only a few have successfully implemented instruments such as GSSS bonds, debt-for-nature swaps, sovereign catastrophe bonds, and CRDCs. Out of the 39 UN-designated SIDS, only three have issued sovereign blue bonds (8%), five have undertaken debt-for-nature swaps (13%), and one has issued a catastrophe bond (3%). By contrast, CRDCs have been adopted more rapidly, with 15 SIDS (38%) integrating them into their debt structures, reflecting the increasing recognition of the need for fiscal safeguards in the face of climate shocks (Figure 2.7).

Figure 2.7. A majority of SIDS have no practical experience with innovative finance

Number of SIDS, practical experience implementing sovereign blue bonds, debt-for-nature swaps, sovereign catastrophe bonds and CRDCs



Note: The figures include all UN-listed SIDS (including non-ODA-eligible ones) except for Singapore.

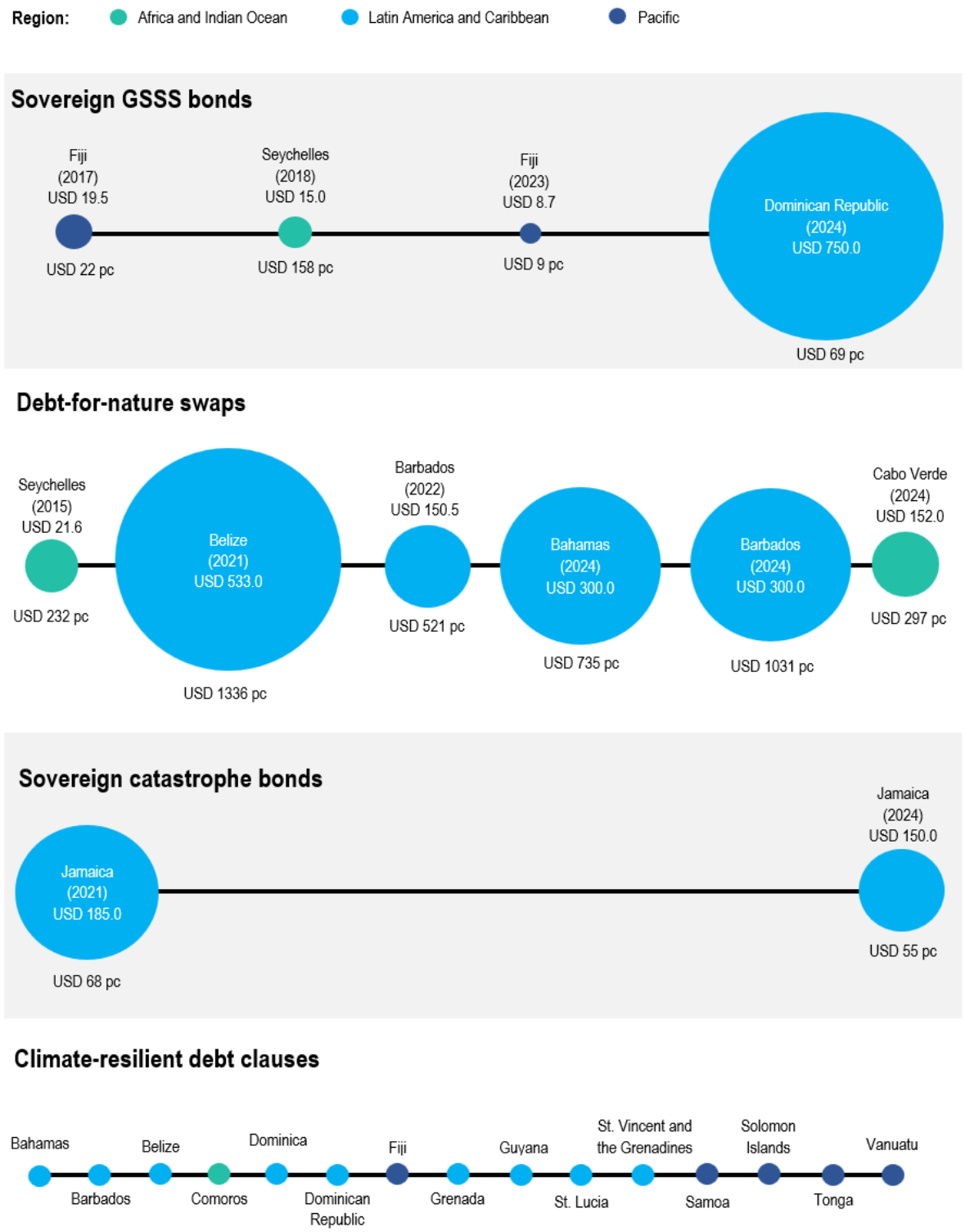
The experience of early adopters provides valuable lessons for future transactions. Understanding where and how these instruments have been deployed can provide valuable insights into the conditions that enable their successful implementation and the challenges that have limited their uptake. Figure 2.8 offers an overview of the extent to which each instrument has been utilised, the timeline for adoption across different contexts, and the volume of financing mobilised.

The volume of financing mobilised through these instruments varies widely, highlighting differences in market access and financial capacity among SIDS. The largest sovereign green bond issuance by a SIDS has been by the Dominican Republic, raising USD 750 million in 2024, while Fiji's blue bond issuance in 2023 was significantly smaller at USD 8.7 million. Similarly, Belize executed a major debt-for-nature swap amounting to USD 591.9 million, whereas the Seychelles' pioneering transaction in 2016 was much smaller at USD 26.2 million. Jamaica remains the only SIDS to have issued catastrophe bonds, securing USD 335 million in coverage through two issuances. The volume of financing linked to CRDCs is more difficult to quantify, as their impact depends on the loan amounts covered by the clauses. The large differences in volume also show that most of these instruments are not yet mature, and experimentation is still taking place to find the best parameters and tailor them to different country contexts.

Caribbean SIDS have led the adoption of innovative financing instruments, while uptake remains lower in other regions. Caribbean countries such as Jamaica, Belize, and the Bahamas have engaged in multiple types of innovative finance, reflecting their relatively higher financial market development. African and Indian Ocean SIDS, such as the Seychelles, have adopted select instruments like blue bonds and debt-for-nature swaps but remain less active in other areas. Pacific SIDS, on the other hand, have seen the slowest adoption, with very few engaging in these instruments beyond CRDCs and, in the case of Fiji, blue bonds. This regional disparity underscores the risk that, without proper support to facilitate adoption, innovative finance could exacerbate existing financial inequalities among SIDS, leaving behind precisely the countries that would benefit most from new financing solutions.

Figure 2.8. The adoption of innovative finance in SIDS is progressing slowly and unevenly

Innovative financing instruments implemented in SIDS, volume in USD million and USD per capita (2014-24)



Note: For all financing instruments but CRDCs, the size of the bubbles corresponds to the volume of financing by country for each instrument. For CRDCs, bubble size is not indicative (as volume depends on individual loan amounts). Sovereign bonds issued as part of DNS transactions are excluded from the sovereign GSSS bonds. For Cabo Verde's DNS, only USD 13 million have been swapped so far, pending assessment.

While some SIDS have successfully accessed international capital markets or piloted novel financing mechanisms, slow adoption reflects the persistence of barriers and implementation challenges. The following section examines the constraints that have held back the adoption of innovative finance in SIDS and the risks that must be managed to ensure SIDS can fully leverage the opportunities that these instruments present.

2.3. Why both caution and support are essential for SIDS to leverage innovative finance

SIDS must carefully consider the risks associated with deploying innovative finance. Although developed 25 years ago, innovative financial solutions have not scaled significantly in developing countries, and even less so in SIDS contexts. Their adoption should also not be improvised but instead approached with caution, ensuring a thorough understanding of their mechanisms, commitments, and potential trade-offs. While success stories may make these instruments appear attractive, their feasibility varies by country. A case-by-case analysis is essential, considering each instrument's opportunity cost relative to alternative financing sources.

In the absence of adequate safeguards, the adoption of innovative finance instruments may exacerbate SIDS' financial vulnerabilities. The experience of early adopters underscores the risks associated with weak financial planning, limited institutional capacity, and exposure to market volatility. Poorly structured financing strategies and instruments can lead to unsustainable debt burdens, unfavourable repayment terms, and higher borrowing costs. The case studies presented in subsequent chapters highlight both success and cautionary lessons, demonstrating the importance of careful financial planning and risk management. Mitigating financial and economic risks is crucial, as these instruments often expose SIDS to new types of obligations, such as repayment risks linked to market fluctuations or performance-based conditions. Without adequate safeguards, these risks could exacerbate financial vulnerabilities rather than alleviate them.

Some instruments can be prohibitively expensive due to SIDS' risk premia to access private finance and transaction costs involved in structuring deals. High-risk premia, market volatility, and the relatively small size of SIDS' economies can make innovative finance instruments more expensive or less attractive to investors unless carefully structured. Many of these instruments also involve substantial transaction costs, including legal fees, financial advisory services, and risk assessment requirements. For example, GSSS bonds and debt swaps often require robust monitoring systems to ensure transparency and impact assessment. Even CRDCs, which several development partners have proposed retroactively integrating into existing loans, require legal review and administrative capacity – imposing additional costs on governments already managing stretched resources. Without external support to subsidise some of these costs, many SIDS may find these instruments too costly to implement.

Capacity gaps can also hinder the adoption of innovative financing instruments. For many countries, the technical requirements of innovative finance go beyond existing capacities, requiring technical support and investments in new capacities. The development of credible project pipelines, for instance, is a prerequisite for issuing GSSS bonds. Similarly, integrating sovereign catastrophe bonds in national disaster risk financing strategies requires technical and financial expertise that is not always immediately available within SIDS' public administrations. Without accompanying investments in institutional strengthening, there is a risk that these instruments will remain out of reach for many SIDS or be adopted in ways that do not maximise their potential benefits.

The demand for technical support on innovative finance continues to outpace available support. Several international initiatives – including the G20 Technical Assistance Action Plan (TAAP) published in 2023 (G20 SFWG, 2023), the 2024 UN Financing for Development (FfD4) draft outcome document (Co-

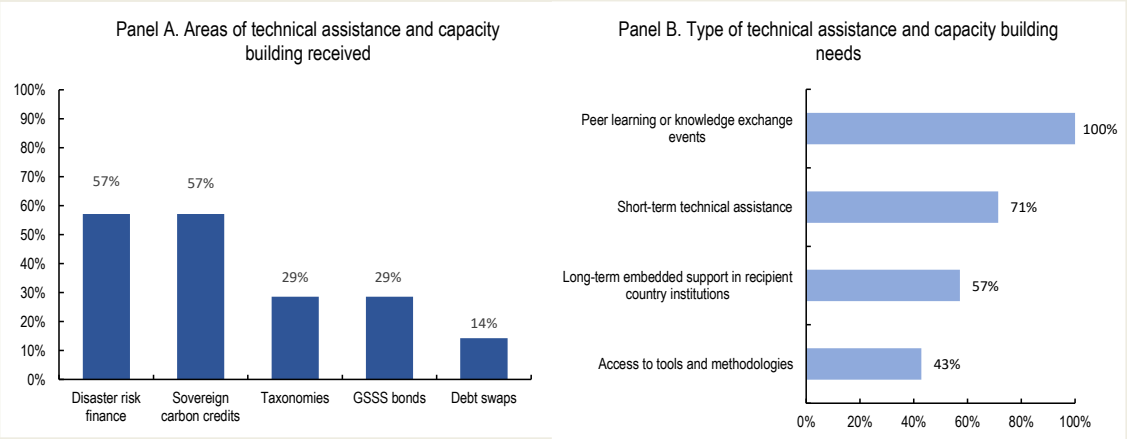
Facilitators of the Fourth International Conference on Financing for Development, 2025[26]), and a recent Finance in Common study on technical assistance for public development banks (Finance in Common, 2024[27]) – have highlighted the need to scale up capacity development efforts to ensure that developing countries can effectively access and use innovative financing instruments. The growing demand for innovative financing is also reflected in the experiences of SIDS currently developing or implementing an integrated national financing framework (INFF) – a tool introduced by the Addis Ababa Action Agenda to help countries mobilise and align public and private finance in support of their sustainable development goals (Box 2.2).

Box 2.2. SIDS are engaging with innovative finance but express strong demand for technical support

SIDS are increasingly exploring innovative financing instruments, but many still lack technical and institutional capacity to deploy them effectively. Preliminary results from the 2025 *Survey on the state of INFFs*, an annual exercise tracking countries' progress and challenges in implementing their INFFs, found that 71% of SIDS respondents (i.e. 5 out of the 7 SIDS to have already submitted their answers to the survey) had received some form of technical assistance relevant to one of the four innovative financing instruments examined in this paper over the five past years. However, many SIDS remain in the early stages of engagement, and several have yet to receive structured technical support to deploy these instruments effectively.

The survey highlighted significant differences in the provision of technical assistance across the different areas of sustainable finance. Disaster risk finance and sovereign carbon credits were the most commonly supported areas, each cited by 57% of respondents (Figure 2.9, panel A). By contrast, technical assistance and capacity building on taxonomies and GSSS bonds was received by 29% of respondents. Debt swaps were the area showing the least support, with only 14% of respondents reporting access to technical assistance.

Figure 2.9. SIDS are actively seeking technical assistance and capacity building (TACB) to harness innovative financing instruments



Note: The survey results presented in the box are based on preliminary responses obtained from the following seven SIDS governments: Cabo Verde, Comoros, Cuba, Dominican Republic, Papua New Guinea, São Tomé and Príncipe and Seychelles.
Source: Authors' calculations based on preliminary results from the INFF Facility (forthcoming), *State of INFF Survey 2025*.

To address their capacity gaps, SIDS expressed a preference for a mix of peer learning opportunities, short-term technical assistance and embedded long-term support. All respondents identified peer learning and knowledge exchange as essential, underscoring the need for platforms that facilitate knowledge-sharing across regions (Figure 2.9, panel B). Additionally, while 71% of SIDS prioritised short-term technical assistance, 57% emphasised the need for long-term embedded support within recipient country institutions to ensure lasting capacity building. Expanding these platforms – particularly in African and Indian Ocean SIDS, where regional co-operation mechanisms are less developed – could help countries benefit from the experiences of early adopters of innovative finance.

Source: INFF Facility (forthcoming), *State of INFF Survey 2025*.

2.4. Catalysing sustainable development and managing disaster risk: a dual framework for innovative finance in SIDS

This report categorises innovative financing instruments into two functional groups. While all four instruments examined in this report share the goal of enhancing SIDS' sustainable development and financial resilience, they differ in their primary function and application. Some instruments aim to mobilise capital for sustainable development and biodiversity, while others aim to provide timely fiscal relief after natural disasters. Distinguishing between these two categories provides a framework for policymakers and development partners to identify financing solutions that align with country-specific objectives and vulnerabilities.

2.4.1. Financing conservation and development

Chapters 2 and 3 focus on instruments that could help SIDS finance sustainable development and conservation efforts. GSSS bonds and debt-for-nature swaps represent two promising mechanisms for raising capital and aligning financial flows with national development priorities. These instruments are particularly relevant for countries seeking to finance climate adaptation, biodiversity, and infrastructure development while attracting private sector investment and managing debt burdens. The following chapters explore how these mechanisms have been deployed, their benefits and limitations, and the institutional and market conditions required to scale them up in SIDS. Chapter 2 focuses on GSSS bonds, while debt-for-nature swaps are addressed in Chapter 3. These instruments reflect a broader shift in development finance toward outcome-oriented, market-compatible tools that can channel investment into environmental and social priorities.

GSSS bonds and debt-for-nature swaps were selected for their relevance, visibility in international fora, and growing – though still limited – uptake by SIDS. Both instruments are central to ongoing discussions around sustainable finance architecture reform, including the Bridgetown Initiative (Government of Barbados, 2025[18]). They are recognised by development finance institutions and green vertical funds as high-potential tools for scaling up investment in developing economies. While these instruments are not entirely new, their adoption in SIDS remains relatively nascent, and lessons from early issuances are only beginning to emerge. This report, therefore, aims to take stock of implementation to date, examine the enabling conditions for success, and assess whether and how these mechanisms could be adapted to the specific context of SIDS. Some development finance instruments not covered in this report, such as sovereign carbon credits or diaspora bonds, also hold promise for SIDS. However, this paper focuses on GSSS bonds and debt-for-nature swaps as emblematic cases of innovative finance that offer untapped potential and practical lessons for scaling up sustainable development investment.

2.4.2. Managing disaster risk

Chapters 3 and 4 turn to instruments that could help address the urgent financing needs triggered by natural disasters. SIDS are acutely exposed to climate-related shocks such as hurricanes, cyclones, and floods. These events significantly strain public finances, particularly given many countries' limited fiscal buffers and high debt levels. The immediate liquidity needs that arise following disasters can delay recovery, worsen macroeconomic imbalances, and undermine long-term development efforts.

Following disasters, SIDS need urgent liquidity to respond, reconstruct, and avoid fiscal issues. However, given the limited fiscal buffers of many SIDS, the financial strain of disaster response can quickly escalate into a broader economic crisis, exacerbating debt vulnerabilities and constraining long-term development efforts. Without timely access to liquidity and debt relief measures, these countries risk being trapped in a cycle of recovery setbacks, where each disaster erodes their financial stability and hinders future resilience investments.

Addressing the variety of risks stemming from SIDS' exposure to disasters requires a panoply of instruments. No single financial tool can fully mitigate the risks associated with climate and disaster vulnerabilities in SIDS. Instead, a combination of instruments can help ensure immediate response capacity and long-term resilience. These include:

- **Contingent loans and grants:** financial instruments that provide pre-approved funds that can be rapidly accessed in emergencies, helping governments respond effectively;
- **Sovereign insurance risk pools:** regional mechanisms that allow multiple countries to collectively pool disaster risk by paying premiums in exchange for rapid payouts following extreme weather events; and
- **Sovereign catastrophe bonds (cat bonds):** market-based instruments that enable governments to transfer disaster risk to investors. In exchange for periodic coupon payments, investors provide upfront capital, which is used to cover losses from predefined disasters;
- **Climate resilient debt clauses (CRDCs):** provisions in debt agreements that allow borrowers to temporarily defer debt payments when a predefined natural disaster occurs.

Some of these instruments, such as sovereign insurance risk pools and contingent financing, have played a role in SIDS' disaster response for over a decade and are therefore not the focus of this paper. The Caribbean Catastrophe Risk Insurance Facility (CCRIF), established in 2007, has provided rapid payouts to participating Caribbean and Central American countries following extreme weather events. Similarly, contingent financing mechanisms, such as the World Bank's Catastrophe Deferred Drawdown Option (Cat DDO) and the Inter-American Development Bank's Contingent Credit Facility (CCF), introduced in 2008 and 2009, respectively, have been used by some SIDS to access emergency liquidity. While these instruments remain essential components of disaster risk financing, they are not considered part of the new wave of innovative finance explored in this paper.

Therefore, the second part of this report focuses on sovereign catastrophe bonds and CRDCs, two instruments still in their early stages of adoption to assess how they might complement existing tools. Both have gained prominence through initiatives such as the Bridgetown Initiative (Government of Barbados, 2025[18]), which seeks to enhance access to innovative financial instruments for climate-vulnerable countries. However, despite the enthusiasm voiced in international fora, adoption by SIDS remains limited. Concretely, Jamaica is the only SIDS to have issued sovereign catastrophe bonds, none of which have been triggered. Similarly, although a growing number of countries are incorporating CRDCs into their loan agreements (or studying this possibility), only two SIDS, Grenada and Saint Vincent and Grenadines, have exercised such clauses. Chapters 4 and 5 aim to clarify the role and potential of these instruments within the broader panoply, as well as draw lessons from early adopters, to understand how best to make them work in combination with other available risk management instruments.

3 Green, social, sustainable, and sustainability-linked (GSSS) bonds: a new path to market-based financing?

In Brief: Key takeaways on green, social, sustainability and sustainability-linked (GSSS) bonds

Objective

- Green, social, sustainability and sustainability-linked bonds can help channel capital market resources towards environmental or social objectives.

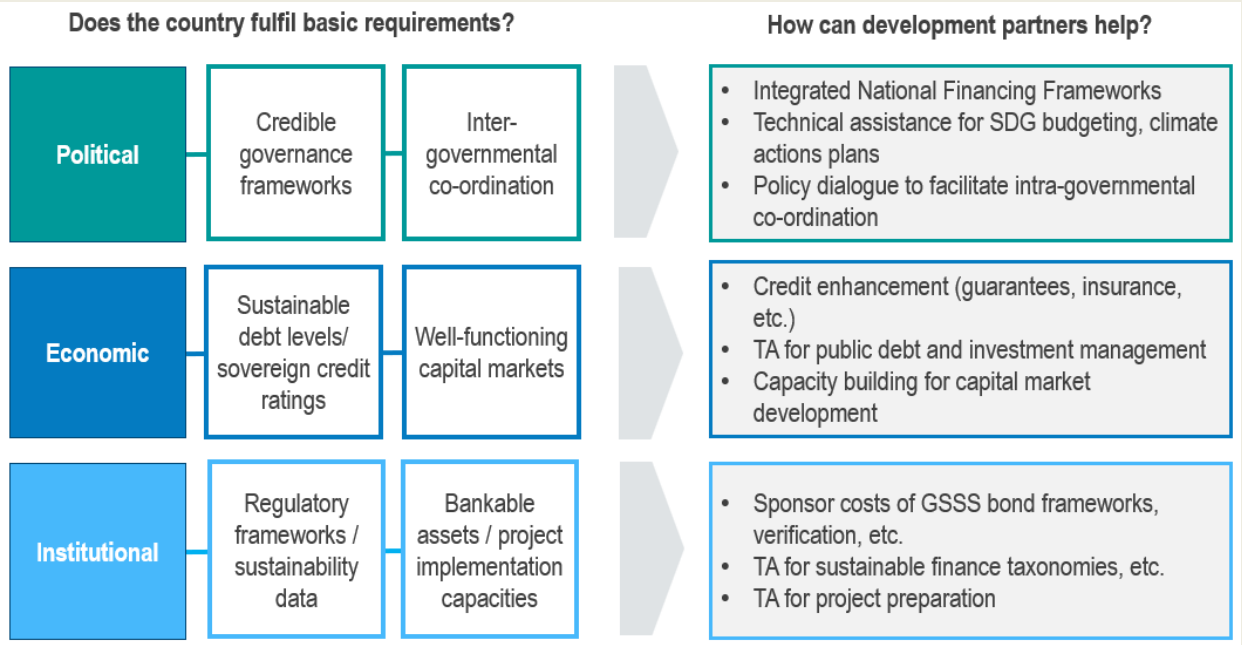
Potential benefits

- GSSS bond issuance can help to broaden and diversify the investor pools.
- In some cases, GSSS bonds can offer pricing benefits ('greenium').
- GSSS bond issuances can send a signal about the government's sustainability commitment.

Challenges and risks

- Debt sustainability concerns and lack of sovereign credit ratings can make it challenging to issue GSSS bonds.
- GSSS bonds can involve substantial transaction costs (USD 50k – USD 500k).
- Dedicated human resources for the structuring and monitoring of the bond can be burdensome.
- Rigorous eligibility and reporting criteria can impede the disbursement of bond proceeds and limit fiscal flexibility.
- The use of proceeds or sustainability targets linked to GSSSs need to be carefully specified in advance of the issuance.

