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Breaking the disaster-response cycle in SIDS:

Aligning financing to urgent climate action

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The Antigua and Barbuda Agenda for SIDS (ABAS) appropriately highlights the challenge of building economic resilience as a lynchpin for sustainable development in Small Island Developing States (SIDS). The fiscal and financial burdens arising from multiple and overlapping vulnerabilities have been comprehensively documented over the past decade –driven by small scale, remoteness and, increasingly, climate vulnerabilities.² A particular challenge is breaking the disaster-response cycle that over time compounds fiscal vulnerabilities, driving up debt burdens and the cost of capital.

This policy brief focuses on the specific issue of disaster-response for three reasons. First, the disaster-response cycle describes a well-documented pattern of fiscal surge and a crowding out effect over much needed adaptation investments; second, climate vulnerability will only increase the volatility of this cycle in the future, threatening both the prospects for sustainable and inclusive growth as well as an increasingly untenable trajectory for fiscal sustainability; and third, because fiscal and financial capital flows to SIDS pose a challenge to the international financial architecture at large. The characteristics of the problem are known, as well as the size of the fiscal and financial burdens; this is a problem that would not be a problem if the incentives for public and private capital flows were aligned in the right direction. This presents a challenge for the multilateral system at large.

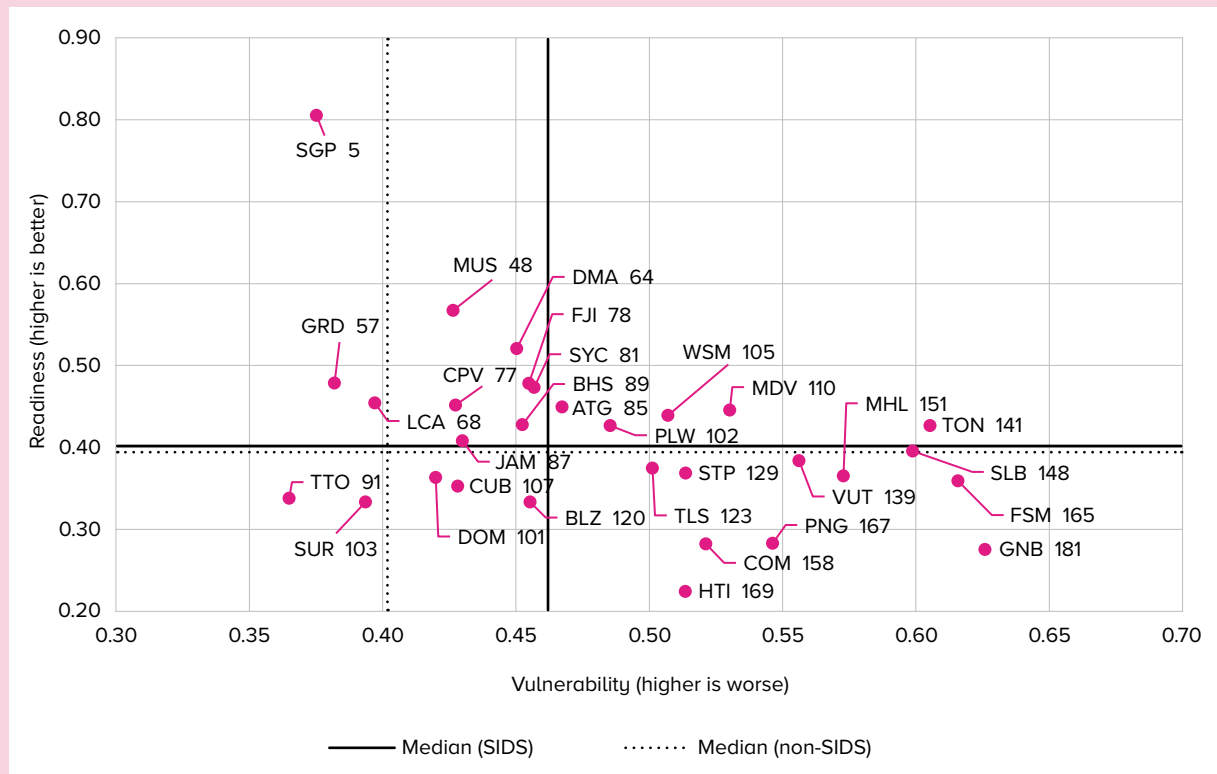
1. Sizing the problem: Economic and recovery costs from disasters are among the highest for SIDS

Highly climate-vulnerable economies face a major development challenge. Many are unable to mobilize the upfront funding they need to invest in adaptation and are forced to divert a growing share of resources to recovery and reconstruction, as the frequency and magnitude of climate-related shocks increase. For these countries climate change is a major threat to both long-term growth prospects and fiscal sustainability and, therefore, to their ability to make progress towards sustainable development.

