

From climate vulnerability to investable opportunity: Financing the food–climate–health nexus in Small Island Developing States

The economic case for climate resilience in SIDS

Small Island Developing States (SIDS) stand at the frontline of the climate crisis. Rising sea levels, increasingly frequent tropical storms, ocean warming and changing rainfall patterns are reshaping livelihoods, disrupting food production and placing growing pressure on public health systems. These impacts are not isolated. Climate change simultaneously affects agricultural productivity, fisheries, nutrition, water security and disease burdens, creating an interconnected food–climate–health nexus that has become central to the resilience of island economies.

The economic consequences are significant. Between 2000 and 2022, climate-related disasters resulted in average annual losses of [US \\$1.7 billion](#) across SIDS, equivalent to nearly [0.8% of their combined GDP](#). In extreme cases, disasters like [Hurricane Maria](#) have erased years of economic progress overnight. The event caused damages equivalent to more than twice Dominica's GDP in 2017. Beyond these immediate losses, repeated climate shocks continue to weaken domestic food production, increase dependence on imported food and contribute to rising levels of malnutrition and diet-related diseases.

Despite the interconnected nature of these risks, financing continues to treat food systems, climate adaptation and health as separate policy priorities. Investments are planned independently, funded through different channels and governed by separate institutions. This fragmented approach has produced disconnected projects instead of integrated investment opportunities capable of attracting commercial and institutional capital. The challenge, therefore, is a mismatch between how resilience challenges manifest and how financial systems allocate capital.

Why capital is not reaching the nexus

Global estimates suggest that SIDS require at least [US \\$11.7 billion](#) annually for adaptation through 2035, which is almost six times current financing levels. Even at this scale, the requirement represents only a small fraction of global climate finance. The persistent financing gap is a consequence of structural barriers that limit investment.

- **Fiscal constraints restrict public investment**

Public finance has traditionally played a catalytic role in crowding in private investment by funding project preparation, providing guarantees and absorbing early-stage risks. However, more than [40%](#) of SIDS are either experiencing or facing a high risk of debt distress, while many allocate a significant share of government revenues towards external debt servicing. Fiscal constraints reduce governments' ability to finance resilience infrastructure, provide credit enhancement mechanisms or establish investment vehicles capable of mobilising larger pools of capital.

At the same time, reliance on gross national income (GNI) as the primary criterion for concessional finance has left many middle- and high-income SIDS [excluded](#) from concessional funding despite being among the world's most climate-vulnerable countries. [Antigua and Barbuda](#) exemplifies this disconnect, advocating for the UN's Multidimensional Vulnerability Index to account for vulnerability alongside income. This misalignment continues to constrain long-term climate investment.

- **Market barriers discourage private capital**

Private investors face a different set of challenges. Climate resilience projects in SIDS are typically small, fragmented and geographically dispersed. Individual investments often range between [US \\$5 million and US \\$10 million](#), which is insufficient to justify the transaction costs associated with institutional investment. On the other hand, investors continue to perceive SIDS as high-risk markets due to their exposure to natural disasters, limited market depth and small domestic economies, resulting in higher borrowing costs.

Currency risk further undermines investment viability. While adaptation projects generate revenues in local currency, financing is frequently denominated in US dollars or euros, exposing projects to exchange rate volatility that can significantly affect long-term returns. Taken together, these factors create an investment environment where commercially viable resilience projects struggle to compete for private capital.

- **Risk Pricing challenges**

Risk pricing is severely linked to the rating methodologies which act as a trap, climate vulnerability widens credit spreads. But rating agencies penalise exposure without giving any credit to any resilience activities. For example, a SIDS country with a functioning, diversified food system, is structurally more creditworthy over a 20-year horizon. But credit models have no mechanism to capture prospective resilience benefits. They price current vulnerability, not future adaptation. In terms of mitigating risk, what a commercial lender needs is a defined repayment source with a credit assessable borrower and a risk premium it can price. SIDS lack the architecture to meet these basic criteria to mitigate risk pricing.

- **Institutional fragmentation limits investability**

Food systems, climate adaptation and health are rarely planned or financed through a common investment framework. Ministries operate independently, projects are developed in isolation, and funding streams remain sector-specific. While these initiatives may generate positive development outcomes individually, they fail to create the capital markets finance portfolios at the scale, standardisation and pipeline that institutional investors require. Investors seek diversified pipelines, consistent governance arrangements and predictable reporting frameworks. Fragmented projects, regardless of their developmental importance, rarely meet these requirements.