Readiness for adoption and development partners' role



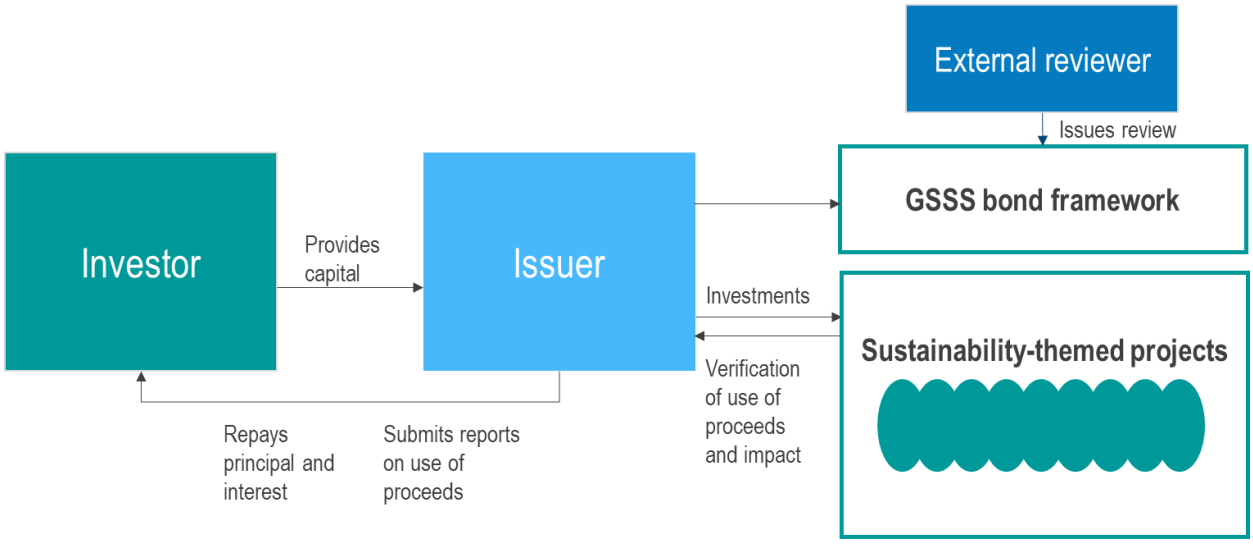
3.1. How do GSSS bonds work?

Green, social, sustainability and sustainability-linked (GSSS) bonds encompass a family of debt instruments that channel capital towards sustainability or social objectives. These instruments fall into two broad categories: use-of-proceeds bonds (UoP bonds), which earmark funds for specific categories of expenditure, and sustainability-linked bonds (SLBs), which tie bond terms to the issuer's achievement of defined sustainability targets.

Issuers of UoP bonds commit to using the capital raised with the bond exclusively for projects that qualify as green, blue, or social. Ahead of the bond issuance, the issuer must establish a GSSS bond framework, articulating the proposed use of proceeds, as shown in Figure 3.1. The framework includes information on the eligible categories for the projects the issuer will invest in and the processes that govern the selection and implementation of projects. This disclosure enables investors to assess the eligibility of the projects better and make more informed investment decisions. To increase the framework's credibility, issuers obtain a second-party opinion from external reviewers (e.g. accountancy firms and specialised research agencies) to confirm its alignment with international standards such as the International Capital Market Association (ICMA) green bond principles or guidance on blue bonds.

Blue bonds, a type of UoP bond, target ocean-related investments and hold particular relevance for SIDS. While often considered a sub-category of green bonds, this financial product is more recent and less standardised. In 2018, the Seychelles launched the world's first sovereign blue bond, raising USD 15 million. While giving an overview of GSSS bonds, this chapter will sometimes point to some characteristics of blue bonds, as they are especially relevant for SIDS, the economies of which stand to benefit substantially from investments in marine and coastal resources. Moreover, the chapter focuses on bonds issued by the central government (sovereign bonds).

Figure 3.1. Use of proceed bonds require that the finance raised is spent on projects with sustainability objectives



Unlike for UoP bonds, the proceeds of SLBs are not tied to specific investments, but issuers need to meet pre-defined sustainability objectives. As with UoP bonds, the issuer establishes a bond framework. However, this framework does not deal with the use of funds but how the issuer's sustainability performance will be assessed through predefined key performance indicators (KPIs) and evaluated against predefined sustainability performance targets (SPTs). For sovereign issuers, these KPIs can be related to greenhouse gas emissions or biodiversity targets. The framework also outlines how target

delivery or failure will affect the payment structure of the bond. Under one possible SLB structure, the bond's characteristics remain unchanged if the issuer achieves the goals, but if the issuer fails to meet the target, there can be a penalty, such as a 'step up' in the coupon paid to investors.

Use-of-proceeds and sustainability-linked bonds offer flexible and targeted tools for financing sustainable development. The next section explores why these instruments have attracted growing interest globally, including their potential benefits for SIDS, such as improved access to finance, investor diversification, and enhanced visibility of sustainability commitments.

3.2. What are the benefits of GSSS bond issuances?

Rising interest in environmental, social, and governance (ESG) investment opportunities has driven the rapid expansion of the GSSS bond market. According to Climate Bond Initiative's screening methodology, the GSSS debt market reached USD 1.1 trillion in 2024, with a cumulative historical volume of USD 5.7 trillion (Climate Bonds Initiative, 2025[3]). Developing countries account for about 23% of total cumulative issuances, but their share has grown since 2021, reaching almost one-third of total issuances in 2023 (Jensen, 2024[28]). Among SIDS, however, GSSS bond issuance remains rare, as explored in the following section. As of the end of 2024, three SIDS[7] had issued sovereign GSSS bonds amounting to USD 784 million.

GSSS bonds offer potential pricing benefits, but these are limited and vary widely across contexts. GSSS bonds potentially present lower yields than conventional bonds. This yield difference is particularly well-documented for green bonds, where it is known as the "greenium". It occurs when investor demand for these bonds exceeds supply[8]. However, the existence and size of the greenium depend on factors such as market conditions[9], issuer profile, and the credibility of the sustainability framework. The greenium tends to be higher for hard currency issuances in international markets than for local currency bonds or local issuances, due to higher interest in SDG and ESG-related investment opportunities from international investors. The greenium is also larger for new issuances and tends to weaken with more repeat issuances. Relatedly, some studies find that the greenium is larger for developing countries (11 basis points on average) than for advanced economies (four basis points on average) (Ando et al., 2024[29]). Moreover, pricing benefits are more pronounced for bonds with strong sustainability credentials (i.e. credible project selection criteria and/or rigorous monitoring process). Anecdotal evidence from SIDS, such as Fiji, suggests that pricing benefits are not guaranteed: neither the 2017 green bonds issuance nor the more recent blue bond in 2023 secured lower borrowing costs (Reserve Bank of Fiji, 2019[30]). Moreover, the size of the greenium is limited, rarely surpassing a few basis points. The average cost of borrowing for SIDS on international bond markets in 2023 was 7.05% compared to 3.09% for G7 countries (Gail Hurley, n.d.[31]). Even if there is a greenium, it will likely make only a negligible difference to the high borrowing cost of countries.

Issuing GSSS bonds can help diversify and broaden the investor base, providing SIDS with more flexibility and leverage when exploring financing options. Appetite for the value proposition of ESG investments is increasing, with large potential demand for emerging market government debt. In Fiji, the green and blue bond issuances mobilised a range of local and regional institutional investors such as commercial banks, pension funds and insurance companies increasingly interested in local ESG investment opportunities. The blue bond issued in 2023 was oversubscribed with a total bid of over FJD

[7] The three SIDS are Fiji, Dominican Republic and the Seychelles. When including Singapore, which is also classified as a SIDS, the total cumulative issuance amount would be USD 7.5 billion.

[8] More concretely, demand needs to exceed supply at a weighted average price to achieves a greenium.

[9] This includes supply in that part of the yield curve, expectations for future monetary policy etc.

60 million (USD 26.7 million), 3 times the issuance amount of FJD 20 million (USD 8.7 million) (KPMG, 2025[32]).

In addition to providing an opportunity to raise needed capital, GSSS bonds also send a strong signal about a government's commitment to sustainability. GSSS bonds are an entry point to systematically integrate SDG impact measurement and management and create systemic change in how public budgeting and debt are managed. GSSS bonds can help better link public expenditure and investment plans with nature and climate commitments, such as NDCs (OECD, 2022[33]) , the Kunming-Montreal Global Biodiversity Framework, and the National Convention on Biological Diversity's Biodiversity Strategies and Action Plans (NBSAPs).

Despite the benefits and interest in GSSS bonds globally, SIDS have been slow to adopt them at scale. The next section examines the key constraints, ranging from debt sustainability and institutional capacity to transaction costs, that limit sovereign GSSS bond issuances across the SIDS landscape.

3.3. Why are there so few bonds issued by SIDS?

Debt sustainability concerns and a lack of sovereign credit ratings prevent many SIDS from accessing international capital markets.[10] As discussed in Chapter 1, more than half of SIDS assessed by the IMF are at high risk of, or already in, debt distress, leaving only limited fiscal space to take on additional debt. Moreover, bond issuances require credit ratings from international rating agencies, but only a limited number of SIDS (13) have obtained sovereign credit ratings (Bharadwaj et al., 2024[34]). For small Ministries of Finance with constrained budgets and limited human resources, allocating the resources required to obtain and maintain ratings (e.g., supply data, organise periodic rating reviews, prepare and communicate credit narratives, etc.) can be challenging.

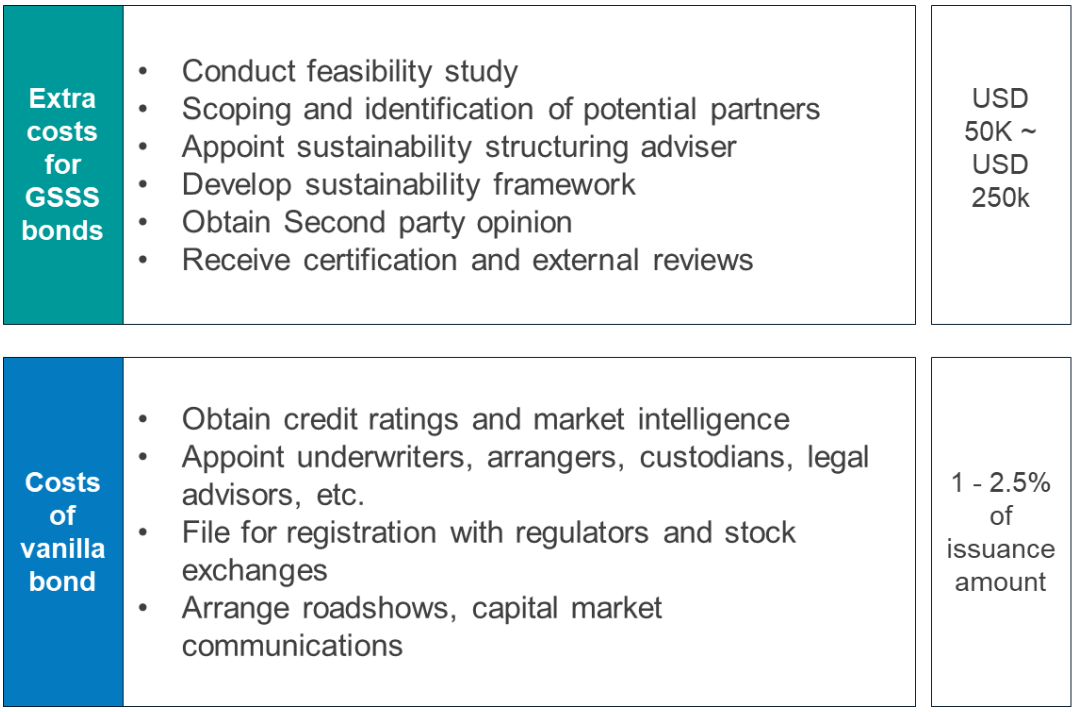
High setup and monitoring costs pose additional barriers for GSSS bond issuances. GSSS bonds require strict monitoring, transparency and verification processes. Compared to standard or so-called vanilla government bonds, arranging GSSS bonds involves more staff time and technical expertise, which can significantly burden small Finance Ministries and debt management offices (Jensen, 2024[35]). For example, in some cases, a steering committee is set up before issuance to convene the relevant stakeholders across different sectors (e.g. environment, infrastructure, climate change and planning, etc.). The issuer also needs to establish a green, social, sustainability bond framework to pass an external review. Based on this framework, mechanisms must be developed to screen and monitor the sustainability impact of projects financed by the bonds throughout their life cycle.

Smaller issuance volumes increase the relative cost burden of GSSS bonds for SIDS. For SIDS, where the average bond issuance amounts are smaller than in other countries, the additional costs associated with GSSS bonds can be especially burdensome. Figure 3.2 provides an indicative list of the fees and costs related to GSSS bond issuances. While these costs can vary depending on the size and structure of the transactions, they often have a minimum threshold. For example, verification of a GSSS bond framework by a second-party opinion provider usually falls within the range of USD 20 000 to 35 000, but they can be higher for more complex and novel transactions such as SLBs or blue bonds than for more standard green bond issuances. Total costs – including external verification, legal services, and investor engagement – can range from USD 50 000 to 250 000. Given these fixed costs, the proportionate expense for smaller issuances is significantly higher. In some cases, providers can step in to cover these costs. The

[10] While debt sustainability is an important concern when issuing sovereign bonds, it is also essential to highlight that bonds placed on international markets often come with higher interest rates and shorter maturities compared to concessional loans from Multilateral Development Banks (MDBs) or the International Monetary Fund (IMF).

government of the Seychelles, for instance, received a USD 425 000 grant from the Rockefeller Foundation to cover the transaction costs associated with its sovereign blue bond.

Figure 3.2. GSSS bonds involve additional costs on top of general issuance fees



Source: Global Investors for Sustainable Development (2024[36]), Guidance on sovereign SDG bonds for countries and investors, https://gisdalliance.org/sites/default/files/2024-04/GISD%20Alliance%20Guidance%20on%20Sovereign%20SDG%20Bonds-FINAL.pdf.

Due to rigorous eligibility and reporting criteria, disbursement of the bond proceeds can be a challenge. In the case of UoP bonds, the funds need to be spent on expenditures and investments that meet specific sustainability criteria. For example, some sectors relevant to blue bonds (e.g. sustainable shipping, renewable energy such as offshore wind, tidal and wave power) are underdeveloped in many SIDS. Moreover, in sectors such as fisheries and aquaculture, ultimate beneficiaries such as micro, small and medium enterprises (MSMEs) may lack the capacity to comply with reporting and verification standards, making it difficult to channel funds to small-scale or community-level projects. In the case of the 2018 Seychelles blue bond, USD 12 million of the bond proceeds (USD 15 million) was to be allocated to local fisheries through loans, ranging from USD 10 000 to USD 3 million. However, the loan application process was complex and costly (Kılıç, 2024[37]). The interest rates on the loans were also discouraging for small local businesses. As a result, only one loan has been approved to date (Kılıç, 2024[37]).

There is a risk of sustainability washing, which occurs when a UoP bond issuer does not use the proceeds to pursue the designated objectives. There are no regulatory mechanisms to penalise issuers if they do not employ bonds proceeds for their designated uses. Looking at a select sample of 150 sovereign, quasi-sovereign and supranational green bond Frameworks, Bolton et al. (2022[38]) found that most ‘use of proceeds’ sections were too broad and vague to be legally enforceable.

Despite growing interest in sustainable finance, SIDS face real constraints that limit their ability to issue GSSS bonds. This is mainly because many SIDs struggle to access capital markets, even through traditional or vanilla instruments. Only under specific conditions, and with adequate support, can GSSS bonds offer a valuable financing tool for SIDS’ climate and development goals. The next section outlines

when and how GSSS bonds can be a viable option for SIDS, and what criteria governments should consider when deciding whether to pursue them.

3.4. When are GSSS bonds a viable option for SIDS?

Given the costs and lengthy processes involved in their preparation, engaging in a GSSS bond requires careful planning and a sober readiness assessment. The criteria to consider when issuing a GSSS bond can be grouped into political, economic and institutional readiness factors. There are interlinkages between these categories, as political factors can influence and shape the institutional framework enabling GSSS bond issuances, and economic developments can affect political considerations. However, the categorisation gives an illustrative overview of how to gauge a country's readiness for a possible GSSS bond issuance. Box 3.1 illustrates the case of Fiji.

3.4.1. Political readiness

Political momentum and leadership at the most senior levels are key to a successful GSSS bond issuance. A commitment to sustainable development is often made evident in the form of strong and credible National Sustainable Development Plans (NSDPs), climate or biodiversity actions plans, as well as legislative and governance frameworks, including those linked to the United Nations Framework Convention on Climate Change (UNFCCC) and CBD processes, such as NDCs, National Adaptation Plans or NBSAPs. GSSS bond issuance is often part of a wider national framework or strategy to mobilise financing for sustainable development. For example, Fiji's 2017 green bond, the first sovereign green bond issued by a developing country, was the outcome of a three-year 'capital markets development project' funded by the Australian government, with technical and financial support from the World Bank. The bond launch was strategically timed to coincide with Fiji's presidency of the 23rd Conference of the Parties to the UNFCC, which boosted the political significance and support for the bond.

A whole-of-government approach is also essential. GSSS bonds require strong co-ordination and close collaboration across different ministries and government agencies (e.g. the Ministry of Finance, Ministry of Environment / Climate Change, Ministry of Fisheries, Ministry of Agriculture, Ministry of Industry, Central Bank, financial regulators, etc.), especially for the framework development, project selection, and for ex-post impact monitoring and reporting. In the pre-issuance phase, countries often set up intra-governmental task forces or other co-ordination mechanisms that help align national priorities, relevant regulations, and any existing commitments such as the Medium-Term National Development Plan, the National SDGs Roadmap, or the NDC. In countries that have received technical assistance in aligning budgetary expenditures with the SDGs or climate objectives, processes have been significantly expedited, with significant reductions in the time spent on government co-ordination and GSSS bond preparation (Global Investors for Sustainable Development Alliance, 2024[36]).

3.4.2. Economic readiness

Typically, GSSS bond issuances are only viable when issuers have fiscal space to take on additional debt. The issuance of a GSSS bond needs to be consistent with a country's overall debt issuance programme. A key factor to consider is the potential impact of the bond on the country's debt capacity and credit rating. Investors' demand for bonds issued by countries with low credit ratings will be limited, or they will ask for high interest payments that can further destabilise a country's debt situation.

A well-functioning local capital market enables cost-effective domestic issuances. Issuing local currency GSSS bonds can be a viable option where domestic capital markets are well-developed. In such cases, the debt issuance structure, debt management, market dynamics, and bond issuance strategy are key factors to consider. The GSSS bond issuance should not create market and debt management

inefficiencies by fragmenting the market or crowding out commercial debt. Local stakeholders, such as regulators, stock exchanges and investors, must also be familiarised with the specificities of a GSSS bond issuance. Some countries may need to develop taxonomies and standards for GSSS bonds that align with international standards (e.g. ICMA) while reflecting the local context. Various resources and mechanisms can facilitate this effort. For example, the Sustainable Banking and Finance Network (SBFN), hosted by the IFC, brings together financial sector regulators and industry associations on different sustainable finance topics, including GSSS bond issuances.

3.4.3. Institutional readiness

Institutional strategies, roadmaps, and regulatory frameworks are prerequisites for effective GSSS bond issuances. For blue bonds, for example, strong ocean governance must be implemented. This involves institutions with mandates to protect the ocean and grow a sustainable blue economy, clear regulatory frameworks to define which types of economic activities are allowed in and adjacent to the oceans, and an effective monitoring and enforcement system. A blue bond could fund the improvement and operation of ocean governance systems (Asian Development Bank, 2021[39]).

GSSS bonds presuppose the capacity to prepare, screen, manage, and implement projects. This includes the necessary expertise and regulatory framework to ensure the projects are executed efficiently. For UoP bonds, the identification, appraisal, and selection of high-quality investment projects must be underpinned by credible green, social, and sustainable bond frameworks. These frameworks ensure the credibility of green and social expenditure accounting and verification at the project level and track the country's overall aggregate green performance.

GSSS bond issuers must fully understand the ultimate beneficiaries' needs to reach them effectively. The disbursement process is likely to fail if the fund disbursement channels are burdened with complex application requirements and not aligned with local capacities and needs. Local stakeholders and ultimate beneficiaries should be consulted or directly involved in issuing the blue bond to maximise impact on the ground.

GSSS bond issuers also need the capacity to provide regular updates and reports on the progress and impact of the projects funded by the bond proceeds. For SLBs, credible data and underlying processes to measure the issuer's progress against key performance indicators and targets are necessary. This includes historical data to assess baselines. Moreover, investors often ask for reports to be externally verified through third-party providers. This ensures that investors and the public can track how their investments contribute to sustainable development.

Due to the costs involved in their issuance, most bonds need to reach a particular scale. Previous sovereign GSSS bonds issuances in SIDS ranged from USD 15 million to USD 50 million, and in other developing countries, many GSSS bonds reach up to USD 500 million and more in scale. A sizable portfolio of loan projects must be identified to service that debt over time. Preferably, the total portfolio of eligible projects (existing and new) should be larger than the first issuance for both contingency and long-term planning.

For a UoP bond to be financially viable, the pool of assets or activities financed through the bond must be bankable. UoP bond proceeds can finance activities such as nature conservation that do not easily generate financial returns. However, those activities must either be part of a bigger pipeline that includes other projects with positive financial returns, or they have to promote and support the national economy or resources to create more revenues. Blue bonds, for example, cannot exclusively finance the creation and maintenance of marine protected areas that disallow economic activities or other conservation activities that do not have a revenue base. Instead, blue bonds must include well-defined sustainable blue economy sectors, such as sustainable fishing, ecotourism, waste management, and marine renewable energy (Asian Development Bank, 2021[39]).

SLBs can be a suitable option when there is a lack of bankable sustainability projects, but they require sophisticated data. SLBs are more suitable for sustainability themes such as climate change adaptation or marine conservation, for which it may be more difficult to identify bankable assets. However, SLBs are only possible when there are data to measure progress against KPIs and SPTs, including historical data to assess baselines. The World Bank's Sovereign ESG Data Portal provides a list of indicators that could be used as KPIs for SLBs linked to various sustainability themes such as climate risk and resilience, nature capital management, energy use, security and food security (World Bank, 2023[40]). Providers can help develop these indicators and collect and monitor relevant data. For example, the Australian High Commission in the Maldives supports a project on natural capital accounting, which can lay the groundwork for blue SLBs and debt-for-nature swaps in the future.

Box 3.1. Lessons learnt from Fiji's sovereign blue bond issuance

In November 2023, the Government of Fiji issued an FJD 20 million (USD 8.7 million) sovereign blue bond, the first-ever blue bond issued by a Pacific island country. The issuance amount included FJD 15 million (USD 6.6 million) for a maturity of 15 years with a coupon of 4.2% and another FJD 5 million (USD 2.2 million) for a 3-year term with a coupon of 1%. The UNDP and the United Kingdom's Blue Planet Fund provided technical support and financial expertise to Fiji in the planning and implementation of this blue bond issuance.

Apart from receiving technical assistance for the design and structuring of the blue bond itself, Fiji had paved the way for an effective blue bond issuance through several measures:

Financial regulatory measures helped to create an enabling environment and prepare domestic capital markets for sustainable finance. The Reserve Bank of Fiji, helped by the International Finance Corporation (IFC) had developed sustainable taxonomies and ESG standards. As a consequence, the blue bond issuance was met with a strong demand from domestic institutional investors such as commercial banks and insurance companies. The bond was oversubscribed with a total bid of over FJD 60 million (USD 26.5 million), 3 times the issuance amount.