The challenge is particularly pressing for the group of SIDS due to their comparatively higher vulnerability to the impacts of climate change, such as those from tropical cyclones, storm surges, droughts, sea level rise, coral bleaching, invasive species and changing precipitation patterns.³ As an example, the ND-GAIN index score summarizes a country's vulnerability and readiness to deal with climate change and here SIDS comprise 16 percent of countries in the index, 18 percent of the top 50 worst scoring countries, but 26 percent of the top 50 most vulnerable countries (cf. Box 1).⁴

Box 1: SIDS – Climate Change Vulnerability and Readiness

The graph plots SIDS on the two dimensions of the ND-GAIN index with vulnerability on the x-axis and readiness on the y-axis, and with the 'SIDS' and 'non-SIDS' sample medians included on both dimensions for comparison. As evidenced, the median SIDS country has about the same readiness score as the non-SIDS sample median but a much higher vulnerability score. The five worst performing SIDS on the index are Guinea Bissau (ranked 181 of 185 countries), Haiti (169), Papua New Guinea (167), the Federated States of Micronesia (165) and Comoros (158) all characterized by both high vulnerability and low readiness.



Source: ND-Gain index from the University of Notre Dame using 2021 data. Note: The dotted lines depict the median score for the non-SIDS sample of countries and the solid lines the median score for the SIDS sample. ND-GAIN ranks a total of 185 countries. The number following the three-letter country code is the country's rank on the ND-GAIN index (1 = best and 185 = worst).

Globally, SIDS comprise two-thirds of countries with the highest relative annual losses from natural disasters (including climate-related disasters) ranging from 1-9 percent of GDP (Bharadwaj, Mitchell, Karthikeyan, & Kumar, 2023). On average, the annual cost of disasters for SIDS is estimated at 2 percent of GDP, which is more than four times higher than for larger countries.⁵ One study on Pacific SIDS estimates that annual economic losses due to disasters reach nearly five percent of the combined GDP, with some countries at risk of losing more than ten percent annually (ESCAP, 2020). Compared to non-SIDS countries in the Asia region, the study also finds that the annual average loss per capita in SIDS is at least three times higher. For all SIDS combined, one study estimates that without adaptation, annual economic damages

from coastal flooding will increase by a factor 9 to 11 times that of the present-day damages by mid-century depending on global emissions. This represents an increase of between 1.2 to 5.1 percent of the present-day SIDS GDP (Vousdoukas, et al., 2023).

Recovery and reconstruction following climate-related and natural disasters is similarly very high. For example, estimates from post-disaster needs assessments (PDNA) after hurricanes or cyclones ranged from 4.5 to 39.8 percent of the GDP in Fiji, Haiti and Vanuatu in a comparative study from 2018 (Jeggle & Boggero, 2018)⁶ and in Dominica, it was estimated as high as 226 percent of the GDP after hurricane Maria in 2017 (Dominica, 2017).

2. Adaptation investments are needed to break the disaster-response cycle

The challenge for SIDS (and other highly climate-vulnerable countries) is to break the increasingly costly disaster-response cycle by ramping up adaptation investments immediately. Doing so will definitely pay off. The Global Commission on Adaptation finds that the overall rate of return on investments in resilience is very high, with cost-benefit ratios ranging from 1:2 to 1:10, and in some cases even higher (Global Commission on Adaptation, 2019). Another study focusing on the Asia and Pacific region found cost-benefit ratios between 1:2 and 1:55 from investing in disaster-resilient measures (ADB, 2020). However, mobilizing the capital needed, and on affordable terms, is particularly challenging due to the relatively higher adaptation costs (such as for, building seawalls, relocating infrastructure and populations, investing in climate-resilient agriculture, etc.) and high debt vulnerabilities in many SIDS. For example, the adaptation cost in SIDS is estimated

at US\$4.7 billion per year (from 2020-2030), which is equivalent to 0.7 percent of 2021 GDP compared to 0.56 percent across all developing countries (UNEP, 2023). Another study puts the adaptation gap in SIDS at \$7.3 billion on average per year until 2030 (OECD, 2024). It is worth emphasizing that adaptation needs vary a lot within the SIDS group, with some estimates suggesting that financial needs for adaptation can reach up to 20 percent annually for some SIDS exposed to tropical cyclones and rising sea levels (Georgieva, Gaspar, & Pazarbasioglu, 2022). Funding adaptation through increased public borrowing, particularly market-based borrowing, is constrained by current debt levels. For example, 68 percent (13 of 19) of SIDS with debt sustainability assessed under the LIC-DSF⁷ are rated either in or at high risk of debt distress compared to 43 percent of non-SIDS countries.⁸ Similarly, only three out of 14 SIDS with a credit rating are considered 'investment grade'.⁹