Reframing resilience as an investment opportunity

Addressing these barriers requires shifting from financing individual projects to building integrated investment platforms. Rather than treating resilience as standalone public expenditure, governments and development partners must create financing ecosystems that overcome SIDS-specific constraints, including small ticket sizes, fragmented markets, climate-

exposed cash flows and limited fiscal space. This improves investment readiness, enables capital deployment at scale and recognises that different financing instruments address distinct market failures. Together, they strengthen project bankability, investment scale, long-term capital mobilisation and domestic financial markets.

- **Improving bankability through blended finance**

Many resilience investments fail to attract commercial capital due to high early-stage risks. Blended finance addresses this by using concessional capital, guarantees and first-loss facilities to improve the risk-return profile and crowd in private investment. The International Finance Corporation's investment in Arya.ag illustrates this principle. A catalytic investment of [US \\$12.4 million](#) mobilised an additional US \$48 million from development finance institutions and impact investors, demonstrating how relatively modest concessional funding can unlock substantially larger pools of private capital.

- **Creating investment scale through regional platforms**

While blended finance improves project bankability, regional platforms address fragmented investment pipelines by aggregating projects across multiple island economies into larger, more diversified portfolios. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) provides a successful example of regional risk pooling. By combining catastrophe risks across participating countries, since its inception the facility has made payouts totalling [US \\$483 million](#). Applying similar principles to climate resilience investments could help transform fragmented projects into investment portfolios capable of attracting institutional capital.

- **Mobilising long-term capital through sovereign anchored issuances**

Sovereign green, blue and sustainability bonds provide governments with access to long-term capital dedicated to clearly defined resilience objectives. Beyond raising finance, thematic bonds strengthen transparency, improve reporting standards and establish credibility with international investors. [Gabon's sovereign blue bond](#) demonstrates the potential of this approach, generating significant resources for marine conservation while establishing a replicable financing model. For SIDS, the next step is a sovereign-backed blue food-security bond programme could support integrated investments spanning sustainable fisheries, climate-resilient agriculture and public health infrastructure, while helping deepen domestic sustainable finance markets.

- **Strengthening domestic finance through monetary policy**

Central banks also have an important role in scaling resilience finance. Preferential refinancing facilities, differentiated reserve requirements and targeted lending programmes can improve the economics of climate lending without significant fiscal costs. [The Reserve Bank of Fiji's Import Substitution and Export Finance Facility](#) illustrate how monetary policy can redirect lending towards agriculture, renewable energy and resilience sectors by lowering refinancing costs for participating financial institutions. Central banks can also support off-taker and value chain finance, using tourism operators, hotel groups, food distributors and regional supermarket chains as anchor buyers to aggregate fragmented island production into investable opportunities. By establishing early lending precedents, they can reduce future

transaction costs and help integrate SIDS food systems into mainstream emerging market investment portfolios.

- **Expanding fiscal space through debt-for-climate swaps**

For highly indebted SIDS, debt-for-climate swaps improve fiscal sustainability while creating dedicated funding for resilience. By refinancing existing debt under more favourable terms, governments can redirect future savings towards climate adaptation and food system resilience. Barbados's 2024 swap refinanced high-cost debt at 3.25%, freeing [US \\$125-165 million](#) over a decade for water, food and health resilience, while similar transactions in Belize, Seychelles and the Bahamas have collectively unlocked over [US \\$500 million](#) for resilience and ocean conservation. These instruments address different market constraints and, as part of a broader financing ecosystem, can mobilise significantly larger volumes of public and private capital.

Conclusion

The challenge facing SIDS currently is redesigning the financial architecture through which capital flows. Resilience will not be financed at scale through isolated projects or individual instruments, but through integrated financing ecosystems that improve bankability, create investment scale, expand fiscal space and strengthen domestic financial markets. Governance is the thread that binds these mechanisms together, transforming fragmented resilience needs into credible, investable opportunities.

As climate risks continue to reshape economic and financial stability, investments in food systems, adaptation and public health should no longer be viewed as social expenditure, but as productive assets that safeguard long-term growth and resilience. For SIDS, the future of climate finance will depend less on developing new instruments than on building the institutional and financial architecture capable of deploying them at scale.

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