Prior to embarking on the blue bond issuance, Fiji had developed a Sustainable Bond Framework, which was launched at UNFCCC COP27 in 2022. The framework was the first of its kind developed by a SIDS that set out criteria for green, blue, and social projects and which aimed to help Fiji better communicate its sustainable development finance priorities with bilateral, multilateral, private and philanthropic investors.

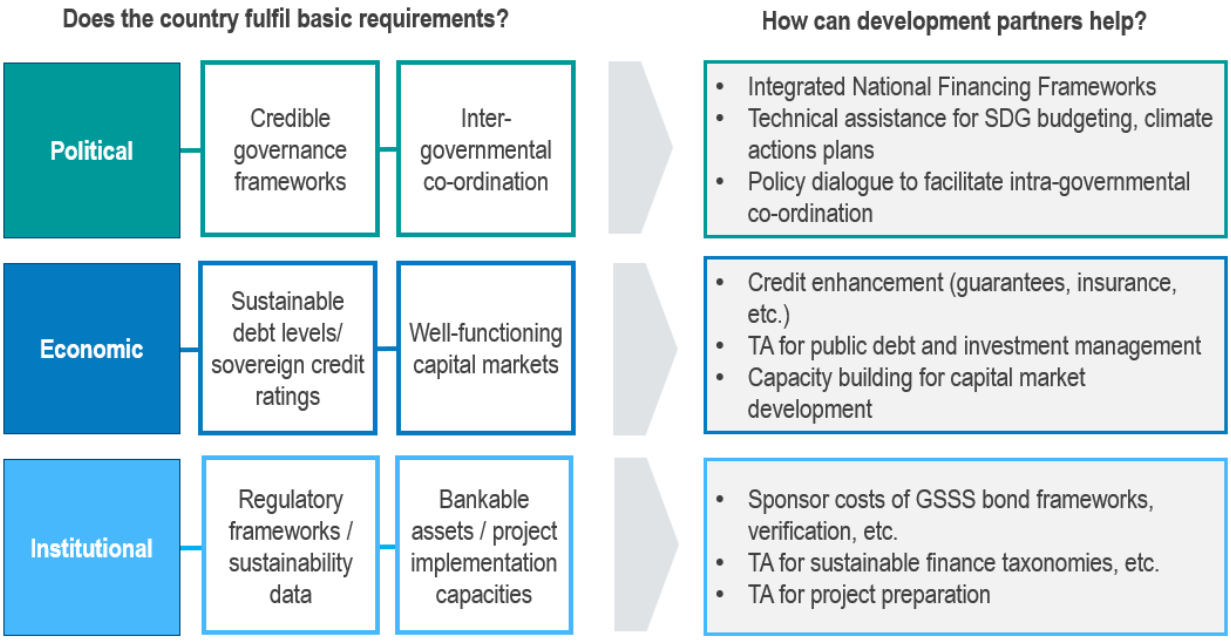
The blue bond was embedded into national strategies and governance frameworks that set up a plan to operationalise the country's blue economy ambitions and sustainably leverage its ocean-based resources. The objective of the bond was to support the operationalisation of Fiji's National Oceans Policy, Climate Change Policy and its 5-Year and 20-Year National Development Plans. Building on the Sustainable Bond framework, a total of 18 projects were pre-selected for funding through the blue bond in four key thematic areas: i) coastal protection; ii) aquaculture sector; iii) developing sustainable towns and cities with blue town concepts and enhancing solid waste management.

However, despite efforts to pre-select projects, Fiji is facing challenges in disbursing the blue bond proceeds. Lack of familiarity with the sustainability requirements related to blue bonds, for example, reportedly cause difficulties in implementing the projects. Currently, an inter-agency task force headed by the Ministry of Environment, which is supported by a grant from the UK, is investigating the causes of the delays in implementation and identifying possible areas for technical assistance and support.

3.5. The potential role for development co-operation

External support from development co-operation providers can help countries enhance their readiness for GSSS bonds and render the transactions more viable and impactful. Development co-operation can help SIDS navigate the complexity of structuring and issuing GSSS bonds, reduce upfront costs, and ensure these instruments are embedded within broader sustainability frameworks. Collectively, providers span a wide array of tools and areas of expertise, from experience as seasoned financial investors to innovative market enablers and providers of long-term capacity development. This section explores how providers can help countries enhance their political, economic and institutional readiness to issue GSSS bonds. Figure 3.3.

Figure 3.3. Development co-operation can enhance SIDS' readiness to issue GSSS bonds



2.5.1 Supporting political preparedness

Development partners are key in strengthening national ownership and policy alignment around GSSS bonds. GSSS bond issuance should not be a standalone transaction, but part of a country's broader approach to financing sustainable development. Development co-operation can help SIDS embed bond frameworks within national development strategies, SDG budgeting processes, and climate plans (such as NDCs or NBSAPs). The Integrated National Financing Frameworks (INFFs), a tool to help countries strengthen planning processes and overcome obstacles to financing sustainable development at the national level, can be another avenue to access support to plan and prepare GSSS bond issuances. For example, Cabo Verde's INFF process led to the sustainable finance platform Blu-X in 2021, which listed and traded sustainable and inclusive financial instruments for developing the country's blue, green, and social economy. Blu-X subsequently facilitated the public offering of a blue bond issuance worth USD 3.5 million by the Cabo Verde International Investment Bank (IIB) in 2023, which supported affordable loans for microentrepreneurs and start-ups in coastal communities and investments in micro-, small- and medium-sized enterprises (MSMES) operating in the maritime and fisheries sectors (UNDP, 2024[41]).

Development partners can convene different stakeholders to enable and facilitate whole-of-government approaches. By sponsoring policy dialogue, co-ordination platforms, and results monitoring, development partners can assist in bringing together representatives from different ministries that need to collaborate on a GSSS bond issuance. This can ensure buy-in and understanding of the characteristics of GSSS bonds across ministries. For example, before the first green bond issuance by the government of Chile, the Inter-American Development Bank assisted in a one-year preparatory process, which consisted of workshops and consultative engagement across government ministries (OECD, 2022[33]) . This model could be applied in SIDS as well.

2.5.2 Improving economic feasibility

Innovative financing structures supported by development partners can enhance the credibility and marketability of GSSS bonds. Blended finance approaches – such as partial credit guarantees or concessional capital – can significantly improve the risk-return profile of GSSS bonds and attract a broader

investor base. For example, to help attract foreign investors to the Seychelles blue bond, the World Bank provided a partial credit guarantee of USD 5 million to the government of the Seychelles. The Global Environment Facility also supported the blue bond by providing a concessional loan of USD 5 million to the Seychelles, which was used to help cover the costs of payments owed to foreign investors in the blue bond.

Development partners' support to promote GSSS bonds can be integrated into and build on existing efforts to strengthen national and sub-national governments' public investment and debt management capacities. Such an integrated approach can help countries weigh the potential benefits against the costs of GSSS bond issuance while managing public debt levels. Systematically including training on GSSS bond issuances in technical assistance programmes for debt and public investment management, including those offered through the IMF's regional technical assistance centres, can create better awareness among policymakers in developing countries on how to utilise these instruments as part of a fiscally responsible and sustainable financing strategy.

2.5.3 Strengthening institutional capacities

Development co-operation can help SIDS overcome the scale and cost barriers that limit access to GSSS bond markets. For many SIDS, the small size of their economies makes it challenging to justify the fixed costs of issuing sovereign GSSS bonds. Development partners can help lower these barriers by co-financing transaction costs, such as fees for legal and financial advisors, and providing subsidies for external verification and investor engagement. Providers can help governments assess feasibility without upfront financial pressure by sponsoring these early-stage expenses.

Development partners can also support the building of pipelines and facilitate regional pooling. They can support the establishment of solid project pipelines by providing technical assistance to prepare and implement projects that qualify as green, blue or sustainable. For example, the ADB's Blue Bond Incubator supports ocean-related projects in Asia and the Pacific. In the future, providers could also encourage project aggregation at a regional level. Specialised platforms and mechanisms for SIDS, administered by regional development banks or other regional bodies such as the Pacific Island Forum, could pool small-scale projects from various SIDS and issue regional GSSS bonds.

Technical assistance is essential to develop institutional capacity for credible and repeatable GSSS bond issuance. Developing the expertise to structure, issue, and monitor GSSS bonds is a multi-year process. Development partners can support SIDS by offering long-term embedded advisors, targeted training, and peer exchange programmes. This includes support in designing sustainability frameworks, developing taxonomies, mapping eligible expenditure, and building robust monitoring and reporting systems. For example, in 2024 in partnership with the IFC, the Dominican Republic became the first Caribbean country to issue a green taxonomy (OECD, 2024[42]). While country-specific taxonomies are welcome, technical assistance to develop region-wide sustainable finance frameworks could accelerate GSSS bond issuance, including in capacity-constrained SIDS (OECD/IDB, 2024[43]). A growing number of technical assistance initiatives now exist to support such efforts. Table 3.1. provides a non-exhaustive and illustrative overview of relevant programmes offering technical assistance for GSSS bonds across different areas of support.

Table 3.1. Where can SIDS obtain technical assistance and capacity building on GSSS bonds?

Activities	Development partners
Public debt and investment management.	IMF Regional Technical Assistance Centres (RFTAC)
Development of sustainable finance taxonomies and green bond frameworks. Identification of green projects and support to issuance processes.	EU Sustainable Finance Advisory Hub (SFAH) & Global Green Bond Initiative (GGBI)

Planning and implementation of GSSS bond issuance. Development of a pipeline of bankable green investment projects.	Global Green Growth Institute (GGGI) Thematic Bond Offering
Development of green bond frameworks and action plans for issuance. Identification of eligible categories/projects. Assistance for the development of use of proceeds and impact reports.	World Bank Sustainable Finance and ESG Advisory Services
Planning and implementation of GSSS bond issuance.	UNDP Sustainable Finance Hub – Debt-for-SDGs
Development of green bond frameworks. Identification of eligible expenditure. Advice on financial structuring and opportunities for the use of credit enhancement.	Inter-American Development BankRegional Green Bonds Program for Latin America and the Caribbean
Strengthening of blue economy enabling environment. Assistance in project origination and preparation.	Asian Development Bank – Blue Pacific Finance Hub
Sustainable finance trainings, including on taxonomies and GSSS bond issuance.	Luxembourg Green Exchange – LGX Academy
Technical assistance and capacity building on sovereign green bonds.	Italy – Ministry of Environment and Energy Security (under consideration)
Pooled TA from various stakeholders: UN agencies (including UNDP Sustainable Finance Hub) and bilateral partners member of the OECD Development Assistance Committee (DAC), including EU SFAH and EU GGBI.	INFF Facility
Tailored support for SIDS to issue blue and green bonds.	International Institute for Environment and Development (IIED) - SIDS Debt Sustainability Support Service (under implementation)

Note: This is an illustrative, non-exhaustive list.

4 Debt-for-nature swaps: turning debt into environmental action

In Brief: Key takeaways on debt-for-nature swaps

Objective

- Debt-for-nature swaps (DNS) enable governments to convert debt burdens into actionable finance for environment and climate investments.

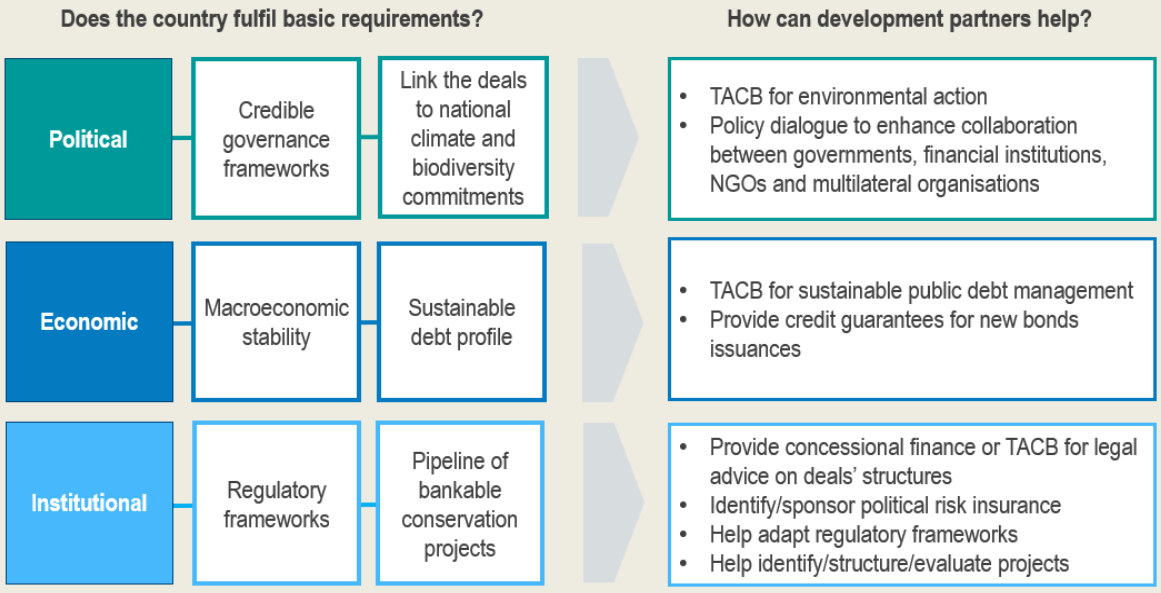
Potential benefits

- DNS can catalyse sustainable development by enabling SIDS to invest in biodiversity and nature, with positive spillover effects on vital sectors like tourism, agriculture, and fisheries.
- By swapping debt for environmental investment, countries could significantly reduce their debt service obligations, improving fiscal and debt profiles.
- DNS can unlock new finance to improve ecosystems' ability to withstand climate hazards, reducing future economic losses from natural disasters.

Challenges and risks

- DNS are highly complex transactions, often requiring sophisticated legal advice, tailored regulations and support for the preparation, evaluation, and implementation of environmental projects-making them costly deals.
- Securing broader stakeholder diversification is a major challenge for DNS, particularly after the withdrawal of its principal partner to date, the U.S. International Development Finance Corporation (DFC), which had played a critical role in providing sovereign insurance for numerous SIDS transactions.
- DNS require an adequate measurement and verification of environmental outcomes to ensure that the funds mobilised are effectively used for their intended purpose.
- DNS must be part of an integral reflection of the country's debt burden.

Readiness for adoption and development partners' role



4.1. How do debt-for-nature swaps work?

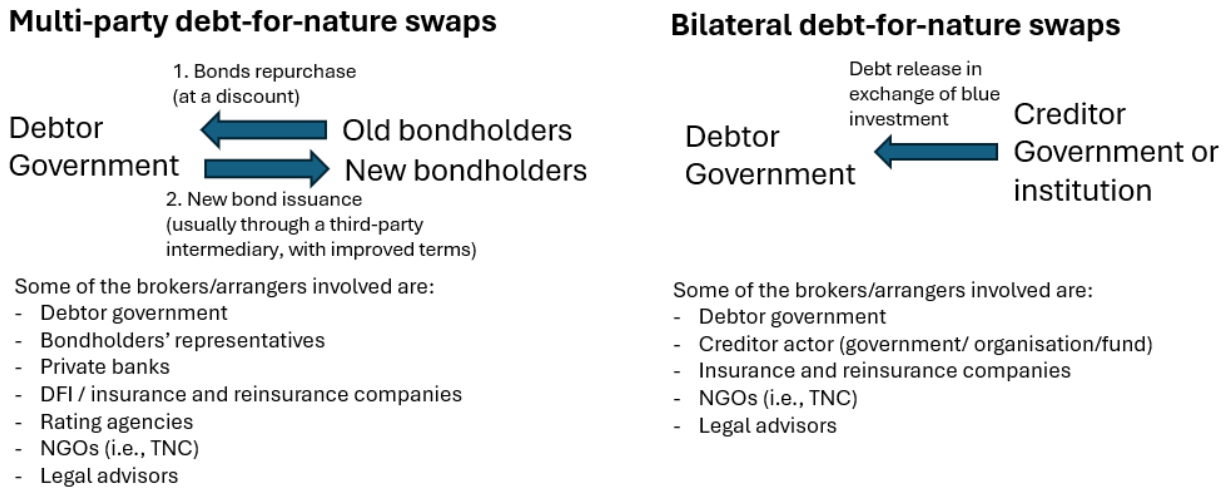
Debt-for-nature swaps are agreements between a government and one or more of its creditors to replace existing sovereign debt with one or more liabilities, including a spending commitment towards a specific environmental goal. These deals help free up fiscal resources so governments can improve environmental resilience without triggering a fiscal crisis or sacrificing spending on other development priorities (Georgieva, Chamon and Thakoor, 2022[44])**.** Usually, the rationale for debt swaps is that debt can be acquired at a discount when creditors do not expect to recover the full nominal value of the debt. In exchange for (partial) cancellation of the debt, the debtor government mobilises the equivalent of the reduced amount for pre-agreed conservation activities. In this sense, debt-for-nature swaps provide opportunities for raising capital to address environmental and other policy challenges while enhancing fiscal space.

While debt swaps have existed since the 1980s, their models have evolved significantly since 2015. Traditional models were primarily bilateral agreements between debtor governments and official creditors, whereas today's innovative deals connect private actors and governments (Figure 4.1). Early debt swaps typically involved concessional debt relief by bilateral development partners, such as Paris Club creditors or multilateral institutions, in exchange for environmental or social spending commitments (Yue and Wang, 2021[45]). Recent innovations in collaboration with the private sector have led to more complex, multi-party structures involving bondholders, international guarantors, and financial institutions. These swaps have also gained traction more recently in international fora, notably mentioned in the Paris Summit for a New Global Financing Pact (Elysée, 2023[46]). Furthermore, the Bridgetown Initiative and G20 discussions (G20, 2023[47]) have also proposed enhancing debt sustainability mechanisms (Bridgetown Initiative, 2023[48]).

Traditional models, or bilateral agreements, mainly concern debt earmarked to finance specific projects or in the form of budget support. While simple in principle, each transaction is tailor-made, has specific characteristics, involves a different number of actors and results in different execution costs[11]. Typically, the transactions may take two formats: (1) the creditor government waives all or a part of its credit rights, and the debtor government invests the equivalent value in green/blue activities; or (2) the creditor government sells all or a part of the debt outstanding to an organisation with the expertise to carry out green/blue activities work in the debtor country. The creditor government usually sells the debt to a third-party organisation at a price lower than its face value. The debtor country then repays the outstanding debt to the third party, who uses the payments to fund green/blue efforts. Common to all bilateral transactions is the need to have a sort of "labelling" control to ensure the green (or blue) engagement made in the deal is realised, avoiding so-called "greenwashing".

[11] Recent deals connected Peru with the US (2023), and Cabo Verde with Portugal (2023).

Figure 4.1. Debt-for-nature swaps may involve sovereign and semi-sovereign debtors on one side and sovereign, international institutions and the private sector on the other



Source: Authors' design based on (Grund, 2024[49]); (Ledwell, 2024[50])

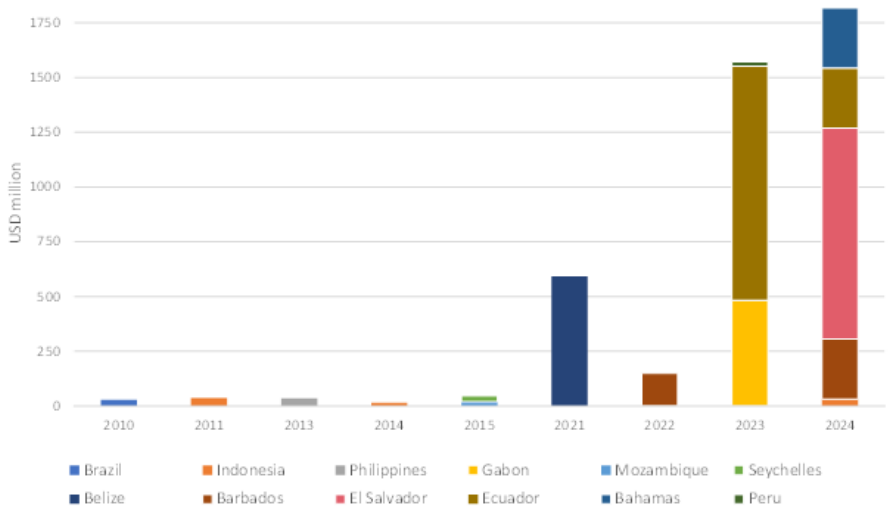
Debt-for-nature swaps structured with the private sector allow savings from the new debt emission to be invested in conservation. The government repurchases bonds already in the market at a discount. To do so, new credit is needed (in many cases involving new lending from a private bank). New lending at more preferential terms than existing debt is secured through political risk insurance (often provided by a Development Finance Institution (DFI)), and reinsurance (provided by a DFI or the private sector). A new subsidiary body is also customarily created; this new body secures the emission of a new green or blue bond, and the deployment of new environmental-related projects financed through the deal savings. Typically, such deals include at least the following stakeholders (1) bondholders (of the old and new emissions); (2) a commercial bank; (3) insurance/ reinsurance companies; (4) one or several development finance institutions providing sovereign insurance/ backing the deal; and (5) a conservation institution (i.e., an NGO). See the example of the Bahamas deal structure (**Error! Reference source not found.**Box 4.1).

4.2. What are the benefits of debt-for-nature swaps?

Debt-for-nature swaps could help SIDS unlock needed finance for climate and environmental investments, while enabling smooth debt amortisation profiles and debt liability management (IMF, 2024[51]). According to recent research, debt-for-nature swaps could unlock up to USD 100 billion for climate and biodiversity action (International Institute for Environment and Development, 2024[52]). This has accelerated their resurgence since the 2020s (Figure 4.2), particularly among indebted small states seeking innovative ways to balance economic stability with environmental commitments.

Figure 4.2. Debt-for-nature swaps' volume has skyrocketed

USD million, deflated, 2022 prices



Note: Multi-party and bilateral debt-for-nature swaps are included in this chart.
The specific case of Cabo Verde, which involves a bilateral swap with Portugal, is not yet fully completed. In January 2023, the two countries initially agreed to swap USD 13 million. The plan is to evaluate the effectiveness of this mechanism before proceeding with the swap of the remaining USD 140 million.
Source: Authors' calculation based on (Chandrasekhar and Quiroz, 2024[2]), "Q&A: Can debt-for-nature 'swaps' help tackle biodiversity loss and climate change", Q&A: Can debt-for-nature 'swaps' help tackle biodiversity loss and climate change? - Carbon Brief.

SIDS possess vast natural assets, making them well-positioned to leverage debt-for-nature swaps to finance conservation efforts. SIDS are home to large reserves of natural assets and a rich biodiversity. They are custodian of 30% of the oceans [12] and possess abundant ecosystems such as reefs [13], mangroves[14], salt marshes, and seagrass that can serve as sources of significant environmental-related projects. Many of their economies are tourism-based, requiring the preservation and sustainable management of their environmental assets to ensure long-term survival.

Recent debt-for-nature swaps in SIDS demonstrate the potential of these instruments. In the last decade up to March 2025, five SIDS have conducted debt-for-nature swaps: Bahamas (2024), Barbados (2024 and 2022), Cabo Verde (2023), Belize (2021) and the Seychelles (2015)[15]. These transactions have mobilised financing for marine conservation, climate resilience, the sustainable management of natural resources, and ecosystem restoration while improving fiscal positions. Table 4.1.