3. Adaptation not only mitigates debt surges and development trade-offs, but also lowers borrowing cost

Responding to disasters can push up debt and debt servicing ratios, and when debt is already too high (and other financial flows inadequate) funding required will have to be diverted from other expenditures, thus creating development trade-offs. Growing evidence is also indicating that financial markets are increasingly pricing sovereign bonds

based on climate risk performance, exposure, and for lower-rated countries, especially physical impact preparedness and climate risk exposure (Bingler, 2022). By some estimates climate vulnerability has already raised the average cost of public debt in developing economies by 117 basis points (Kling, Lo, Murinde, & Volz, 2018), and other estimates suggest

that a ten percentage point increase in climate change vulnerability is associated with a more than 150 basis points increase in long-term government bond spreads in emerging markets and developing economies.¹⁰ In other words, investing in adaptation will not only help save on costly recovery spending and reduce development trade-off, but will also help curb borrowing costs by lowering the country's

risk premium. The adaptation spending needed for many SIDS (and other highly climate vulnerable countries), however, is not likely to be met through domestic resources and private capital flows alone. There are also important equity issues related to using these flows to fill adaptation spending gaps in these countries (UNEP, 2023).

4. A multipronged multilateral approach to delivering more climate sensitive finance

The multilateral community must ensure a fairer and more effective international financial system for developing economies, especially given the combination of urgent climate investment needs coupled with high levels of debt vulnerabilities. For SIDS, most of which are middle-income countries and only contribute very little to global emissions, this especially concerns greater access to affordable adaptation finance, better ways of receiving liquidity support when climate-related shocks occur and easier access to debt relief for those in need. Some of the ways in which this can be obtained are presented below.

Access to effective debt treatments

Following the global pandemic, high levels of widespread debt vulnerabilities across developing countries prompted several international initiatives aimed at providing countries with much-needed debt relief. Currently, eligible countries with solvency or protracted liquidity problems can seek to have their debt treated under the Common Framework for Debt Treatments (in short, the CF). However, coordinating debt relief under the CF has proven more difficult than expected. This is due to countries' intricate creditor compositions counting a mix of traditional (such as the Paris Club) and non-traditional (most notably China) bilateral creditors and a higher reliance on private creditors than in the past. This has resulted in long delays and limited relief for the few countries that have signed up for debt treatments thus far. It is crucial that the debt treatment process improves so that countries can minimize the economic uncertainty associated with signing up under the CF, including the time needed to reach a deal with its creditors and regain markets access. It should also be noted here that many countries are ineligible for the CF including 21 of the 39 SIDS.

For highly climate-vulnerable countries like SIDS it is important that the Debt Sustainability

Analysis (DSA) (which also underpins debtor-creditor negotiations) takes climate change into account, by for instance modelling climate shocks and the longer-term relationship between adaptation investments, growth and fiscal balances. Encouragingly, such climate-related analyses are increasingly being incorporated into new DSAs, and in particular in SIDS, due to their high levels of climate vulnerability (World Bank, 2023).

State-contingent debt and insurance instruments

State-contingent debt instruments that automatically reschedule payments in the event of external shocks can be of particular relevance to countries commonly affected by such, including in SIDS that frequently experience climate-related shocks. Climate-related state contingency is growing in popularity among bilateral and multilateral lenders and is also finding its way into private creditor debt contracts.¹¹ For example, several countries now include hurricane clauses in bond contracts (Landers & Aboneaj, 2023). Allowing for debt pauses when disaster hits will aid economic recovery and reconstruction efforts and help reduce economic and financial losses. For private creditors, debt pauses can be implemented either through clauses embedded directly into the bond contract or, for instance, by the official sector promising (guaranteeing) to assume repayments for the duration of the debt pause. Notably, embedding state-contingent debt pause clauses need not affect the credit rating and, therefore, likely the price, of the bond if carefully designed. For instance, Barbados' recent natural disaster clause bond was assigned the same credit rating as the country's sovereign rating. As stated by credit rating agency Fitch: 'This [the deferral of payments] is intended to adjust the profile of the repayment burden on the issuer, and not to transfer the risk of the disaster event to bondholders' (FitchRatings, 2022).