[12] See EP-Ocean-Finance-Blue-Bond-Incubator-16-Pager-240508-FINAL.pdf (oceanriskalliance.org)

[13] Estimates suggest the services worldwide reefs provide may be worth as much as USD 11 trillion a year. (MIT Sceince Policy Review, 2020[121])

[14] Although they make up just 3% of the world's forest cover, (Plastic Oceans, 2021[122]) estimates that mangroves house the carbon equivalent of 10% of global emissions.

[15] Note that Barbados and the Seychelles are no longer ODA-eligible countries.

Table 4.1. Five SIDS have recently deployed debt-for-nature swaps

	Year	Characteristics of the deal
Bahamas	2024	Bahamas unlocked more than USD 120 million to fund the conservation and management of its oceans and mangroves with a USD 300 million debt swap financed by Standard Chartered and backed with USD 200 million by the Inter-American Development Bank (IDB) and USD 100 million by the private sector (AXA XL provided USD 30 million of credit guarantee and Builders Vision USD 70 million). Funding from the swap, designed by the NGO The Nature Conservancy (TNC), went towards restoring mangroves damaged by a hurricane, managing the archipelago's 6.8 million hectares (16.8 million acres) of marine protected areas and supporting the build-out of a new project to protect the entire Bahamian ocean area (Reinsurancene, 2024[53]). Rothschild & Co. served as financial advisor to The Bahamas' Ministry of Finance on this transaction (Office of the Prime Minister, 2024[54]).
Barbados	2024 and 2022	In 2024, Barbados organised a buy-back of its domestic bonds worth roughly USD 300 million. Under the financial structure was a sovereign sustainability-linked loan with a 3.25% coupon (the previous bond coupon rate was 8%) arranged by three Canadian-owned banks—CIBC, Royal Bank, and Scotiabank— which lent USD 180 million, USD 70 million, and USD 50 million, respectively (The Caribbean Council, 2024[55]). IDB and European Investment Bank, each provided USD 150 million of backing guarantee. Upfront funding for the resilience project, totalling USD 110 million, was provided by the IDB and Green Climate Fund (GCF) -of which USD 40 million was a grant from GCF (Impact Investor, 2024[56]). Sustainanalytics reviewed Barbados' Climate Resilience Sovereign Sustainability-Linked Financing Framework. The wide-reaching project saw Barbados make USD 165 million in debt service savings which it aims to invest in water infrastructure, food security and environmental protection. The bond included a CRDC. In 2022, Barbados completed a USD150 million debt conversion freeing up USD 50 million of long-term financing for marine conservation, with the island nation agreeing to protect up to 30% of its Exclusive Economic Zone (EEZ). The deal was funded by a 15-year dual currency blue loan arranged by Credit Suisse and CIBC First Caribbean and co-guaranteed by the Inter-American Development Bank and TNC. This bond issuance also included a CRDC.
Belize	2021	Belize bought back and retired USD 533 million in bonds. The country committed to spend USD 4 million a year on conservation and fund a USD 23 million marine conservation trust to protect the world's second-largest coral-reef. The deal was backed by the NGO TNC, the U.S. International Development Finance Corporation and Credit Suisse. The deal generated about USD 200 million in debt relief to the Central American country. (The Nature Conservancy, 2022[57])
Cabo Verde	2024	Portugal pledged to swap Euro 140 million (USD 152.91 million) of debt owed by Cabo Verde for investments in the archipelago's environmental and climate fund. An initial deal of Euro 12 million has already been initiated. (Reuters, 2025[58])
Seychelles[16]	2015	The Seychelles' debt-for-nature swap took dealmakers almost six years from design to disbursement. First mooted in 2012, the deal saw the Seychelles government buy back USD 21.6 million of debt from the Paris Club group in 2016, financed by a loan from NGO TNC as well as philanthropic grants. (The Commonwealth, 2020[59])

Note: ODA-eligible countries are shown **in bold.**

In the case of debt-for-nature swaps involving the private sector, the new debt issued generally receives a higher credit rating than the repurchased debt. In this sense, debt-for-nature swaps are efficient alternatives for a country to finance climate-related investments, freeing up resources that would otherwise have been spent on debt servicing.

As a consequence of bond issuances, sovereign ratings have also tented to improve. Debt-for-nature swaps with the private sector have recurrently boosted sovereign credit ratings, improving borrowing conditions for participating countries. In five out of six deals in SIDS, the sovereign debt rating improved after their launch (in the sixth case, it was maintained). Table 4.2.

Table 4.2. Debt swaps have yielded improved debt ratings in some SIDS

	Bonds' rating before the debt swap	New bonds' rating resulting from the debt swap	*Rating of the sovereign debt before the debt swap*	*Rating of the sovereign debt sometime after the debt swap*
Bahamas	n.a.	n.a.	B+*	B+*
Barbados (2024)	n.a.	Aaa (Series A1), Aa2 (Series A2) ***	*B–**	*B**
Barbados (2022)	B– *	B *	*Caa1****	*B3****

[16] The Seychelles DNS is a separate transaction from the Seychelles blue bond mentioned in Chapter 2.

Belize	SD * (Selective default)	B– *	*Caa3***; B–**	*Caa2***; B**
Cabo Verde	Not applicable	Not applicable	*B–* **	*B* **
Seychelles	Not applicable	Not applicable	*BB–* **	*BB* **

Note: * risk ranked by Standard & Poor's credit rating; ** Fitch; *** Moody's; In the case of the Seychelles' blue bond issuance, no individual credit rating was assigned as the issuance was privately placed.
Source : (Fitch, 2019[60]); (Fitch, 2024[61]); (Wiseequities, 2023[62]).

The Bahamas' 2024 debt-for-nature swap demonstrates how well-structured transactions can achieve significant fiscal and environmental gains. As one of the largest and most recent debt-for-nature swaps in a SIDS, the deal illustrates the potential of these instruments to provide meaningful debt relief while mobilising long-term environment-related finance. By securing credit guarantees and engaging multiple stakeholders – including multilateral institutions, private sector investors, and environmental organisations – the country was able to restructure its debt on more favourable terms and unlock USD 124 million for the conservation and sustainable management of marine resources. Box 4.1 provides an overview of The Bahamas' debt-for-nature swap and its expected long-term impact. However, despite their potential and advantages, debt-for-nature swaps require in-depth feasibility studies and momentum.

According to (IMF, 2022[63]) **and** (World Bank, 2024[64])**, countries that are potentially good candidates for swaps are those at "moderate" or "high" risk of debt distress, facing temporary liquidity pressures**. In such cases, debt-for-nature swaps can be impactful in providing critical short-term relief and improving debt sustainability prospects. This research also suggests that countries showing unsustainable debt profiles (or already in debt distress) should not engage in debt-for-nature swaps before considering a full debt restructuring (or at least be considered together with a debt restructuring). Finally, deals engaging the private sector may be less efficient for countries with a low risk of debt distress as the cost difference between the existing and the new debt is likely to be minor. In contrast, transaction costs are high when incorporating bondholders. Nevertheless, bilateral swaps (where official bilateral debt is written off or exchanged) may still be viable options.

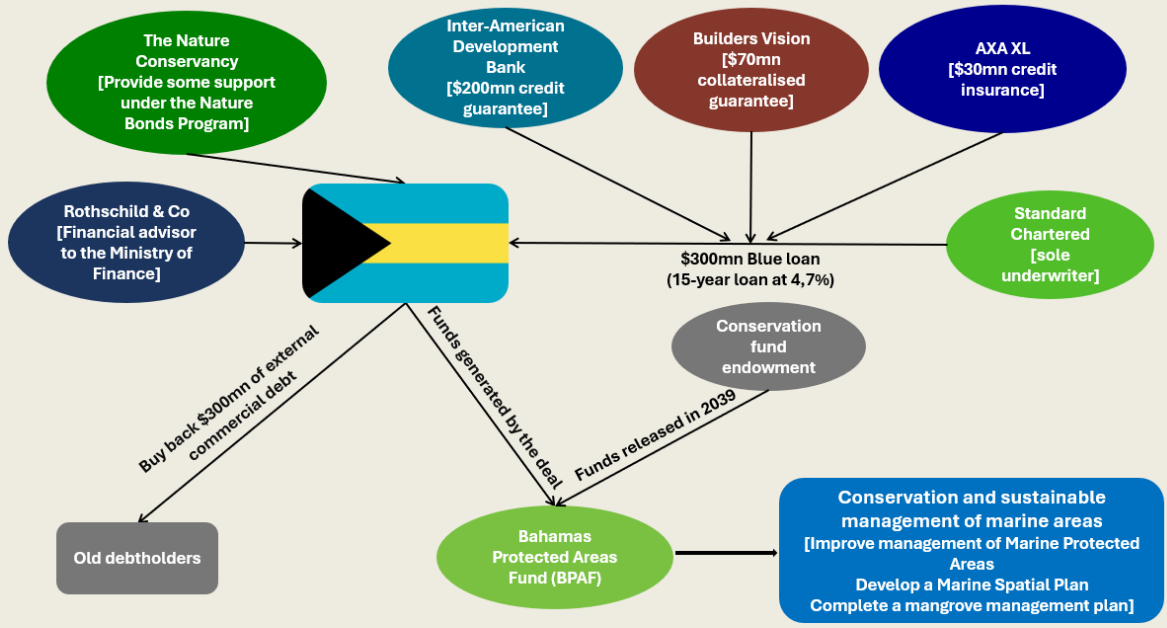
Box 4.1. The case of Bahamas illustrates the key elements of a debt-for-nature swap

After peaking at 99.7% in 2021, Bahamas' general government debt reached 81.7% of GDP in 2023. In 2024, and despite efforts to manage its fiscal situation and a gradual economic recovery, the IMF assessed Bahamas' overall risk of sovereign debt distress as high.

In late 2024, supported by the Nature Conservancy, a non-governmental organisation which endorsed the sustainability and implementation of the blue projects involving the deal, Bahamas completed its first debt-for-nature swap. The government repurchased USD 300 million of its external commercial debt (5.3% of the USD 5.7 billion total external commercial debt) using proceeds from a new USD 300 million loan (15-year at 4.7%) underwritten by the private bank Standard Chartered and backed with USD 200 million from the Inter-American Development Bank as well as USD 100 million from the private sector (USD 30 million of credit insurance policy by AXA XL and USD 70 million collateralised guarantee by the philanthropic platform Builders Vision/Lukas Walton impact platform). This loan allowed Bahamas to repurchase USD 215.7 million of Eurobond obligations and repurchase a USD 81 million commercial bank loan. Consequently, Bahamas refinanced its scheduled debt service, while simultaneously unlocking USD 124 million for nature conservation to be spent over 15 years. Additionally, an endowment, expected to grow to USD 20 million by 2039, should continue funding the conservation and sustainable management of marine areas beyond the project's 15-year term.

The Bahamas Projected Areas Fund, responsible for allocating the deal's savings, is committed to improve the management of Marine Protected Areas. It will do so by completing a national Mangrove Management Plan and implementing a Marine Spatial Plan aimed at addressing increased demands for the use of Bahamas' ocean through a transparent, participatory and science-based process (Figure 4.3).

Figure 4.3. The Bahamas case



Source: Authors' design based (Reinsurancene, 2024[53]); (Office of the Prime Minister, 2024[54]); (The Nature Conservancy, 2024[65]).

4.3. Why are debt-for-nature swaps not common among SIDS?

Despite their potential, debt-for-nature swaps remain rare among SIDS due to financial, structural, and governance-related challenges. Although these mechanisms appear well-suited for small island economies, only a handful of SIDS have successfully implemented them. The limited uptake reflects several key barriers, including the complexity and cost of structuring these deals and the challenges of aligning creditor interests with debtor priorities. Moreover, many SIDS face constraints, such as weak fiscal positions, limited technical capacity, and uncertain investment pipelines for climate and conservation projects.

Debt-for-nature swaps require intricate financial structuring, making them costly and time-consuming. Most recent transactions involve multiple stakeholders—including sovereign governments, private creditors, development finance institutions, and environmental civil society organisations—all of whom must agree on the terms of the swap. Negotiating these deals requires extensive legal and financial expertise, and transaction costs can be substantial, particularly for small-scale swaps. The need for financial guarantees and credit enhancements further adds to the complexity, limiting the feasibility of such deals for many debt-distressed SIDS.

A lack of counterparts and suitable financial guarantees often prevents deals from materialising. Many SIDS have no or low credit ratings or are already at high risk of debt distress. This makes it difficult to attract private sector participation without substantial risk mitigation from DFIs. Multilateral institutions and development banks can provide guarantees or concessional finance to de-risk these transactions, but securing such backing is not always straightforward. Investors may be reluctant to engage in debt-for-nature swaps without strong financial support.

Uncertainty around project pipelines and governance frameworks can further deter investors and creditors from engaging in debt-for-nature swaps. To be viable, these transactions require a well-defined portfolio of conservation or climate resilience projects that are bankable, transparent, and capable of delivering measurable benefits for society and the environment. However, many SIDS struggle to develop and manage such investment pipelines due to capacity constraints, weak regulatory frameworks, or political uncertainty. Without credible governance structures and clear implementation strategies, creditors may hesitate to support such swaps, fearing project delays, mismanagement, or ineffective biodiversity and/or climate outcomes.

The case of the Maldives illustrates how these challenges can prevent a debt-for-nature swap from coming to fruition. The Maldives faces a high debt-to-GDP ratio (118% in 2023) and is at high risk of debt distress (IMF, 2024[66]). At the same time, the country has a strong rationale for pursuing a debt-for-nature swap given its dependence on marine biodiversity and the need to finance conservation efforts. However, as Box 4.24.2 details, despite multiple attempts to negotiate a debt-for-nature swap, the Maldives has so far been unable to secure a viable agreement, largely due to difficulties in aligning creditors, securing guarantees, and defining a suitable environment-related investment pipeline.

Box 4.2. The case of Maldives: an aborted debt-for-nature swap

The Maldives' attempt to negotiate a debt-for-nature swap highlights the financial and structural obstacles that can hinder these transactions. With a high debt-to-GDP ratio (118% in 2023), the country is at high risk of debt distress and facing long-term fiscal sustainability challenges (IMF, 2024[66]).[17] The country's external debt includes obligations to both official lenders – including China, India, Gulf states and multilateral development banks such as the Islamic Development Bank and Asian Development Bank – and private sector creditors – including investors in sukuk bonds for a value of USD 500 million and Abu Dhabi Eurobonds for USD 100 million maturing in 2026.[18]

Despite its significant environmental assets and urgent need for climate and conservation finance, the Maldives has struggled to finalise a debt-for-nature swap. The country must preserve its rich biodiversity and coral assets, which represent the backbone of its biggest economic sectors (fisheries and tourism). Consequently, the country seems to encompass most of the characteristics needed for the deployment of a debt-for-nature swap.

The country began to explore the possibilities of a debt-for-nature swap in 2020. Negotiations were initially launched with UNDP, but they did not bear fruit due to disagreements over the pipeline of projects to finance. In 2024, negotiations were initiated with new stakeholders, the U.S. DFC, the Nature Conservancy and the Asian Development Bank. However, in January 2025, the DFC withdrew from the negotiations, and the inability to secure an alternative guarantor ultimately led to the collapse of the deal.[19]

Source: Authors based on consultations with the major involved parties; (Piemonte, 2021[67]) .

The next section explores the conditions under which debt-for-nature swaps can be viable for SIDS and identifies key factors enabling their success. Understanding these conditions is essential for scaling up these instruments and ensuring they deliver fiscal relief and environmental impact.

4.4. When are debt-for-nature swaps a suitable option for SIDS?

Building on the insights from this chapter, this section outlines the key factors influencing the successful implementation of debt-for-nature swaps in SIDS. While these transactions present an

[17] It was estimated that the off-the-radar debt of Maldives in 2019 amounted to an additional 28% of GDP (Piemonte, 2021[67]).

[18] The Maldives issued two sovereign Eurobonds with a total face value of USD 350 million: i) the first USD 250 million maiden Eurobond (also known as Sunny side bond) issued to the international market, which was partly repurchased in March 2021, with the remainder repaid on maturity in June 2022; and ii) another USD 100 million issued to Abu Dhabi in 2018, which was expected to fall due in 2023 and extended to 2026. In April 2021, the government issued a global Sukuk bond, due to mature in 2026, in the amount of USD 200 million priced at 97.616 with a yield of 10.5%, that helped repurchase 77% of the USD 250 million maiden Eurobond that was expected to mature in 2023. Subsequently, the Maldives issued another USD 100 million Sukuk in April 2021 under the same conditions, and another USD 200 million in September 2021 to cover budgetary expenses, trading at about 20% yield. In May 2022, the government also secured a USD 100 million loan through private placement maturing in 2025 at a 7% annual interest rate. (IMF, 2024[66])

[19] Note that other stakeholders were reluctant to replace DFC, arguing Maldives needed global debt restructuring, as recommended by the IMF.

innovative mechanism to alleviate debt burdens and finance environmental conservation, their feasibility depends on political, macroeconomic, and institutional conditions.

4.4.1. *Political readiness*

Strong political commitment and alignment with national development priorities are critical to the success of debt-for-nature swaps. Governments must demonstrate a clear dedication to sustainable development and sound debt management, as these transactions entail long-term financial and environmental commitments. Without high-level political buy-in, negotiations with creditors and investors may face delays, and implementation risks increase. Linking debt-for-nature swaps to broader national climate or biodiversity commitments – such as Nationally Determined Contributions (NDCs) under the Paris Agreement or the Kunming-Montreal Global Biodiversity Framework (KMGBF) and National Biodiversity Strategies and Action Plans (NBSAPs) – can enhance credibility and unlock international funding opportunities.

Governance and fiscal transparency are also fundamental to building investor confidence. Creditors and investors are more likely to engage with countries with strong governance, institutional capacity, and responsible financial management[20]. A robust legal framework that promotes transparency, accountability, and adherence to environmental commitments is essential to mitigating concerns about greenwashing and ensuring long-term effectiveness. Weak governance structures or opaque financial management can pose a reputational risk, making securing agreements with environmental NGOs, private creditors, or multilateral institutions (McGowan et al., 2020[68]) more challenging.

4.4.2. *Economic readiness*

A country's macroeconomic stability and debt sustainability are key determinants of whether a debt-for-nature swap is viable. The country must have a sustainable debt profile to ensure the transaction does not exacerbate fiscal vulnerabilities. Additionally, macroeconomic stability is necessary to gain public support, as governments must balance green/blue investments with pressing socioeconomic priorities such as employment, healthcare, and social services. If a country is experiencing a severe economic crisis, these transactions may be less advisable. [21]

Debt-for-nature swaps are not a substitute for broader debt restructuring in cases where debt burdens are unsustainable. While these swaps can provide fiscal relief and mobilise financing for conservation, they are not a substitute for broader debt renegotiations in cases of unsustainable debt burdens. Case-by-case analysis is needed since the risk of external debt distress classification remains non-exhaustive when analysing a country's debt situation. For instance, the Belize case shows there are still possibilities to engage in debt-for-nature swaps even with relatively weak debt prospects. In 2021, when the country engaged in a successful debt-for-nature swap deal amounting to USD 1 billion, its debt profile was classified as 'unsustainable' (IMF, 2021[69]). On the other hand, in the Maldives, which currently presents a high risk of external debt distress, efforts to complete a debt-for-nature swap have so far remained fruitless.

Many SIDS fall within the debt risk categories where a debt-for-nature swap could be feasible. Among the 27 ODA-eligible SIDS for which information is available, nearly 90% present an external debt classified as being either at high or moderate risk of distress (Table 4.3, column a). Additionally, 16 of them

[20] For instance, the NGO The Nature Conservancy expressed that it assesses corruption levels before engaging with potential partners.

[21] An alternative to debt-for-nature swaps that may be more politically viable in economies under stress are what recently the (IMF, 2024[51]) and (World Bank, 2024[64]) have called debt-for-development swaps, that is, deals targeting a wider range of public expenditure programmes.

present negative country fiscal balances (column b) and such deals could alleviate their situation, improving their fiscal space[22]. As explained in (IMF, 2022[63]) and (World Bank, 2024[64]) such debt prospects make these deals an option to be considered in order to help the countries improve their debt amortization profiles and debt liability management[23]. Finally, as shown in column c many also are in high need of investment to finance their nationally determined contributions (NDCs).

Table 4.3. Many SIDS could benefit from a debt-for-nature swap

Debt risks, fiscal balances and climate investment needs in SIDS (2024, 2025, or latest available data)

	Risk of external debt distress (March 2025) or overall risk of sovereign stress if not available (a)	Country fiscal balance, % of GDP (2024 or last available) (b)	NDCs' climate investments needs (in USD million) (c)
Belize	Moderate	-2.4	1906
Cabo Verde	Moderate	-2.4	700
Comoros	High	-3.5	1450
Dominica	High	-2.9	n.a.
Dominican Republic	Moderate	-3.1	17633
Fiji	Moderate	-3.5	1980
Grenada	In debt distress	+6.7	n.a.
Guinea-Bissau	High	-7.3	664
Guyana	-	-7.4	n.a.
Haiti	High	6.7	22036
Jamaica	-	0.3	n.a.
Kiribati	High	-22	210.5
Maldives	High	-14.0	n.a.
Mauritius	High	-6.5	6500
Marshall Islands	High	0.6	n.a.
Micronesia	Moderate	7.7	n.a.
Nauru	Moderate	30.1	n.a.
Palau	Moderate	-4.4	2,5
Papua New Guinea	High	-3.7	n.a.
Samoa	Moderate	10.2	n.a.

[22] There is not a single definition of fiscal space; however, it is commonly understood as 'a multi-dimensional concept reflecting whether a government can raise spending or lower taxes without endangering market access and debt sustainability'. Also, there is no single measure to estimate a country's fiscal space, but many methodologies co-exist. See (IMF, 2016[131]) and (IMF, 2018[132]). Here, an adequate situation is judged when column (b) indicates 0 or a positive figure.

[23] On the other hand, countries already in debt distress may require comprehensive debt restructurings instead of debt-for-nature swaps. While these swaps can provide fiscal relief and mobilise financing for conservation, they are not a substitute for broader debt renegotiations in cases of unsustainable debt burdens. Case-by-case analysis is needed, as the rule of having a moderate or high- risk debt classification remains an indicative one. The Belize case, for instance, shows that there are still possibilities to engage in debt-for-nature swaps even at relatively weak debt prospects. In 2021, when the country engaged in a successful debt-for-nature swap deal amounting to USD 1 billion, its debt profile was classified as 'unsustainable' (IMF, 2021[69]). On the other hand, while Maldives currently present a high risk of debt distress, efforts to engage in debt-for-nature swap deal have so far remained fruitless.

Sao Tomé and Principe	In debt distress	0.9	150 (mitigation only)
Solomon Islands	Law	-3.1	n.a.
Saint Lucia	High	-1.3	183
Saint Vincent and the Grenadines	High	-12.5	n.a.
Timor-Leste	Moderate	-44.3	n.a.
Tonga	High	3.5	n.a.
Tuvalu	High	-7.1	n.a.

Note: Country fiscal space is here showcased by a single variable, the fiscal balance (country's revenues less expenditure) as a share of GDP. If negative and significant, the worse the country situation. Note that the fiscal space concept is, however, much larger than a single variable. This information being then indicative and not exhaustive. **if the NDCs' climate need is lower than the fiscal balance surplus, the debt swap may be considered an efficient alternative to finance climate needs. Column d is calculated using UNEP estimations and NDCs information (authors' calculations, see (OECD, 2024[70])
Source: (IMF, 2025[4]), *List of LIC DSAs for PRGT-Eligible Countries: As of March 31, 2025,* https://www.imf.org/external/pubs/ft/dsa/dsalist.pdf; (World Bank, 2024[71]), *A Cross-Country Database of Fiscal Space*, A Cross-Country Database of Fiscal Space.

The scale of the transaction matters, but there is no universal minimum size for debt-for-nature swaps. While some actors, such as the Development Bank of Latin America (CAF), suggest that transactions should be at least USD 100–300 million to be financially viable, others argue that smaller – scale deals (USD 50 million or less) can still be effective (IMF, 2022[63]). Standard Chartered has indicated that larger transactions with national-level impact tend to be more efficient in addressing nature and climate goals. However, the key determinant of success is not size alone but rather the presence of strong governance, a bankable project pipeline, and adequate financial backing.[24]

4.4.3. *Institutional readiness*

A well-structured pipeline of bankable conservation projects is necessary to justify a debt-for-nature swap. Creditors and investors require assurance that the funds generated through a swap will be directed towards high-impact environmental projects with measurable outcomes. Countries must be able to identify, design, and implement a portfolio of projects aligned with blue and green finance objectives. Without a clear investment pipeline, negotiations may face delays, and implementation risks increase.

A robust regulatory framework and monitoring system are critical to ensuring credibility and long-term success. Clear and supportive regulations enhance the credibility and smooth execution of transactions. It finally reassures investors that they will get returns on the government's green/blue commitments. A robust monitoring system, with standardised performance metrics and financial penalties for unmet conservation commitments, fosters investor confidence and accelerates progress on commitments. Barbados' 2024 swap, for example, is centred around upgrading a large sewage treatment plant. If the water extracted from the upgraded plant does not meet certain pre-defined volume and quality metrics, then the government incurs a financial penalty which is channelled to a trust fund for environmental investments (OECD/IDB, 2024[43]). Independent oversight mechanisms, such as third-party audits, can further enhance accountability and prevent mismanagement, ensuring long-term project sustainability.

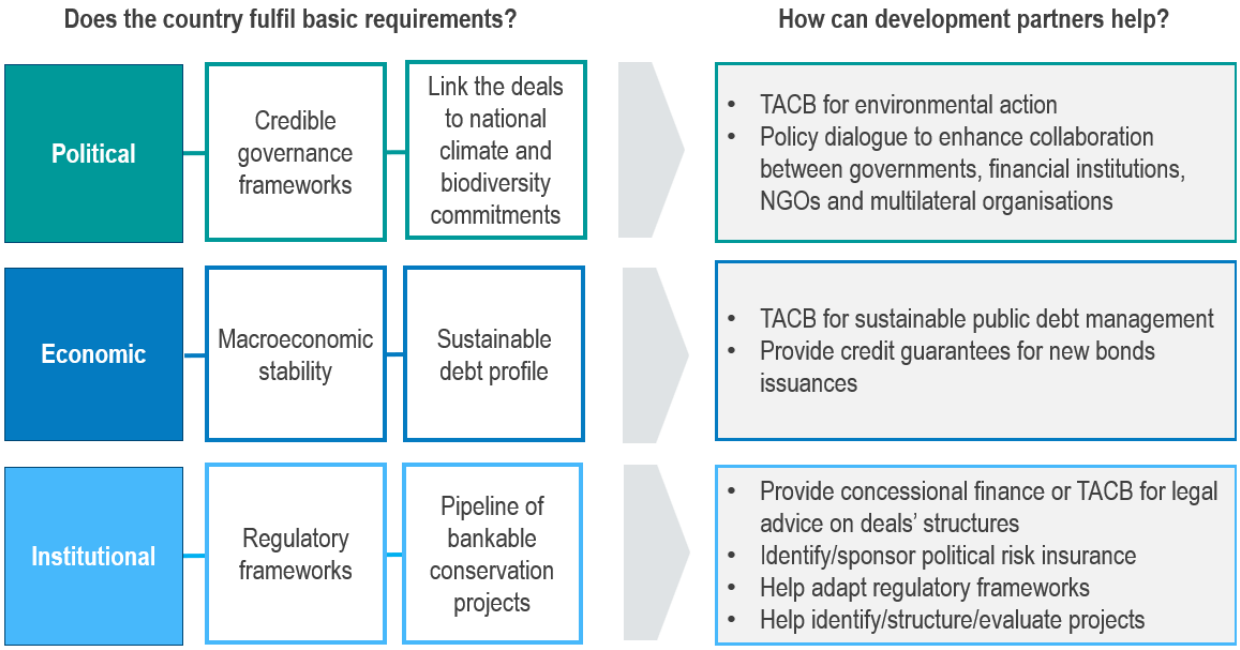
Collaborative governance structures and effective transaction design are key to successful implementation. Debt-for-nature swap agreements must respect national sovereignty while allowing debtor countries flexibility in meeting environmental commitments. These transactions typically involve diverse stakeholders, including NGOs, financial institutions, credit rating agencies, and advisory firms. Engaging with local communities to enhance the implementation of the projects is also an important factor in securing long-lasting impact and the survival of the projects.

[24] This section is based on exchanges carried out through the survey described in the methodology.

4.5. Potential role for development co-operation

Beyond the fundamental political, economic, and institutional prerequisites, addressing persistent barriers can significantly enhance the success of debt-for-nature swaps. Development co-operation plays a crucial role in improving the viability of these transactions by facilitating multi-stakeholder co-ordination, providing technical assistance, and offering risk-mitigation instruments. Figure 4.4.

Figure 4.4. Development co-operation can enhance SIDS' readiness to deploy debt-for-nature swaps



3.5.1 Supporting political preparedness

Provider support can help SIDS embed debt-for-nature swap frameworks in national development strategies and environmental plans. For example, development partners (UNDP and GEF) supported the Seychelles in 2016 ensure its first debt-for-nature swap aligned with the country's National Development Strategy, the Seychelles Blue Economy Roadmap, the Marine Spatial Plan (MSP) as well as its Nationally Determined Contributions (NDCs) under the Paris Agreements (GEF, 2016[72]).

Development co-operation also helps strengthen partnerships and facilitate dialogue between key stakeholders, enhancing collaboration between governments, financial institutions, and multilateral organisations. In Ecuador, for example, development partners helped facilitate the Galápagos debt conversion by bridging communication between public and private sector stakeholders. Indeed, different stakeholders often speak very different "languages" – fiscal policy vs. biodiversity science vs. investor risk – and development partners can help translate priorities, build trust, and find common ground (The University of Cambridge Institute for Sustainability Leadership, 2024[73]).

3.5.2 Improving economic feasibility

Development co-operation can play a pivotal role in strengthening debt sustainability in SIDS by providing or facilitating targeted technical assistance, capacity development, and institutional support. This may include training government officials in effective debt management strategies,

supporting the design and structuring of complex financial instruments, and helping to adapt fiscal and regulatory frameworks to integrate sustainability-linked finance. IMF-supported initiatives – such as the Caribbean Regional Technical Assistance Centre (CARTAC) and the Pacific Financial Technical Assistance Centre (PFTAC) – already play a vital role in delivering capacity development services in areas including public financial management, macroeconomic forecasting, and debt sustainability assessments. As mentioned in Chapter 2 in the context of GSSS bonds, supporting the role of these regional centres and ensuring they integrate the most recent policy guidance on debt-for-nature swaps (IMF, 2024[51]) would enhance their ability to provide context-specific, hands-on support to SIDS. This would include advising on incorporating environmental objectives into debt restructuring processes and strengthening the technical and institutional frameworks required to implement and monitor such innovative instruments effectively.

3.5.3 Strengthening institutional capacities

Development co-operation actors can also provide critical indirect support for debt-for-nature swaps by subsidising enabling mechanisms, such as climate and biodiversity finance facilities and technical preparation funds. These mechanisms help mitigate risks and increase the bankability of the deals, making them more attractive to private investors and feasible for indebted countries. For instance, the Green Climate Fund (GCF) supported Barbados' 2023 debt-for-nature swap by granting USD 40 million in concessional finance to help catalyse the transaction. The GCF's involvement also lent legitimacy to the environmental commitments embedded in the swap, encouraging broader buy-in from stakeholders across sectors. (GCF, 2024[74]). In addition, specialised environmental NGOs and civil society organisations often act as transaction facilitators, conveners, and technical advisors. These organisations (Debtfornature.org, 2024[75]) may provide governments with tailored support on designing conservation-linked commitments and liaising with creditors and investors. Their deep understanding of ecological priorities and financial structuring allows them to bridge knowledge gaps between ministries of finance and environment, enabling the creation of robust, accountable, and results-driven debt conversion programmes.

Development providers may offer adequate insurance and reinsurance solutions to mitigate risks and enhance deal viability. Development partners, including bilateral providers and development finance institutions, can enhance deal viability by providing concessional finance, facilitating technical assistance, or identifying political risk insurance providers. For example, the U.S. Development Finance Corporation (DFC) played a pivotal role as a guarantor, offering political risk insurance for major debt conversions, including USD 610 million for Belize (The Nature Conservancy, 2022[57]), USD 1 billion for Ecuador (IDB, 2023[76]), USD 656 million for Gabon (Financial Afrik, 2023[77]) and USD 500 million for El Salvador (CAF, 2024[78]). However, recent shifts in global political dynamics have cast uncertainty over DFC's continued involvement in this agenda. To sustain the momentum of debt-for-nature swaps, it will be essential to identify and mobilise alternative institutions or financial mechanisms that can fill this critical role.

From a policy perspective, development co-operation can also support debt-for-nature swaps by shaping public policy in providers' jurisdictions to encourage investment in related financial instruments. Favourable regulatory frameworks and financial incentives – such as tax-exempt bonds[25] – could attract private sector investment in ODA-eligible SIDS (OECD, 2024[79]). Such tax incentives would reduce the cost of participation for investors, thereby increasing the scalability of these financial instruments. Although revenue losses from such incentives may not be classified as ODA-eligible[26], they

[25] Tax-exempt bonds, for instance in US municipal bonds and Brazilian wind projects, allow investors to avoid income tax on interest.

[26] Some years ago, the OECD through its Working Party on Statistics (WP-STAT), studied the possibility of accounting as ODA the shortfall resulting to governments from granting a tax exemption to contributions made by the private sector to NGOs. The WP-STAT concluded it was not feasible, and it is now described in footnote 66 of the CRS

could still be recorded as mobilised finance under OECD DAC definitions. Tracking these efforts in the OECD Creditor Reporting System (CRS) would enhance visibility and encourage further development of blue and green financial instruments in ODA-eligible developing countries. Table 4.4 overviews relevant programmes offering technical assistance for debt-for-nature swaps.

Table 4.4. Where can SIDS obtain technical assistance and capacity building on debt-for-nature swaps?

Activities	TACB providers
Technical and financial advisory and capacity building on the structure and negotiation of debt-for-nature swap transactions, as well as formalisation of conservation commitments.	Global Green Growth Institute (GGGI)
Technical and financial advisory and capacity building on the structure and negotiation of debt-for-nature swap transactions, as well as formalisation of conservation commitments.	The Nature Conservancy (TNC)
Commission feasibility study of potential debt swap structures.	UNDP
Determine the appropriateness of debt for development swaps for the country. Determine the most suitable commercial or bilateral debt to swap/buyback. Analyse financial terms needed to make the debt swap favourable from a debt management perspective. Build guidelines for the use of proceeds and provide support to the monitoring and verification. Help with the selection process for transaction arrangers and other advisors. Assessment of appropriateness of debt-for-development swaps for the country. Identification of the most suitable commercial or bilateral debt for swap or buyback. Financial terms analysis to ensure debt swap is favourable from a debt management perspective. Guidelines for the use of proceeds, including support for monitoring and verification. Assistance in the selection process for transaction arrangers and other advisors.	World Bank (under consideration)
Provide access to pooled TA from various stakeholders: UN agencies (including UNDP Sustainable Finance Hub) and bilateral partners member of the OECD Development Assistance Committee (DAC), including EU SFAH and EU GGBI.	INFF Facility
SIDS Debt Sustainability Support Service: A comprehensive framework for shaping resilient prosperity in LDCs and other developing countries.	International Institute for Environment and Development (IIED) - SIDS Debt Sustainability Support Service (under implementation)

Note: This is an illustrative, non-exhaustive list.

Directives “Tax incentives – i.e., deductions or rebates for private donations for development purposes – are not recorded as official flows and therefore not deducted from private charitable flows”.

5 Sovereign catastrophe bonds: rethinking disaster risk financing

In Brief: Key takeaways on sovereign catastrophe bonds

Objective

- Sovereign catastrophe bonds enable governments to transfer a portion of disaster risk to capital markets. These instruments provide rapid, pre-arranged liquidity following extreme natural hazards that meet specific trigger criteria.

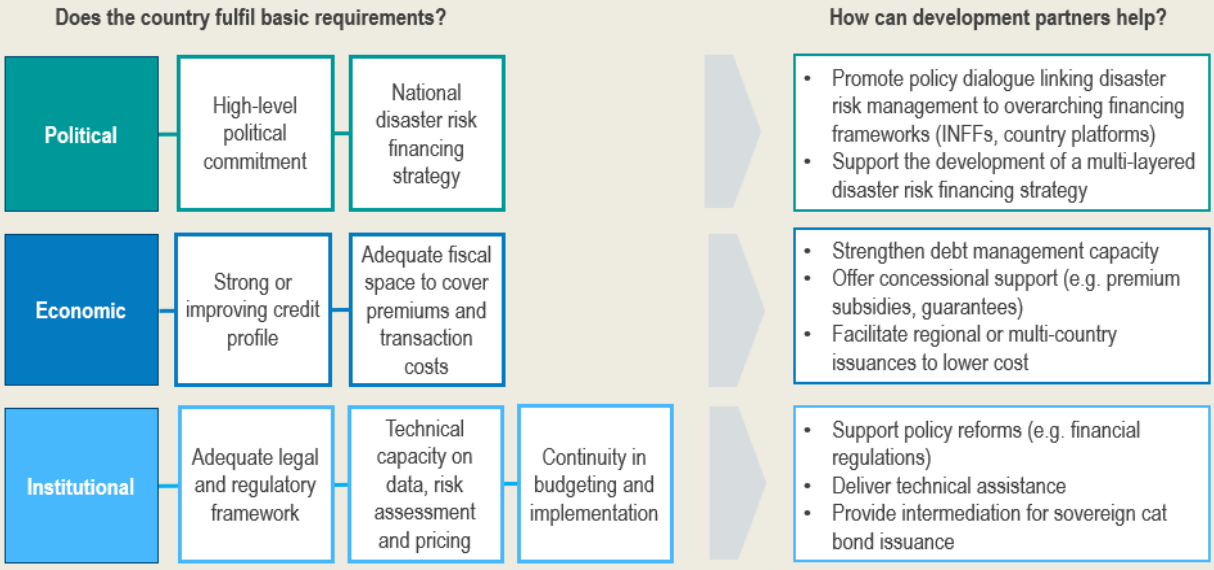
Potential benefits

- As market-based instruments, cat bonds can mobilise private capital for disaster risk financing, reducing reliance on provider funding, budget reallocations or borrowing.
- Sovereign catastrophe bonds can help governments respond to low-frequency but high-impact disasters, while minimising fiscal disruption.
- The existence of a pre-funded, rule-based payout mechanism can provide quick liquidity and bolster investor confidence by enhancing predictability in disaster response financing.

Challenges and risks

- Sovereign catastrophe bonds require a sustained, multi-year fiscal commitment, which can be politically difficult to maintain amid competing budgetary pressures.
- Sovereign catastrophe bonds are generally not well suited for addressing high-frequency or relatively small-scale local disasters, limiting their applicability in certain contexts.
- The structuring and issuance of cat bonds entail significant premium and transaction costs, which may pose affordability challenges for lower-income and highly indebted SIDS.
- Payouts are typically based on parametric triggers, which may not align perfectly with actual losses on the ground.

Readiness for adoption and development partners' role



5.1. How do sovereign catastrophe bonds work?

Sovereign catastrophe bonds – commonly referred to as cat bonds – are financial instruments that transfer disaster risk from governments to capital market investors. Developed in the 1990s, these bonds were originally used by insurers and reinsurers in the United States to cover losses from large-scale disasters, such as hurricanes and earthquakes. Their application by sovereign governments is a more recent development, with Mexico pioneering the first sovereign catastrophe bond in 2006, with support from the World Bank. Through these bonds, governments can secure pre-arranged funding that is disbursed quickly when a disaster meets predefined trigger conditions. Because these triggers are based on measurable physical parameters – such as wind speed or earthquake magnitude – they are referred to as "parametric", in contrast to "soft" or non-parametric triggers, which rely on discretionary or situational assessments and are more commonly used in other types of pre-arranged financing instruments, such as climate resilient debt clauses (see Chapter 5).

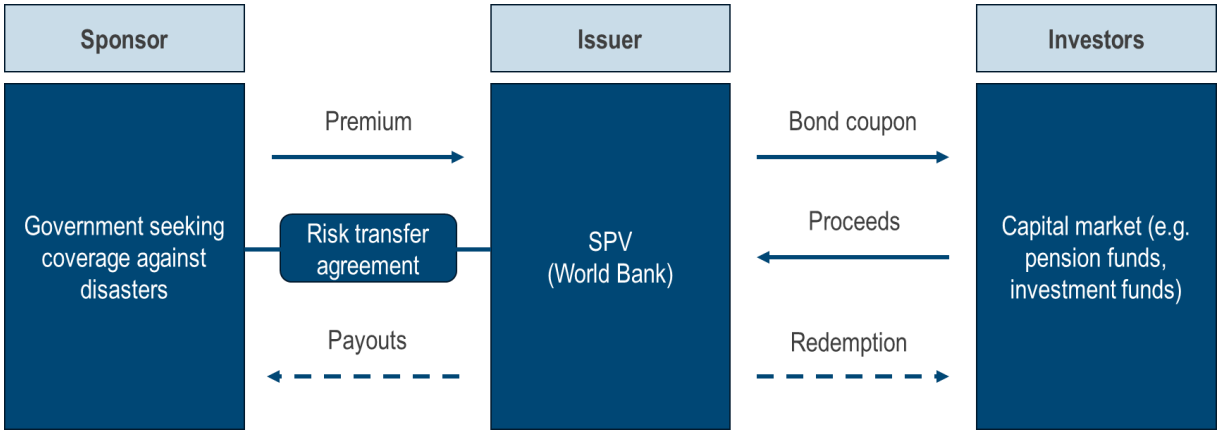
In the context of SIDS, the use of cat bonds has been limited, but regional mechanisms and multilateral support are creating entry points. Despite their potential, cat bonds have seen limited uptake in SIDS. Jamaica was the first SIDS to issue a cat bond in 2021, backed by the World Bank. The bond was renewed in 2024, marking a positive step toward institutionalising regional risk-transfer mechanisms. Although no other SIDS has issued a sovereign cat bond, regional risk-pooling mechanisms, such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF), have also started using these instruments.

Multilateral support is helping create an enabling environment for the wider adoption of cat bonds in developing countries. While several development partners are working to expand countries' access to disaster risk financing, the World Bank is currently the only institution with a dedicated platform and operational experience in issuing sovereign catastrophe bonds on behalf of developing countries. To date, all sovereign cat bonds from developing countries have been issued through the World Bank. Its Capital-at-Risk Notes programme enables countries to access international capital markets without having to set up a bespoke special purpose vehicle (SPV). This process would present significant cost and capacity barriers for most developing countries. Under this structure, the World Bank issues the bonds to investors. It holds the proceeds in trust accounts for participating countries, facilitating rapid disbursement when a disaster meets pre-agreed parametric triggers (Figure 5.1). This intermediation role reduces transaction costs, enhances market confidence, and ensures regulatory compliance and transparency – key factors in improving the affordability and accessibility of cat bonds for countries with limited direct market access. As such, while other partners have a role in technical and policy support, the World Bank's platform is currently essential to the operational feasibility of sovereign cat bond issuance in developing countries, including SIDS.

The issuance process follows a structured flow of payments and risk transfer, as outlined in the steps below.

1. **Risk transfer agreement:** The government agrees to pay a premium to the World Bank, which acts as an intermediary.
2. **Capital mobilisation:** Investors buy the bonds by providing proceeds to the World Bank.
3. **Investors' return:** Throughout the bond's life, investors receive periodic interest payments (bond coupon) as a return on their investment.
4. **Payout mechanism:** If a disaster occurs and satisfies the agreed trigger conditions, the government receives a payout, meaning investors lose some or all of their principal.
5. **Bond maturity:** If no qualifying disaster occurs, the World Bank returns the original investment (the redemption amount) to the investors at the end of the bond's term.

Figure 5.1. Sovereign catastrophe bonds offer a market-based solution to reduce SIDS' financing gap for disaster risk management



Source: Authors' design adapted from (World Bank, 2024[80]), *Disaster Risk Transfer Product Note*, https://thedocs.worldbank.org/en/doc/46c9b740fe83bc96681ff097681d9e6b-0340012024/original/Disaster-Risk-Transfer-Product-Note.pdf.

5.2. What are the benefits of sovereign catastrophe bonds?

Cat bonds offer a rapid source of post-disaster liquidity for SIDS in the case of extreme events. Unlike traditional insurance, which may involve lengthy claims processes, cat bonds offer predictable, rules-based payouts, improving countries' ability to respond rapidly to disasters. This ensures that governments can respond swiftly to crises, restore essential services, repair critical infrastructure, and provide relief to affected populations without delay. This rapid access to funds is a crucial advantage for SIDS, where disruptions induced by extreme events can paralyse entire economies.

By transferring risk to investors, cat bonds reduce the need for further debt accumulation after large disasters. When a disaster strikes, governments often borrow from international financial institutions, bilateral development partners, or sovereign debt markets to finance emergency relief and reconstruction. This can exacerbate existing fiscal vulnerabilities, creating a cycle of disaster-driven indebtedness. Cat bonds provide liquidity without increasing the government's debt burden. Investors purchase these bonds in advance, and the pre-committed funds are released to the government if a disaster occurs. This structure allows SIDS to finance recovery efforts without jeopardising long-term fiscal sustainability (Reitmeier, Dookie and Rözer, 2025[81]).

Sovereign catastrophe bonds can provide substantial financial protection for extreme events, complementing a broader disaster risk financing strategy. Cat bonds are specifically designed for tail risk events – i.e. extreme but infrequent disasters – and as a result, they offer coverage at a scale many other instruments cannot match. For instance, the World Bank-facilitated cat bond for Jamaica initially provided USD 185 million in coverage, with a minimum payout of 30% of this total, for three hurricane seasons (2021-2023) and was renewed for USD 150 million for four additional seasons (2024-2027). By comparison, payouts from sovereign insurance risk pools tend to be significantly smaller, with CCRIF's average payouts amounting to under USD 5 million for the 2007-2024 period (CCRIF SPC, 2025[82]).

Accessing global capital markets allows SIDS to tap into deep pools of capital. One of the fundamental benefits of cat bonds is that they mobilise capital from institutional investors (including pension funds, sovereign wealth funds, and hedge funds) seeking non-correlated, high-yield investments (Table 5.1). Unlike concessional loans, whose availability is limited and often competes with other development priorities within a country's aid allocation, cat bonds offer an alternative and additional financing source. By sponsoring cat bonds, SIDS can thus attract private-sector participation in disaster

resilience financing at a much greater magnitude than what would be available through public funding alone.