Similarly, parametric catastrophe insurance, for instance, to cover against qualifying tropical storms and hurricanes also offers countries alternative ways of weakening the link between disaster and financial risk. However, this can be costly, especially for smaller countries. Donors could play a role in helping countries achieve more optimal protection (Cebotari & Youssef, 2020).

Other innovative debt instruments and approaches

Thematic debt offers new ways of mobilizing capital for sustainable development investments and can also be highly relevant to SIDS. Many have already issued various thematic bonds; however, making thematic debt a stronger force for sustainability, including the climate transition, requires rethinking thematic debt models with a stronger focus on official sector credit enhancements, technical assistance provisions and linking ambitious development targets and policies with strong financial incentives (UNDP forthcoming). Another way of potentially freeing up fiscal resources for adaptation and other development spending is the use of debt-for-development swaps (DfDs), whereby countries obtain a reduction in their public debt stock in return for commitments (including spending) on agreed development priorities. Several SIDS have already undertaken DfDs over the past decade, most often with a focus on ocean conservation. It is important to note, however, that DfDs are only appropriate when debt is considered

sustainable, as they are a poor substitute for comprehensive debt restructurings. In addition, DfDs, due to their often complex transaction structure and large number of stakeholders, can be costly instruments compared to alternatives (UNDP forthcoming). The use of DfDs should, therefore, be carefully considered with regard to the country's specific debt situation, and development stakeholders should focus on ways to reduce their costs.

Greater access to grants and concessional climate finance, especially adaptation finance in SIDS

Finally, it should be noted that there are strong calls for increasing access to concessional funding for climate action among developing economies, including among middle-income countries that currently have no or limited access.¹² Boosting official sector climate financing to developing economies is crucial for limiting global warming, as developing economies now account for close to two-thirds of annual global carbon emissions.¹³ It is also important in order to enable and attract the large amounts of private climate finance needed.¹⁴ For small economies (with low emissions) with relatively larger adaptation needs like SIDS, greater access to official sector climate financing is extremely important not only to safeguard their development prospects, but also because adaptation is comparatively harder to finance via the private sector (Choi, Jang, & Laxton, 2023).

Conclusion

Multiple and overlapping vulnerabilities affect the sustainable development prospects in SIDS. Climate change is of particular concern, as many SIDS are among the most climate-vulnerable countries in the world. A lack of adaptation finance will keep SIDS trapped in a costly disaster-recovery cycle which negatively affects growth, fiscal sustainability and long-term development prospects. A layered approach is needed that combines effective and climate-change-sensitive debt treatments with the use of and improvement in innovative debt instruments and approaches and

greater access to more long-term and affordable official sector funding.

In a very tangible way, SIDS pose a challenge for the international financial architecture to address vulnerabilities of speed and scale. The problems are known as well as the size of adaptation finance gaps; what is needed are multilateral commitments to address these challenges in an integrated and impactful way. The ABAS agenda sets forth a compelling roadmap for immediate action.

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Appendix

Small Island Developing States (SIDS) are a diverse group of 39 states including 11 high-, 27 middle- and one low-income countries. Eight countries are

categorized as least developed, 11 as emerging markets, one as an advanced economy and ten as 'fragile and conflict-affected' (cf. Table A1).

Table A1: List of SIDS

Country/State	iso	Region	Income	Least developed	Emerging market	Fragile & conflict-affected	ND-GAIN Rank (185 = worst)**
Antigua and Barbuda	ATG	Latin America & Caribbean	HIC				85
Bahamas, The	BHS	Latin America & Caribbean	HIC				89
Barbados	BRB	Latin America & Caribbean	HIC		✓		45
Belize	BLZ	Latin America & Caribbean	UMIC		✓		120
Cabo Verde	CPV	Sub-Saharan Africa	LMIC				77
Comoros	COM	Sub-Saharan Africa	LMIC	✓		✓	158
Cook Islands	COK	East Asia & Pacific	HIC				NA
Cuba	CUB	Latin America & Caribbean	UMIC				107
Dominica	DMA	Latin America & Caribbean	UMIC				64
Dominican Republic	DOM	Latin America & Caribbean	UMIC		✓		101
Fiji	FJI	East Asia & Pacific	UMIC				78
Grenada	GRD	Latin America & Caribbean	UMIC				57
Guinea-Bissau	GNB	Sub-Saharan Africa	LIC	✓		✓	181
Guyana	GUY	Latin America & Caribbean	HIC		✓		113
Haiti	HTI	Latin America & Caribbean	LMIC	✓		✓	169
Jamaica	JAM	Latin America & Caribbean	UMIC		✓		87
Kiribati	KIR	East Asia & Pacific	LMIC	✓		✓	NA
Maldives	MDV	South Asia	UMIC				110
Marshall Islands	MHL	East Asia & Pacific	UMIC			✓	151
Mauritius	MUS	Sub-Saharan Africa	UMIC		✓		48
Micronesia, Fed. States of	FSM	East Asia & Pacific	LMIC				165
Nauru	NRU	East Asia & Pacific	HIC				111
Niue	NIU	East Asia & Pacific	HIC				NA
Palau	PLW	East Asia & Pacific	UMIC		✓		102
Papua New Guinea	PNG	East Asia & Pacific	LMIC			✓	167
Samoa	WSM	East Asia & Pacific	LMIC		✓		105
São Tomé and Príncipe	STP	Sub-Saharan Africa	LMIC	✓		✓	129
Seychelles	SYC	Sub-Saharan Africa	HIC				81
Singapore*	SGP	East Asia & Pacific	HIC				5
Solomon Islands	SLB	East Asia & Pacific	LMIC	✓		✓	148
St. Kitts & Nevis	KNA	Latin America & Caribbean	HIC				58
St. Lucia	LCA	Latin America & Caribbean	UMIC				68
St. Vincent & the Grenadines	VCT	Latin America & Caribbean	UMIC				NA
Suriname	SUR	Latin America & Caribbean	UMIC		✓		103
Timor-Leste	TLS	East Asia & Pacific	LMIC	✓		✓	123
Tonga	TON	East Asia & Pacific	UMIC		✓		141
Trinidad and Tobago	TTO	Latin America & Caribbean	HIC		✓		91
Tuvalu	TUV	East Asia & Pacific	UMIC	✓		✓	NA
Vanuatu	VUT	East Asia & Pacific	LMIC				139

Source: Income level is based on the World Bank income classification (LIC = low, LMIC = lower-middle, UMIC = upper-middle, HIC = high), 'least developed' status is based on the UN, 'emerging market' status is based on the IMF and 'fragile and conflict-affected' status on the World Bank. ND-Gain rank is from the ND-GAIN country Index from the University of Notre Dame. Note: *Singapore is the only SIDS classified as an 'Advanced economy'. **The ND-GAIN index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience.

Endnotes

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- 2 See for instance (UNDP, 2024), (Rachid, 2022) and (UN DESA, 2023).
- 3 See IPCC AR6 report, Chapter 15: <https://www.ipcc.ch/report/ar6/wg2/>
- 4 The ND-GAIN country index is published by the University of Notre Dame and is described as follows: "The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience". <https://gain.nd.edu/our-work/country-index/rankings/>
- 5 See Chapter 5 in (World Bank, 2023).
- 6 These were Haiti and Fiji in 2016 and Vanuatu in 2015.
- 7 Low-income country debt sustainability framework.
- 8 As of 29 February 2024, 68 countries (including 19 SIDS) had a debt distress rating under the LIC-DSF with 34 countries rated either in (9 countries) or at high risk (25 countries) of debt distress.
- 9 This covers all SIDS with a credit rating by one or more of the two large credit rating agencies, S&P and Moody's. Two high income (Trinidad and Tobago and Singapore) and one middle-income (Mauritius) are considered 'investment grade' meaning a rating at or above BBB- for S&P and Baa3 for Moody's.
- 10 See (World Bank, 2023) Chapter 5.
- 11 For example, five of six of the large multilateral development banks intend to use climate resilient debt clauses in their loans with two banks having already implemented this process. For details, see CGD's MDB reform tracker: <https://www.cgdev.org/page/mdb-reform-tracker>
- 12 It should be noted here that most of the middle-income SIDS do have access to some concessional funding, often because they have small economies. For example, 14 of the middle-income SIDS have access to IDA funding from the World Bank and another eight can lend on blended terms (a combination of IDA and IBRD funding).
- 13 Developing economies here means all low- and middle-income countries. For a breakdown, see: <https://ourworldindata.org/inequality-co2>
- 14 The IEA estimates that EMDEs (outside China) will need to increase clean energy investments more than sixfold over the next ten years to have a fair chance of limiting global warming 1.5°C degrees and that the main hurdle facing project developers is securing affordable financing (IEA, 2024).