Table 5.1. The 2021 Jamaica sovereign cat bond attracted a diverse range of investors

Investor distribution of the Government of Jamaica's 2021 sovereign catastrophe bond

Geographic distribution		Investor type	
Europe	60%	ILS Fund	66%
North America	24%	Insurer / Reinsurer	17%
Caribbean (Bermuda)	15%	Asset Management	14%
Asia	1%	Pension Fund	3%

Source: (World Bank, 2021[83]), World Bank Catastrophe Bond provides Jamaica with Financial Protection against Tropical Cyclones, https://thedocs.worldbank.org/en/doc/43a111757d3b1ff1cabde80ee7eb0535-0340012021/original/Case-Study-Jamaica-Cat-Bond.pdf.

In addition, cat bonds offer transparency and credibility, potentially enhancing investor confidence in SIDS' disaster risk management strategies. Since cat bonds are structured and placed in global financial markets, participating SIDS can enhance their reputation as proactive, financially responsible actors in disaster risk management. In theory, this could, in turn, improve their access to other forms of climate finance and investment (Reitmeier, Dookie and Rözer, 2025[81]).

Despite their potential benefits, sovereign catastrophe bonds are not widely used by SIDS, largely due to financial and technical constraints. Understanding these barriers is essential to identifying in which cases sovereign catastrophe bonds can be a suitable option and how they can be improved to better meet the needs of SIDS. The following section examines the key obstacles preventing wider adoption of sovereign cat bonds and why many SIDS remain hesitant to integrate them into their disaster risk management strategies.

5.3. What is holding back the wider adoption of sovereign catastrophe bonds?

Sovereign cat bond issuance remains very sparse in SIDS. While these instruments offer a promising solution for extreme disaster risk financing, several structural and financial barriers are limiting their adoption at scale. As a result, Jamaica is the only SIDS to have sponsored a cat bond to date. High costs, technical complexity, and the nature of parametric triggers present challenges that must be addressed to enhance their viability for SIDS.

The parametric nature of sovereign cat bonds is a double-edged sword: quick disbursement but imperfect loss coverage. Using pre-determined parametric triggers (such as wind speed, earthquake magnitude, or storm surge levels) allows cat bonds to offer rapid payouts but introduces a trade-off: payouts may not fully align with actual damages. If a disaster does not meet the specific trigger thresholds, no payout occurs, even if significant destruction occurs (Mustapha and Benson, 2024[84]). This issue, common to all parametric insurance instruments, can frustrate governments expecting financial relief. For example, in 2024, Hurricane Beryl impacted Jamaica, but its sovereign cat bond did not trigger, despite severe storm impacts (Box 5.1).

Box 5.1. The challenge of non-trigger events and the importance of a risk layering approach: lessons from Jamaica

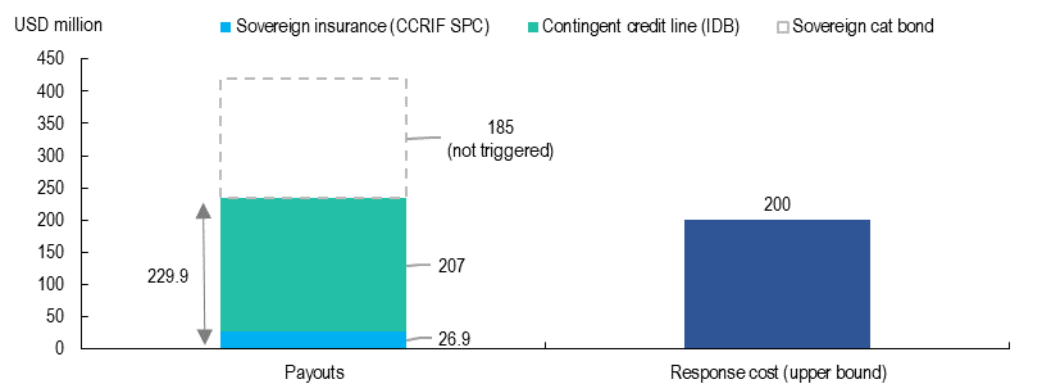
Hurricane Beryl's impact on Jamaica in 2024 highlighted a key challenge of sovereign catastrophe bonds: the risk of non-trigger events, where severe disaster impacts do not meet the bond's parametric payout criteria. Although Hurricane Beryl caused widespread flooding, infrastructure damage, and economic losses, Jamaica's sovereign cat bond did not trigger because the storm's recorded wind speeds and barometric pressure did not exceed the bond's pre-determined parametric thresholds. This outcome underscores a broader issue with parametric insurance instruments: while they provide rapid, transparent payouts, their effectiveness depends on how well the trigger conditions align with actual disaster losses.

For policymakers, the risk of non-trigger events raises concerns about the reliability of catastrophe bonds as a source of post-disaster liquidity. Governments that pay premiums year after year without receiving a payout may question the value of these instruments, particularly when faced with fiscal constraints. This risk is particularly pronounced for SIDS, where even moderate disasters can have outsized economic impacts, yet may not meet parametric payout conditions.

Mitigating the impact of non-trigger events requires strategic risk layering. To avoid gaps in financial protection, countries can combine cat bonds with other risk financing instruments, such as sovereign insurance risk pools (e.g., CCRIF SPC) for more frequent but smaller-scale disasters and contingent credit lines for mid-range events. Jamaica's case illustrates the value of embedding cat bonds within a broader disaster risk financing (DRF) strategy. The country has adopted a risk-layering approach, ensuring that different financial instruments are used for different levels of disaster severity. As a result, while the cat bond narrowly missed triggering, Jamaica's DRF strategy ensured that other instruments were activated. These included a USD 26.9 million payout from the CCRIF SPC and an Inter-American Bank contingent credit line, which provided an additional USD 207 million. Together, these mechanisms provided sufficient liquidity to cover the estimated USD 85-200 million in response costs (Figure 5.2).

Figure 5.2. Jamaica's risk-layering approach ensures coverage through multiple instruments

Payouts received by the Government of Jamaica following Hurricane Beryl and estimated response cost, 2024



Source: Authors' calculations, based on (Mustapha and Benson, 2024[84]), *Hurricane Beryl: How did Jamaica's DRF strategy stack up?*, https://www.disasterprotection.org/blogs/hurricane-beryl-how-did-jamaicas-drf-strategy-stack-up.

The high cost of issuance is another major deterrent for SIDS. Cat bonds require significant upfront investment to structure and place in global capital markets. The process includes risk modelling, actuarial

assessments, legal structuring, investor outreach, and transaction fees, whose costs can be prohibitively high for SIDS. This makes intermediation essential to ensure the uptake of such instruments. Without the World Bank's support, countries would also need to establish special purpose vehicles (SPVs) – legal entities dedicated to issuing the bond – which would involve additional costs and regulatory complexity. For many SIDS, this would represent a significant hurdle, as they may lack the financial and legal expertise to navigate these requirements independently.

Some small island states also face scale limitations that make individual cat bond issuances less viable. Except for Jamaica and Uruguay, most cat bonds have been designed for relatively large sovereign issuers (e.g. Mexico, Chile, Philippines, Colombia, Peru) or multi-country pooled structures (CCRIF) with the ability to attract institutional investors. In some of the smallest SIDS, the size of the economy could make it difficult to justify the high transaction costs of issuing a cat bond. These countries could struggle to issue a cat bond of sufficient size to attract investor interest while maintaining affordability.

Cat bonds are designed for extreme events and macro-level risks, but complementary instruments are needed to protect local communities from lower-intensity disasters. While cat bonds provide protection against low-probability, high-impact disasters, they do not address more frequent but less severe events, such as tropical storms, heavy rainfall, or moderate earthquakes. These events may not cause total economic collapse, but they still impose significant fiscal burdens on SIDS and can directly impact local livelihoods, particularly among vulnerable populations. Alongside sovereign cat bonds, SIDS are increasingly combining other tools such as contingent financing arrangements, CRDCs, and sovereign parametric insurance to strengthen fiscal resilience. Yet these instruments still focus primarily on protecting government budgets. To address the gap in protection for households and small businesses, parametric micro- and meso-insurance schemes are gaining traction. These instruments offer rapid payouts based on predefined triggers and are designed to reach affected communities directly, helping them absorb and recover from frequent, lower-intensity shocks. As such, they are an important addition to the disaster risk financing toolbox in SIDS (Box 5.2).

Box 5.2. Parametric insurance schemes for vulnerable communities and MSMEs can complement the suite of disaster risk financing tools in SIDS: the example of Fiji

While not a sovereign financing tool, parametric micro- and meso-insurance schemes can effectively complement the SIDS' suite of disaster risk tools. In the event of climate-related disasters, they deliver immediate financial relief to vulnerable communities like smallholder farmers, fisherfolks and market vendors. The Pacific Insurance and Climate Adaptation Programme (PICAP) – a joint initiative of the United Nations Capital Development Fund (UNCDF), the United Nations Development Programme (UNDP), and other partners – has successfully piloted micro-insurance schemes (UN Multi-Partner Trust Fund Office, 2025[85]). The programme aims to improve the financial preparedness and resilience of Pacific Islanders to climate change and natural hazards through market-based insurance schemes. It offers an option for the national and sub-national governments to subscribe to a 'macro to micro' scheme, where a government level insurance policy pays out to individuals, to support the most vulnerable communities. Since its launch in Fiji in December 2020, PICAP has expanded to Tonga, Vanuatu, Samoa, Papua New Guinea, Solomon Islands, Kiribati and Tuvalu.

In Fiji, the effectiveness of the scheme has been validated by quick claim payouts in the initial years. In 2023, a total of 1 013 farmers have benefited from this insurance, with a total payout amounting to FJD 201 000 (USD 88 000). The parametric micro-insurance claims were processed by FijiCare Insurance Limited following days of excessive rainfall (UNCDF, 2023[86]). The payouts were conveniently made into farmers' bank accounts or e-wallets (74% of all impacted were farmers) within two weeks after receipt of verified data by the insurers, quickly reaching women (40% of all impacted) and people with disabilities (24% of all impacted).

The government and regulatory authorities in Fiji see great promise in these microinsurance schemes and have plans to expand their roll-out. Especially in a SIDS context, where government capacity is constrained, providing support to vulnerable communities in the event of a climate disaster can be challenging. Parametric micro-insurance schemes fill a gap as they immediately cushion the financial losses incurred by climate events and are directly paid out to the insured. The Reserve Bank of Fiji (RFB) signed a new partnership with SUN Insurance, Tower Insurance and the InsuResilience Solutions Fund (ISF or the Fund). Together, they work on ways to scale up parametric insurance and make it more affordable for low-and-middle-income households and micro, small and medium businesses (MSMEs). At the international level, other institutions are also advancing similar models. For example, the Global Environment Facility (GEF) is developing a parametric insurance instrument to support vulnerable populations affected by climate change (GEF, 2025[87]).

Financial readiness can be an important factor for the success of parametric insurance schemes. In Fiji, bank accounts and digital wallets were already widely in use at the time the micro-insurance schemes were rolled out. This allowed the insured to receive and access the pay-outs. For countries where this is not the case, there is a need to boost financial inclusion before adopting parametric insurance schemes.

Source: Pullanikkatil et al., (2024[88]), Parametric Insurance: A lifeline for Fiji's climate challenges, https://thecommonwealth.org/news/parametric-insurance-lifeline-fijis-climate-challenges.

Overcoming the barriers to cat bond adoption requires targeted solutions that improve their affordability, reliability, and accessibility for SIDS. While this section highlighted several factors that have hindered wider use of sovereign cat bonds, including high structuring costs, scale limitations, and the risk of non-trigger events, these challenges are not insurmountable. In the right environment and with support, cat bonds could become a more practical and cost-effective tool for SIDS. The following section

explores the conditions under which cat bonds can be successfully deployed and the key requirements to make them work as part of a broader disaster risk financing strategy.

5.4. When are sovereign catastrophe bonds a viable option?

Building on the insights from this chapter, this section provides an analytical framework for assessing in which cases sovereign catastrophe bonds can be a suitable financial instrument for SIDS. Given their vulnerability to natural disasters and fiscal constraints, SIDS must carefully evaluate whether a sovereign catastrophe bond aligns with their risk exposure and political, economic and institutional readiness. Cat bonds can provide rapid liquidity following extreme events, but they are not universally appropriate, and high transaction costs, market conditions, and creditworthiness influence their viability.

5.4.1. *Risk profile*

High exposure to natural disasters is a prerequisite for considering a sovereign cat bond. Catastrophe bonds are designed for countries that face significant financial risks due to natural disasters such as hurricanes, earthquakes, and floods. If a country is highly exposed to disasters, traditional ex-post financing approaches – such as budget reallocations, emergency borrowing, or humanitarian assistance – may be insufficient or too slow to meet immediate needs. Like a cat bond, a pre-arranged risk financing mechanism can provide rapid financial relief. On the other hand, if a country has low exposure to natural disasters, a cat bond may be unnecessary. In such cases, ex-post financing options may be more cost-effective and flexible.

Sovereign cat bonds are best suited for rare but severe disasters that pose a significant economic threat. Cat bonds are structured to pay out large sums when predefined catastrophic events occur, making them particularly useful for high-severity, low-frequency risks. Alternative mechanisms, such as contingency budgets, reserve funds, sovereign insurance, or contingent loans and grants, can provide more affordable and predictable support to cover against high-frequency and low-severity events. These instruments help maintain fiscal stability without the need for expensive risk transfer mechanisms that may rarely pay out.

5.4.2. *Political readiness*

Political commitment and leadership are essential to initiating and prioritising cat bond issuance. High-level government commitment is crucial to initiate the complex preparatory process involved in cat bond issuance, which often requires co-ordination across ministries of finance ministries, disaster risk management, and development planning. Political champions can help elevate cat bonds within the national policy agenda, ensure cross-government buy-in, and signal credibility to development partners and investors, whether at ministerial or head-of-state level. This leadership is crucial in SIDS, where administrative resources are limited, and competing priorities can delay or derail technically demanding reforms.

Sustained political support is critical to uphold multi-year financial commitments and maximise the long-term value of cat bonds. Cat bonds are not one-off interventions – they require governments to commit to a series of financial and administrative responsibilities over multiple years, including paying annual premiums and maintaining data, legal, and institutional frameworks. These multi-year obligations must remain protected from shifts in political leadership, changes in budget priorities, or external fiscal shocks. Without long-term political backing, there is a risk that cat bonds may fail. Embedding cat bonds in national disaster risk financing frameworks, public financial management systems, and medium-term expenditure plans can help ensure continuity. Strong engagement with parliamentarians, civil society, and

development partners can also reinforce domestic support and accountability around these long-term commitments.

5.4.3. *Economic readiness*

A strong credit profile is also crucial for attracting investors and securing favourable pricing in sovereign catastrophe bond issuances. Sovereign cat bonds are sold to investors in global financial markets, meaning a country's creditworthiness affects the cost and demand for the bond. In theory, the World Bank Group, playing the role of an SPV and issuing the cat bond on behalf of developing countries, should make the premium independent from a country's credit risk. However, recent research indicates that a country's characteristics, including its credit profile, still influence the risk premium, as investors factor in overall economic stability and fiscal health in their investment decisions (Roch et al., 2022[89]) (Götze and Gürtler, 2020[90]). A strong credit rating (investment-grade or solid BB level), signalling that the country is financially stable, tends to reduce the risk premium investors demand. Conversely, if a country has a low credit rating or is experiencing significant debt distress, investors may be reluctant to participate, or they may require higher returns, making issuance expensive. Countries in this situation may consider strengthening their credit standing over time before considering a cat bond.

Fiscal space must cover transaction costs and premiums associated with cat bonds. Issuing a catastrophe bond requires upfront transaction costs, which can be significant, particularly for small economies. These costs include legal structuring, actuarial modelling, issuance fees, and investor roadshows. Additionally, cat bonds often require annual premium payments like insurance policies. A country must have sufficient fiscal space to absorb these costs without compromising essential public expenditures. If fiscal space is constrained, a country may seek grant support from development partners to cover transaction costs and premiums.

5.4.4. *Institutional readiness*

Institutional readiness is a foundational condition for the viability of sovereign catastrophe bonds in SIDS. Successful issuance and implementation hinge on adequate legal and regulatory frameworks, specialised technical capacity, and strong administrative systems. Without these, countries may face barriers in effectively structuring, managing, and executing cat bond mechanisms. Given the resource limitations often faced by SIDS, institutional constraints must be addressed early.

A clear and sound legal and regulatory framework is essential for sovereign catastrophe bond issuance. Clear legislation that allows for the use of risk transfer instruments is critical. In many SIDS, financial regulations have not yet been adapted to accommodate catastrophe bonds, which are still relatively new instruments (OECD, 2024[91]). Regulatory clarity helps protect investors and improve transparency, which are key to attracting market interest. In many countries, cat bonds are not subject to the same reporting requirements as traditional bonds, creating concerns about information asymmetry. Development partners can support reforms to modernise financial regulations and strengthen legal certainty, which are essential for investor confidence and market participation.

Technical capacity is required to underpin every stage of a catastrophe bond's lifecycle. Governments must be equipped with (or be able to access) expertise in disaster risk modelling and financial structuring. This includes generating or accessing high-quality risk data, having the capacity to assess parametric triggers, and understanding pricing dynamics. Development partners can help develop capacity through technical assistance and training, and by facilitating access to trusted intermediaries and modelling platforms.

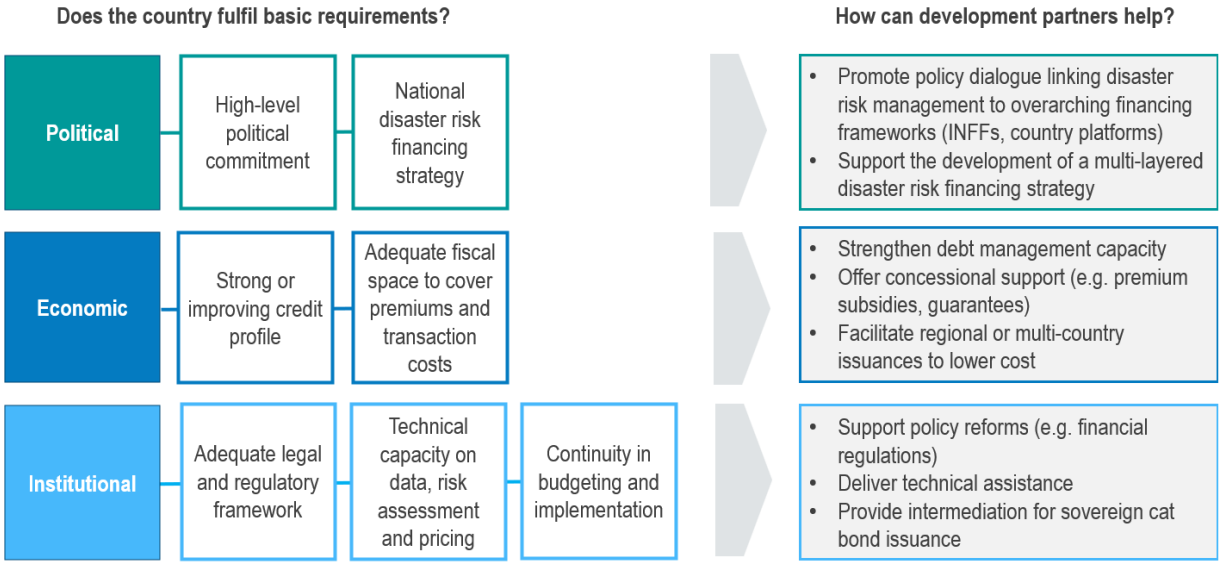
Administrative continuity and co-ordination ensure that cat bond mechanisms are implemented and sustained over time. Effective inter-agency co-ordination (particularly across ministries of finance and disaster risk management authorities) is crucial for ongoing risk monitoring, budgeting, and payout

administration. Institutional fragmentation or ad hoc arrangements can undermine implementation. Long-term institutional mechanisms and budgeting practices that integrate cat bond expenditures can help maintain consistency and resilience across political and fiscal cycles.

5.5. How can development partners help?

Development partners can help SIDS overcome financial and technical challenges associated with sovereign catastrophe bonds. By providing expertise, fostering collaboration between public and private stakeholders, and facilitating access to concessional support, development partners can help make cat bonds a more viable and effective tool that SIDS can incorporate in their disaster financing strategies. Figure 5.3.

Figure 5.3. Development partners can enhance SIDS' readiness in sponsoring catastrophe bonds



5.5.1. Supporting political preparedness

Sovereign catastrophe bonds are complex, multi-year instruments requiring sustained political commitment. Where gaps in political readiness exist, development partners can support governments by promoting policy dialogue and whole-of-government approaches. These are key for embedding cat bonds within overarching financing frameworks – such as INFFs or country platforms – and disaster risk financing strategies.

Development co-operation actors can be important in fostering political momentum and ownership. This includes supporting legislative or regulatory reforms, strengthening domestic accountability frameworks, and promoting peer learning opportunities to share lessons from countries with more advanced disaster risk financing systems. Clear articulation of the medium- to long-term benefits of catastrophe bonds – including enhanced fiscal stability, faster disaster response, and reduced reliance on emergency humanitarian assistance – can help build the political consensus required to support these instruments over time, including through political transitions.

5.5.2. Improving economic feasibility

Concessional support can make cat bonds more affordable and attractive for SIDS. The high costs of issuing cat bonds often deter participation, particularly for SIDS with limited fiscal space. To improve affordability, provider support – such as premium subsidies, concessional financing for bond structuring costs, and risk-sharing arrangements – can lower the financial burden on issuing governments. DFIs and vertical environmental funds can play a critical role in facilitating access to cat bonds by absorbing part of the cost or providing financial guarantees, thereby reducing investor risk perceptions and lowering the cost of capital for SIDS.

Development partners can promote and pilot regional or multi-country catastrophe bond issuances to improve cost-effectiveness and expand coverage for smaller SIDS. Given the high fixed costs of structuring catastrophe bonds, standalone issuances may not be financially viable for many small island states. Pooling resources through regional frameworks can reduce transaction costs, enhance risk diversification, and attract greater investor interest by creating larger, more liquid instruments. Development partners can play a key role in facilitating these efforts by providing technical support, co-ordinating negotiations among participating countries, and offering financial backing to de-risk transactions. Initiatives such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF) and the Pacific Catastrophe Risk Insurance Company (PCRIC) have already demonstrated the potential of regional risk-sharing mechanisms. By piloting and scaling up regional approaches, development partners can help SIDS access more affordable and efficient disaster risk financing solutions.

5.5.3. Strengthening institutional capacities

Development partners can also provide much-needed technical support. This involves assisting governments in assessing their risk exposure, identifying funding gaps, and designing layered financing strategies that optimise coverage across different types and severities of disasters. It also involves guiding them in selecting the right combination of instruments. Additionally, technical assistance can help countries navigate the complexities of structuring financial instruments, access credit enhancement mechanisms, and improve fiscal planning to sustain premium payments or transaction costs. Table 5.2 provides some examples of relevant technical support programmes available to SIDS.

Long-term institutional strengthening also involves enhancing public financial management systems and building specialised expertise within key ministries and agencies. Development partners can help establish dedicated units or inter-ministerial working groups tasked with managing sovereign risk transfer instruments and ensuring continuity in policy implementation. Capacity development efforts should be designed to reduce dependency over time, ensuring that governments can independently manage and adapt catastrophe bond strategies in response to evolving risk landscapes and fiscal conditions.

Table 5.2. Where can SIDS obtain technical assistance and capacity building on cat bonds?

Areas of support	Organisation
Design of climate insurance mechanisms.	Commonwealth Climate Finance Access Hub(CCFAH)
Intermediation and sovereign cat bond issuance.	World Bank's Capital at Risk Notes Program
Design of disaster risk financing strategies. Financial/actuarial analysis.	World Bank's Disaster Risk Financing and Insurance (DRFI) Program
Advisory, quality assurance and training on disaster risk financing strategies and pre-arranged financing.	Centre for Disaster Protection
Design and implementation of parametric insurance.	UNDP Sustainable Finance Hub – Insurance and Risk Finance
Design of comprehensive financial protection strategies.	Caribbean Catastrophe Risk Insurance Facility

Technical support on disaster risk finance, based on financial/actuarial analysis.	(CCRIF-SPC)
Workshops, seminars and training (in-country and online) on disaster risk finance and insurance.	Pacific Catastrophe Risk Insurance Company (PCRIC)
Training in risk modelling, contingency planning and risk transfer, including parametric insurance.	African Risk Capacity (ARC) Capacity BuildingProgramme
Pooled TA from various stakeholders: UN agencies (including UNDP Sustainable Finance Hub) and bilateral development partners who are members of the OECD Development Assistance Committee (DAC).	INFF Facility
Tailored support for SIDS to leverage parametric insurance and build greater resilience to natural disasters.	International Institute for Environment and Development (IIED) - SIDS Debt Sustainability Support Service (under implementation)

Note: This is an illustrative, non-exhaustive list.

6 Climate resilient debt clauses (CRDCs): building flexibility into debt contracts

In Brief: Key takeaways on climate resilient debt clauses (CRDCs)

Objective

- CRDCs are provisions in debt contracts allowing borrowing governments to defer debt service payments for a pre-defined period if struck by a natural hazard satisfying pre-agreed triggers.

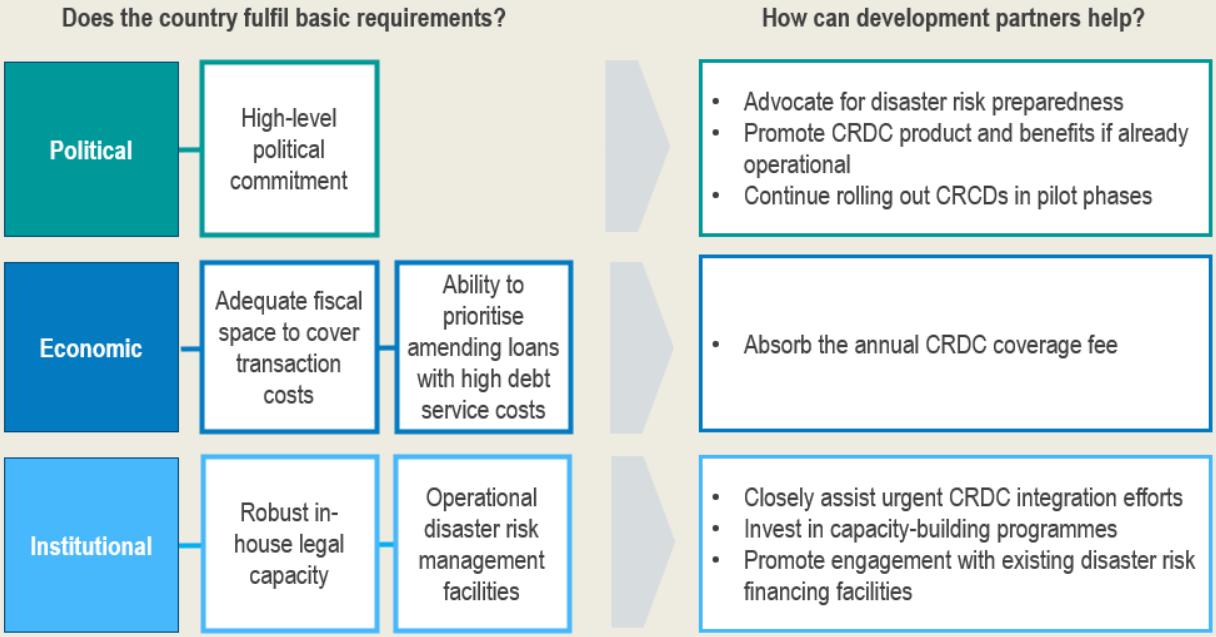
Potential benefits

- If a qualifying natural disaster occurs, CRDCs allow borrowers to reallocate funds intended for debt servicing to post-disaster recovery, alleviating pressure on public finances.
- Their design based on pre-defined triggers can make them a faster-paced disaster finance mechanism than ex-post solutions.
- The funds liberated for disaster response using a CRDC may also help limit the need for new borrowing following natural disasters in highly indebted SIDS.

Challenges and risks

- From the provider perspective, most concerns about offering CRDCs have been mitigated, as evidenced by the rapidly growing number of multilateral and bilateral DFIs deploying the clause.
- From the borrower standpoint, the cost and complexity of integrating the clause in credit contracts, as well as uncertain pricing and credit rating effects on bond markets can limit take-up.

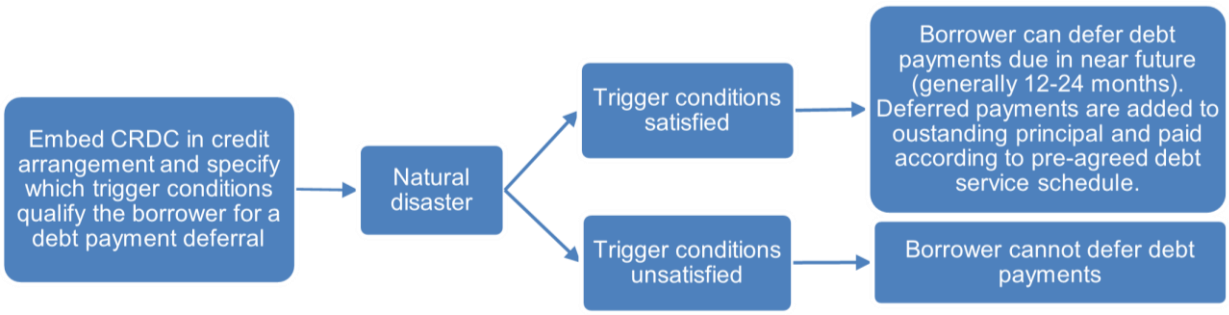
Readiness for adoption and development partners' role



6.1. How do CRDCs work?

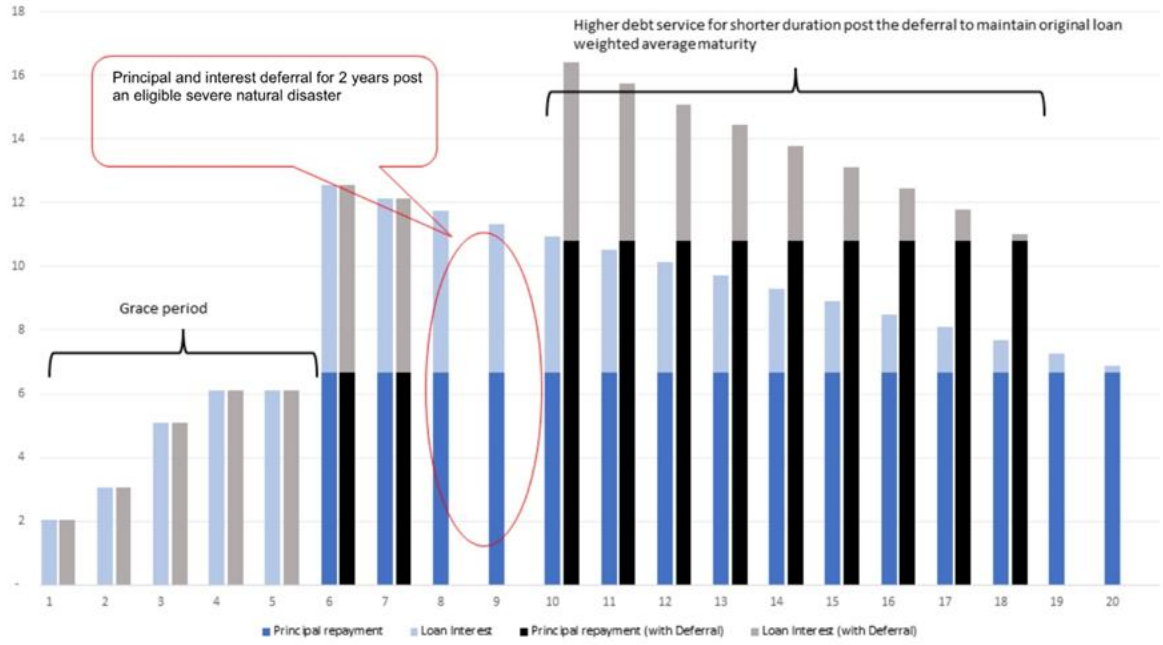
Climate resilient debt clauses are contractual provisions allowing borrowing governments to defer debt service payments for a pre-defined period if struck by a qualifying natural disaster. A natural hazard qualifies the borrower to defer debt payments if it satisfies certain trigger conditions elaborated in the credit contract. CRDC providers offer two main types of triggers: parametric (e.g. storm wind speed) and soft (e.g. declaration of state of emergency) triggers. The duration of the payment deferral period depends on the provider, with the longest currently being two years. The deferred interest and/or principal payments are capitalised onto outstanding principal and paid back during the rest of the loan term without increasing the final maturity date. Figure 6.1.

Figure 6.1. A CRDC enables debt service deferral when a qualifying natural disaster occurs



Exercising a CRDC provides the borrower with temporary relief but results in higher interest payments after the deferral period. Figure 6.2. A payment deferral alters the debt service schedule and raises total repayment costs

Illustrative debt service in USD million

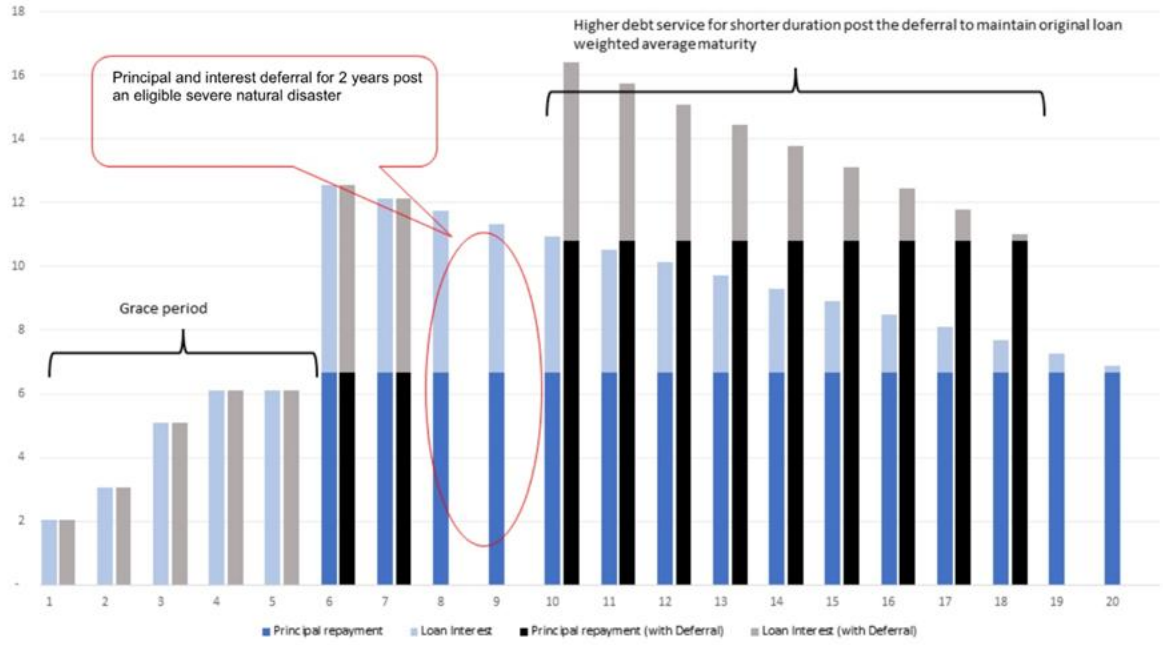


illustrates how a debt repayment deferral would affect a borrower's servicing schedule. In this example, the borrower has deferred two years of debt payments following a qualifying natural disaster. During the

deferral period, debt payments are suspended, but interest accrues normally. The unpaid interest is added to future interest bills, and missed principal payments are spread evenly over most of the remaining repayment period. The accrual of interest during the deferral period and higher principal post-deferral contribute to higher interest payments on the rescheduled debt. This structure ensures that weighted average maturity and net present value are preserved. The borrower resumes payments once the deferral period ends without extending the loan's final maturity date.

Figure 6.2. A payment deferral alters the debt service schedule and raises total repayment costs

Illustrative debt service in USD million



Source: World Bank (2024[92]), *CRDC FAQ*, https://thedocs.worldbank.org/en/doc/c81fdf80718a5eb9b3d18c178b5307be-0340012023/original/CRDC-FAQ.pdf

6.2. What are the benefits of CRDCs?

CRDCs have been embedded in credit contracts since 2015 but provision and take-up only accelerated following the Bridgetown Initiative of 2022. The first known case of a CRDC incorporation was in Grenada's credit arrangements with private and bilateral creditors in 2015 (Paris Club, 2015[93]). However, the 2022 Bridgetown Initiative elevated CRDCs on the global policy agenda, catalysing their adoption across multiple development finance institutions. In 2023, multiple development finance institutions, including the World Bank and the UK's export credit agency, UK Export Finance (UKEF), started offering or pledged to offer CRDCs to borrowers in the future.

Deferring debt payments following natural disasters can rapidly free up fiscal space for recovery and complement ex-post disaster finance solutions. Ex-post disaster finance, such as humanitarian funding, often arrives piecemeal with several months of delay. To be unlocked, humanitarian funds generally require the affected country to be hit by disaster, complete an application with a needs/loss assessment and wait for application review (Calcutt, Maher and Fitzgibbon, 2018[94]). While CRDCs alone cannot substitute ex-post disaster relief due to a lack of scale, their design based on pre-defined triggers can lead to swift debt payment deferral approvals. This allows funds that would otherwise have been used

to service debt to be reallocated for urgent post-disaster response and recovery. Thus, CRDCs emerge as a potentially faster-paced disaster finance mechanism which can complement ex-post solutions.

CRDCs can help limit new borrowing in highly indebted SIDS. When humanitarian funding is insufficient, highly indebted SIDS may be forced to borrow further in response to natural disasters (Bharadwaj et al., 2023[10]). When Hurricane Maria hit Dominica in 2017, for example, the island suffered economic damages equal to roughly 226% of GDP (IMF, 2018[95]). With the fall in government revenue from the slump in economic activity, combined with high relief spending, public finances were strained, requiring extensive new borrowing. Even accounting for emergency grant financing, the Dominican government projected a rise in borrowing and public debt from 74% of GDP in fiscal year 2016/17 to 95% in 2017/18 (Government of Dominica, 2017[96]).

St. Vincent and the Grenadines and Grenada are the only countries known to have deferred debt service payments using CRDCs, making them insightful case studies. These early experiences offer evidence of the clauses' operational feasibility and their potential to improve countries' fiscal responses following extreme climate events. They also highlight the diverse pathways through which CRDCs can be embedded in government debt – whether in multilateral loans or sovereign bonds – and the institutional arrangements that enable rapid execution.

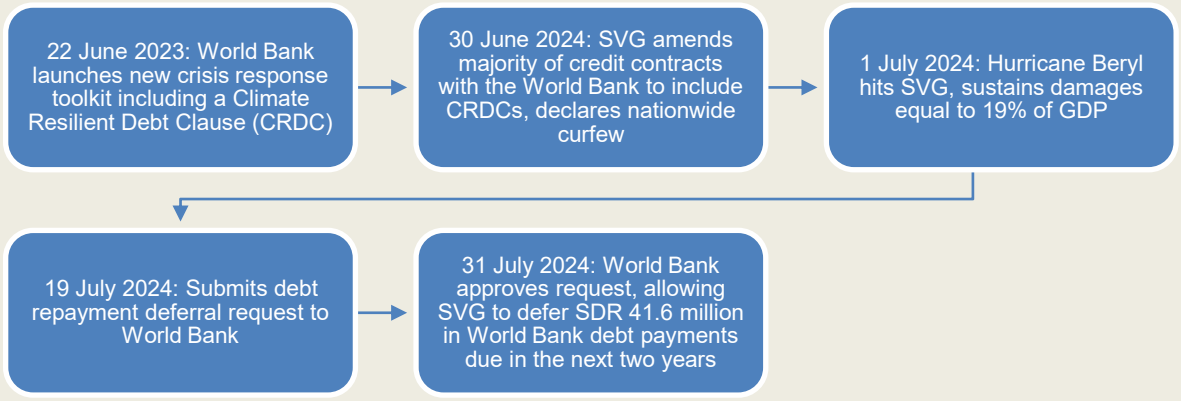
St. Vincent and the Grenadines' use of a CRDC following Hurricane Beryl demonstrated the clause's ability to deliver timely and meaningful fiscal relief. First, the deferral process was swift. Within one month of the disaster, St. Vincent successfully submitted its deferral request, received World Bank approval and deferred upcoming debt service payments (Box 6.1). Second, the scale of relief provided was sufficiently large to relieve the country of short-term strain on its public finances: the deferred principal and interest, equivalent to USD 55 million, represented almost 5% of Vincentian GDP in 2024 (IMF, 2024[97]). This allowed the island nation, at high risk of external debt distress (IMF, 2025[4]), to reallocate the funds from debt servicing to post-disaster recovery.

Box 6.1. St. Vincent and the Grenadines: the first country to exercise a climate resilient debt clause on a World Bank loan

St. Vincent and the Grenadines became the first country to activate a CRDC in a World Bank loan, following timely amendments made to existing loan contracts with the IDA in anticipation of Hurricane Beryl. By late June 2024, climate modellers predicted with high certainty that Hurricane Beryl would impact the island. In response, World Bank staff on-site and local officials rushed to incorporate CRDCs in existing World Bank credit contracts so they would be in place before Beryl made landfall. On June 30th, just one day before the hurricane struck, the majority of St. Vincent and the Grenadines' credit arrangements with the World Bank were successfully amended to include the clause.

The economic toll from Hurricane Beryl was profound, and the CRDC allowed the country to defer upcoming debt service payments. According to World Bank estimates, economic damages from the hurricane were equivalent to 19% of domestic GDP. On July 19th, St. Vincent submitted its debt repayment deferral request to the World Bank. Since the main trigger conditions, namely disaster eligibility and declaration of state of emergency were satisfied, the World Bank approved the request on July 31st. Importantly, the entire process – from deferral request to World Bank approval – was completed under two weeks, underscoring the clause's ability to deliver timely relief. In accordance with the clause, the island-nation was able to defer principal and interest payments due in the 24-month period following impact, amounting to a total 41.6 million Special Drawing Rights (roughly USD 55 million). Figure 6.3.

Figure 6.3. Timeline of St. Vincent and the Grenadines' CRDC exercise



Sources: Consultations with World Bank; World Bank (2024[98]), *In the Eye of the Storm: Staff Stories on Braving Hurricane Beryl in the Caribbean*, https://www.worldbank.org/en/news/feature/2024/09/23/in-the-eye-of-the-storm#:~:text=Saint%20Vincent%20and%20the%20Grenadines,and%20recover%20from%20the%20disaster; St. Vincent Times (2024[99]), *National Shutdown Ordered in St Vincent for 7pm as Beryl Nears*, https://www.stvincenttimes.com/national-shutdown-ordered-in-st-vincent-for-7pm-as-beryl-nears/.

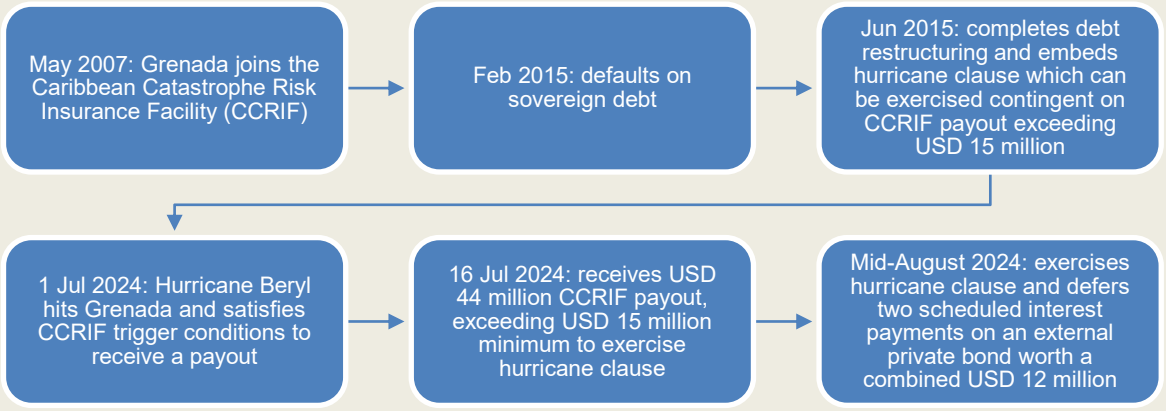
The case of Grenada illustrates how CRDCs can be made operational in sovereign bonds. Hurricane Beryl also precipitated the first-ever activation of a CRDC in a sovereign bond (Box 6.2). Following the storm's impact in mid-2024, Grenada activated its "hurricane clause" embedded in a 2015 sovereign bond agreement. This milestone demonstrated the potential of using established disaster strength modelling – such as the CCRIF's – as the basis for a parametric trigger, reducing the need to negotiate bespoke triggers for each new transaction.

Box 6.2. Grenada: the first country to exercise a climate resilient debt clause on a bond

In 2015, Grenada and its private creditors incorporated the first ever CRDC in a bond. As a founding member of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), Grenada has long recognised the need to boost its financial resilience to natural disasters. When the country underwent a sovereign debt restructuring in 2015 following a default, it negotiated a novel hurricane clause with private bondholders. Rather than designing new parametric triggers, Grenada agreed with private investors that it could defer upcoming debt payments if it suffered a hurricane triggering a large CCRIF payout (over USD 15 million). Figure 6.4

The clause was activated in 2024 after Hurricane Beryl triggered a large CCRIF policy payout. Using its established climate damage modelling tools, the CCRIF assessed Grenada's eligibility to a USD 44 million insurance payout, far exceeding the minimum required to exercise the hurricane clause. Roughly one month later, Grenada informed investors of its intention to defer two interest payments - totalling USD 12 million – under its USD 7.0% Bond due in 2030. As stipulated in the contract, the final maturity date of the bond was not extended, with deferred amounts to be repaid over the lifetime of the bond.

Figure 6.4. Timeline of Grenada's CRDC exercise



Sources: CCRIF (2021[100]), *CCRIF's Members in the Caribbean and Central America Renew Catastrophe Risk Insurance Policies Ahead of Another Active Hurricane Season*, https://www.cdema.org/images/2021/06/Press_Release_CCRIF_Policy_Renewals_2021_June_14_2021.pdf; Asonuma et al. (2017[101]), *Sovereign Debt Restructurings in Grenada: Causes, Processes, Outcomes, and Lessons Learned*, https://www.imf.org/en/Publications/WP/Issues/2017/07/24/Sovereign-Debt-Restructurings-in-Grenada-Causes-Processes-Outcomes-and-Lessons-Learned-45101; Grenada Ministry of Finance (2024[102]), *Notice to Bondholders – Deferral Claim following Hurricane Beryl*, https://www.finance.gd/docs/2024/Annex%20D_Notice%20to%20Bond%20Holder_Deferral%20Claim.pdf; Cotterill and Harris (2024[103]), *Grenada triggers 'hurricane clause' to suspend bond payments*, https://www.ft.com/content/06bdabb2-2abb-45ab-9ee4-94e1c328598f.

Grenada's landmark CRDC tied to a threshold CCRIF payout had positive spillover effects on the Caribbean region. Grenada's 2015 CRDC design inspired neighbouring Barbados to negotiate a similar clause during its 2019 debt restructuring (Anthony, Impavido and van Selm, 2020[104]). Similarly to Grenada, a significant proportion of Barbados' renegotiated debt, including some with private investors, includes CRDCs whose exercise are tied to a CCRIF payout exceeding USD 5 million (Anthony, Impavido and van Selm, 2020[104]).

However, Grenada and Barbados negotiated CRDCs with commercial lenders in exceptional circumstances, casting doubt on the scope for significant CRDC expansion to commercial lending

for now. While MDBs' and bilateral partners' CRDC provision has accelerated in the 2020s (see next section), the clauses remain rare in credit contracts with commercial lenders (Cravero, Esquinca and Peres, 2025[105]). Grenada and Barbados' CRDC incorporations in commercially held debt point to an expansion of the practice, but both occurred in the exceptional circumstances of sovereign debt restructurings. It is therefore unclear whether commercial lenders will offer CRDCs more broadly in future bond issuances.

6.3. What is holding back wider adoption of CRDCs?

Despite growing interest, several supply- and demand-side barriers continue to limit the wider uptake of CRDCs by SIDS. Although CRDCs have become more prominent since the Bridgetown Initiative, their adoption is still not standard practice. The transaction costs for small debt management offices and uncertainty around their financial implications have slowed mainstream integration. This section explores the key technical, institutional, and market-related obstacles that currently hold back broader use of CRDCs.

CRDCs remain a relatively new instrument, and most MDBs are still in the early stages of operationalising them. At the time of writing, the Inter-American Development Bank (IDB) and World Bank are the only two MDBs that systematically offer CRDCs to eligible countries. Even these established CRCD products are still being refined. For instance, the World Bank expanded the scope of eligible disasters as recently as November 2024 (World Bank, 2024[106]). As of February 2025, 20 out of 45 eligible small islands and territories had amended World Bank debt contracts to include CRDCs (Table 6.1). Broader rollout is expected but will take time as countries must finalise the legal reviews and contract amendments.

The pipeline of other MDBs adopting CRDCs is growing, but operational implementation remains limited. In late 2024, the European Investment Bank signed its first CRDC with Barbados and indicated its intention to offer the clause to more borrowers (EIB, 2024[107]). The African Development Bank and European Bank for Reconstruction and Development committed to CRDC deployment at UNFCCC COP28 (AfDB, 2023[108]) while the Caribbean Development Bank announced plans to integrate CRDCs across its lending portfolio (Lazard, 2024[109]). However, in most cases, these commitments are still at the pilot or preparatory stage, which means availability of CRDCs for SIDS remains limited.

Concerns about credit ratings may have made some lenders cautious, though this is starting to shift. Until recently, it was unclear whether including CRDCs could affect MDBs' high credit ratings, which are essential for their low-cost borrowing. Recent clarification from Fitch Ratings suggests that CRDCs are typically credit rating-neutral, provided the deferrals do not threaten an institution's overall liquidity (Jones, 2024[110]). This is an unlikely scenario for the major MDBs given the limited volume of debt payments that are temporarily deferred. As more rating agencies adopt similar stances, this could reduce hesitancy among MDBs and accelerate supply.

On the bilateral side, several providers – led by the United Kingdom – are actively deploying CRDCs, but coverage remains patchy. UKEF was one of the first bilateral development partners to systematically offer CRDCs to eligible borrowing countries. Spain has also started CRDC provision and notably included food-related clauses in two sovereign loans in 2024 (Cotterill and Harris, 2024[111]). Canada announced plans to offer CRDCs in all new sovereign lending (Government of Canada, 2024[112]), while France (Agence Française de Développement) and the Japan International Cooperation Agency (JICA) recently launched CRDC pilot programmes targeting SIDS and other climate-vulnerable countries (AFD, 2023[113]; JICA, 2024[114]). Although promising, these bilateral efforts vary in scope and terms, and most borrowers still lack access to a consistent offering. Table 6.1 outlines the characteristics of the UK's disaster clause alongside the World Bank and IDB equivalents.

Table 6.1. Sample of CRDC providers and key clause characteristics

	Inter-American Development Bank	World Bank	UK Export Finance
Launch year	2021	2023	2023
Countries eligible	12 member countries with Contingent Credit Facility (CCF) coverage	45 SIDS and small states	Borrowing LICs and SIDS
Fee to government	0.05% per year on outstanding loan balance	None (covered by donor contributions)	None (covered by lender)
Countries with active CRDCs	6 countries, including 3 SIDS	20 countries, predominantly SIDS	Senegal, Guyana (non-exhaustive)
Debt payment eligible for deferral	Principal on new debt	Principal and interest on new and existing debt contingent on prior contractual amendment	Principal and interest on new and existing debt contingent on prior contractual amendment
Deferral terms	Payment can be deferred on several loans but only once per loan	Payment can be deferred on several loans but only once per loan	Payment can be deferred on several loans but only once per loan
Maximum deferral period	2 years	2 years	1 year with 1-year extension option
Disasters covered	Storms, earthquakes, excess rainfall	All natural disasters and exogenous public health emergencies	All natural disasters and exogenous public health emergencies
Trigger type	Parametric and non-parametric	Non-parametric	Non-parametric

Note: The data presented are valid as of February 2024 for the IDB and February 2025 for the World Bank.
Sources: IDB (2024[115]), *Innovative Climate and Disaster Risk Finance Solutions*, https://publications.iadb.org/en/innovative-climate-and-disaster-risk-finance-solutions-resilience-building-and-fiscal-strengthening; IDB (2024[116]), *Financial Innovation and Climate Change*, https://www.iadb.org/en/news/financial-innovation-and-climate-change; World Bank (2024[106]), *Product Note: Climate Resilient Debt Clause (CRDC)*, https://thedocs.worldbank.org/en/doc/6857abe91ef32973cfab7f689e9f00fe-0340012023/original/CRDC-Product-note-EN.pdf; UKEF (2023[117]), *Climate Resilient Debt Clauses - New Clauses 6.3 and 6.4 for Inclusion in UKEF's Direct Lending Precedent*, https://assets.publishing.service.gov.uk/media/64932cfade86820013bc8bda/Climate_Resilient_Debt_Clauses.pdf; UKEF (2023[118]), *UK generates billions in climate finance and first CRDC in Africa*, https://www.gov.uk/government/news/uk-generates-billions-in-climate-finance-and-first-crdc-in-africa; consultations with World Bank.

On the demand side, the cost of integrating CRDCs into loan contracts can be a barrier to uptake, particularly when passed on to borrowers. For example, the IDB charges 0.05% per year on outstanding principal. This means a borrower with USD 100 million in outstanding principal must pay roughly USD 50 000 per year for CRDC coverage. While seemingly small, this recurring cost can deter fiscally stretched governments, particularly if the clause is not exercised. By contrast, the World Bank and UKEF do not pass this cost on to borrowers – with the World Bank using donor contributions to cover the cost. Consultations with World Bank experts suggest that this change led to a sharp increase in borrower interest.

The adoption of CRDCs in bonds remains rare due to the uncertain impact of the clause on issuer borrowing costs and credit ratings. So far, only three countries – Grenada, Barbados and the Bahamas – have included CRDCs in sovereign bond agreements, usually in the context of debt restructurings. While the G20 Private Sector Working Group convened by the UK found no evidence of higher bond spreads for Grenada and Barbados (G20 Private Sector Working Group, 2022[119]), the sample size remains too small to draw firm conclusions. Another issuer concern relating to borrowing costs is whether CRDC inclusions cause credit rating downgrades. In a recent commentary, S&P Global acknowledged that CRDCs can enhance debt sustainability in disaster-prone countries (S&P Global, 2024[120]). Nonetheless, the agency cautioned that payment deferrals must be carefully executed to avoid being classified as a sovereign debt default (S&P Global, 2024[120]).

6.4. When are CRDCs a viable option for SIDS?

While CRDCs in bonds are an interesting emerging topic, this section focuses on CRDC viability in loans by development finance institutions. The appropriateness and readiness of a country to integrate CRDCs in sovereign loans is shaped by climatic, political, economic and institutional factors.

6.4.1. Risk profile and needs

CRDCs are designed for use in countries impacted by moderate-to-high-intensity natural disasters (Cravero, Esquinca and Peres, 2025[105]). One commonality between the large CRDC providers (Table 6.1) is that they only permit debt payment deferrals in the event of severe natural disasters. The World Bank, for instance, requires the affected borrower to declare a state of national emergency to be eligible for deferral. Likewise, UKEF only permits a deferral if the natural disaster threatens the borrower's ability to repay the loan. These trigger conditions are unlikely to be satisfied in countries with low-intensity natural hazards, making CRDCs more appropriate for states affected by moderate-to-high-intensity disasters.

6.4.2. Political readiness

A political commitment to disaster risk preparedness can catalyse the integration of CRDCs in disaster risk financing toolkits. The clause is still a nascent provision by DFIs, meaning that small governments in SIDS may not yet be familiar with the benefits of CRDCs. They may prefer DFI disaster risk tools that have been offered and used for longer, such as contingent disaster loans and grants (e.g. IDB CCF established in 2009, or IDA DDO launched in 2017). However, SIDS governments with a strong commitment to disaster risk preparedness may wish to expand the suite of available options and tools for disaster risk financing to include CRDCs. In the future, with an increasing number of cases where CRDCs are effectively triggered and demonstrated to mitigate the debt servicing burden of countries, the political leadership in SIDS could be expected to more readily embrace CRDCs and actively advocate for their adoption.

6.4.3. Economic readiness

Fiscal space must be sufficient to cover transaction costs associated with the clause. Two types of transaction costs can arise when incorporating CRCDs in DFI loans: (1) the legal-administrative efforts required to amend new and existing loan contracts to embed CRDCs and (2) an annual CRDC coverage fee. While some DFIs (e.g. World Bank and UKEF) cover the annual fee, others (e.g. IDB) pass on the fee to the borrower. In either case, some fiscal wiggle room is recommended to incorporate the clause in sovereign debt.

When no annual fee is charged and the legal burden can be strategically managed, CRDCs represent a low-cost, high-reward preparedness measure for SIDS. When the lender absorbs the annual coverage fee, the only remaining transaction cost of CRDCs is the legal effort of embedding the clause in credit contracts. This is not a negligible cost, as retroactively amending several existing loan contracts to maximise CRDC coverage can be legally and administratively burdensome. However, this legal burden can be strategically mitigated. Debt management officials can begin by amending large loans, or those with upcoming debt service payments, as these are likely to generate the greatest fiscal relief if a disaster strikes. When the legal cost is mitigated in this way, this initial expense is outweighed by the long-term benefits of being able to defer debt payments in severe natural catastrophe scenarios. This makes CRDCs a particularly attractive option for SIDS to expand their disaster-response toolkit.

When an annual fee is levied, the decision to adopt CRDCs should be guided by the potential value of debt payment deferral relative to cost. For example, the IDB charges 0.05% per year on the outstanding loan balance for CRDC coverage. If a large proportion of a country's sovereign debt is held by

the IDB, paying this fee may still be worthwhile. Ultimately, this is a case-by-case decision and should be based on the government's legal capacity, structure of its debt portfolio, disaster risk exposure, and fiscal policy priorities.

6.4.4. Institutional readiness

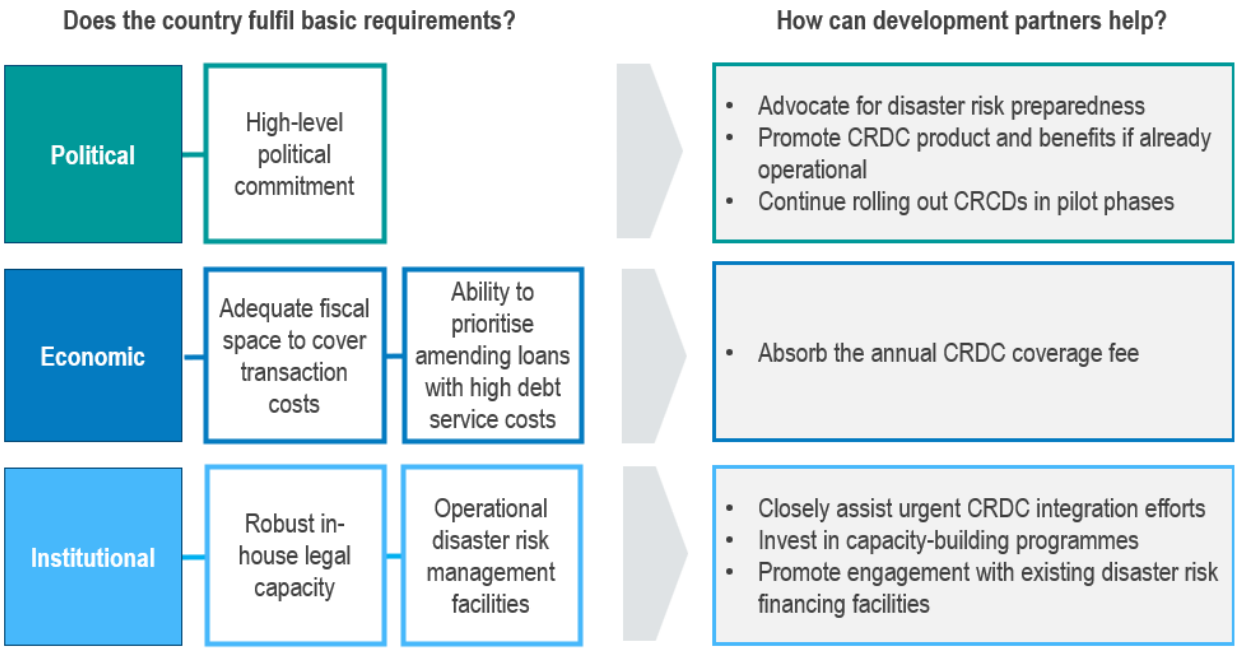
Robust in-house legal capacity can help minimise transaction costs. When coverage fees are zero and the borrowing government has skilled legal teams, the only transaction cost of adopting CRDCs is the opportunity cost of assigning legal expertise to CRDC adoption rather than competing government priorities. This opportunity cost can be minimised if governments have competent and adequately staffed legal teams. Greater investments in university-level public debt law programmes, or in-house government training programmes, are amongst the measures which can prepare governments for these complex omnibus amendments.

Disaster risk management facilities should already be in place for effective CRDC integration. Considering the rising economic costs of natural disasters in SIDS, CRDCs can only liberate a small portion of the post-disaster recovery funding gap. Therefore, the clause should complement rather than replace existing disaster risk management mechanisms. Grenada's handling of Hurricane Beryl provides an illustrative example: the interest payment deferral only liberated a small sum of financing. However, when tied to a CCRIF payout, the total disaster financing unlocked was considerable. The overarching objective should be a comprehensive risk management framework with various financial tools covering the different types of risks a country is exposed to.

6.5. How can development partners help?

Development partners can help enhance SIDS' readiness for CRDC deployment in sovereign debt. From allowing retroactive amendments of existing loans to covering annual coverage fees, development partners have been instrumental in expanding access to CRDCs for a wider range of SIDS. Nonetheless, less than half of SIDS (38%) have incorporated this promising clause in sovereign debt so far. This section outlines how further collaboration with small island states can boost their political, economic and institutional readiness to deploy the clause in sovereign debt.

Figure 6.5. Development partners can support SIDS' readiness to deploy CRDCs in sovereign debt



6.5.1. Supporting political preparedness

Development partners can sustain their strong advocacy in favour of CRDCs. Following the Bridgetown Initiative, numerous bilateral and multilateral development partners rallied around CRDCs as a disaster preparedness tool. Several DFIs now systematically offer CRDCs to eligible borrowers, with positive growth in SIDS' take-up of the clause. However, in the current international context marked by falling development aid budgets and macroeconomic uncertainty, disaster preparedness risks being deprioritised on international policy agendas. DFIs with operational CRDCs can raise awareness about their products in high-level fora to sustain the political momentum around the clause. Meanwhile, development partners piloting CRDC products should continue roll-out and contribute to advocacy efforts.

6.5.2. Improving economic feasibility

Development partners can help reduce financial barriers to CRDC take-up by absorbing annual coverage fees. Covering this recurring cost has proven to be a turning point in encouraging adoption by small states with limited budgets. For instance, the World Bank's decision to cover the annual CRDC fee using donor contributions significantly increased demand for the clause.

6.5.3. Strengthening institutional capacities

Where CRDC integration is urgent, DFIs should closely accompany SIDS in their incorporation of the clause. When Hurricane Beryl was rapidly approaching Caribbean SIDS in 2024, World Bank staff on-site worked tirelessly with local authorities to amend loan contracts in time (World Bank, 2024[98]). This is effectively what allowed St. Vincent and the Grenadines to amend its IDA loan contracts right before hurricane landfall, activate its CRDC, and defer upcoming debt payments. Such active technical assistance is crucial when time is insufficient for longer-term learning opportunities about the clause.

Over the longer run, development partners can strengthen SIDS' familiarity with CRCDs via capacity development programmes. As mentioned previously, only two countries have activated CRDCs to defer debt payments so far, which means that first-hand knowledge of, and experience with, the clause

is still limited. Investing in learning programmes could seriously improve familiarity with the clause and reduce transaction costs of integration over the long term. For example, development partners can provide legal toolkits and incorporate CRDC-specific training for government lawyers and debt managers in existing technical assistance and capacity development programmes. Peer learning platforms could also play a catalytic role, helping to share lessons from early adopters and reduce transaction costs over time. Table 6.2 presents a sample of organisations offering capacity development programmes related to CRDCs.

Development partners can promote engagement with existing disaster risk financing facilities. As mentioned, CRDCs are most effective when embedded in disaster risk financing frameworks. Research by the Centre for Disaster Protection shows that disaster risk financing facilities are often available to SIDS, yet uptake is low (Mustapha and Benson, 2024[84]). Hence, development partners can promote greater engagement with existing DRF facilities like contingent credit lines, cat bonds and regional risk pools (e.g. CCRIF, PCRIC, ARC). This would enhance complementarity between DRF tools and avoid isolated CRDC use with limited benefits.

Table 6.2. Where can SIDS obtain technical assistance and capacity building on CRDCs?

Areas of support	Organisation
CRDC provision and technical assistance to incorporate in credit contracts.	Inter-American Development Bank
CRDC provision and technical assistance to incorporate in credit contracts.	World Bank Crisis Preparedness and Response Toolkit
CRDC provision and technical assistance to incorporate in credit contracts.	UK Export Finance
Advisory, quality assurance and training on disaster risk financing strategies and pre-arranged financing.	Centre for Disaster Protection
Design of comprehensive financial protection strategies. Technical support on disaster risk finance, based on financial/actuarial analysis.	Caribbean Catastrophe Risk Insurance Facility (CCRIF-SPC)
Workshops, seminars and training (in-country and online) on disaster risk finance and insurance.	Pacific Catastrophe Risk Insurance Company (PCRIC)
Training in risk modelling, contingency planning and risk transfer, including parametric insurance.	African Risk Capacity (ARC) Capacity BuildingProgramme
Pooled TA from various stakeholders: UN agencies (including UNDP Sustainable Finance Hub) and bilateral development partners who are members of the OECD Development Assistance Committee (DAC).	INFF Facility
Tailored support for SIDS to leverage CRDCs and build greater resilience to natural disasters.	International Institute for Environment and Development (IIED) - SIDS Debt Sustainability Support Service (under implementation)

Note: This is an illustrative, non-exhaustive list.

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Annex A. Survey template

Dear Madam, Sir,

The OECD is currently preparing a new report called "Best practice guidance for innovative finance in Small Island Developing States (SIDS)". Its main objective is to help unlock finance to SIDS through innovative finance instruments (i.e., debt for nature swaps, blue bonds, CAT bonds, climate resilience debt clauses, etc.). Indeed, SIDS are disproportionately affected by natural disasters, global economic fluctuations, and the impacts of climate change, which have negative externalities on their fiscal balances and development trajectories. The increasing intensity of climate disasters puts pressure on, most of SIDS' debt sustainability.[27] To address such challenges, SIDS need a range of disaster risk finance tools and innovations.

The guidance will analyse innovative finance instruments -in particular, so-called blue instruments such as blue bonds- that have been used in developing countries' contexts.[28] The guidance will draw on feedback from development country stakeholders and financial institutions involved in the transactions as advisors, arrangers, and brokers (consultations are planned to evidence the main conclusions). The study aims to identify when, where, and how to use development co-operation[29] (through technical assistance, budget support, and other means) in a targeted way to unlock and facilitate blue finance. This guidance could be useful to developing country stakeholders to foresee likely obstacles and make informed preparations and choices regarding the use of innovative financial instruments.

The OECD would be grateful for your feedback and participation in these consultations. For doing so, a short list of questions is addressed below. Could you please respond to them and send back your answers before the 10 February 2025? Alternatively, or complementary to the survey, we would be delighted to arrange a call to better explain the scope of the guidance and receive your feedback and insights.

1. Has your institution been involved in a blue-bond initiative, a debt for nature swap, or other blue finance transactions?

If yes and feasible, please detail the nature and scale of the transaction(s) (including the issuance amount, terms and conditions, major investors, structure of transactions, use of proceeds, etc) and the role of your organisations (issuer, advisor, arranger, investor, guarantor, etc)., and then go to question 2.

[27] Some studies have shown that the debt-to-GDP ratio grows faster, by almost 5 percentage points the year a storm strikes in SIDS, with a cumulative debt increase of 5% of GDP a few years later. Acevedo, S. (2014), "Debt, growth and Natural Disasters: a Caribbean Trilogy", https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Debt-Growth-and-Natural-Disasters-A-Caribbean-Trilogy-41757.

[28] View the limited number of blue transactions addressed to SIDS and to learn for other countries' experiences, this section of the study will not be limited to SIDS.

[29] The OECD defines development co-operation as efforts carried out by various actors—typically governments, international organisations, and foundations—to promote economic, social, and environmental progress in developing countries. In 2023, the Development Assistance Committee (DAC)/OECD provided USD 223.3 billion in financial assistance (ODA) to promote development and welfare in developing countries. See https://www.oecd.org/en/topics/official-development-assistance-oda.html

If you have not engaged and are not planning to engage in such a transaction, what are the reasons? If you are not engaged or interested, it is the end of the consultation unless you would like to contact us to discuss the matter.

2. **What are the key ingredients that make such a transaction successful?** (e.g. political will of developing country government, investor interest, institutional capacities, development co-operation actors' involvement through concessional finance, adequate regulation, other).

3. **What are the key obstacles and challenges that need to be overcome?** (e.g. project pipeline, political risk, existing debt levels, absorptive capacities of developing country government, lack of adequate regulation, other).

4. **In your view, is there a critical mass for the type of transaction you engaged in or would like to engage in?** In other words, what is the minimum issuance or swap amount that would make a blue bond, Debt-for-nature swap, etc., feasible?

5. In your view, was (were) this (these) transactions more costly than other transactions at similar levels of amounts? Could you please provide a precise percentage?

6. In your opinion, what could be done to facilitate and scale up these kinds of transactions?

7. **Have you identified new similar/novel deals in the coming months/years? Any pipeline of projects?**

8. Would you be available for a short discussion about your experience with the authors of this work?