JUSTICE IN THE BALANCE:

CLIMATE DEBT RELIEF AND EMERGENCE OF NATURAL RIGHTS LED GOVERNANCE

CHANGE initiative

CLIMATE DEBT RISK INDEX 2025 (CDRI'25)

GLOBAL REPORT

Justice in the Balance : Climate Debt Relief and Emergence of Natural Rights Led Governance

Change Initiative is a Bangladesh-based research and advocacy and solution policy organization focused on climate and nature justice, climate finance, natural right renewable energy finance community-led resilience, working with national and international partners to design natural rights-based, practical solutions that protect people and nature.

Independently published in Bangladesh in 2025 by Change Initiative

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Climate Debt Risk Index 2025
Global Report

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Preferred Citation

Khan, M. Z. H., et al. (2025). Justice in the Balance : Climate Debt Relief and Emergence of Natural Rights Led Governance. Climate Debt Risk Index-2025. Global Report. Change Initiative.

ISBN

978-984-37-0128-2

Acknowledgement

This report is the result of the collective dedication and commitment of the Change Initiative Team, whose tireless efforts made its successful dissemination possible.

Special appreciation is extended to Salman Chowdhury, and M Mofazzal Hossain, for their guidance and coordination with full commitment throughout the study. Kazi Kareena Arif and Paromita Aronee, deserve recognition for their diligent research support. Zainab Khan Roza, contributed with remarkable passion, particularly in the overall presentation of this report, while Najifa Alam Torsa, provided valuable investigative support on climate finance transactions.

The smooth dissemination of information was effectively managed by Mohammad Rezaul Haque Heron, and Md. Sohan Ahmed, with technical assistance provided by Md. Evan Khan Emon.

We also acknowledge Mohammad Khaled Chowdhury Naim, for the thoughtful and impactful design of this report, which has enhanced its overall presentation.

Finally, heartfelt gratitude goes to our families for their constant encouragement, and to the Almighty for the strength and guidance that made this work possible.

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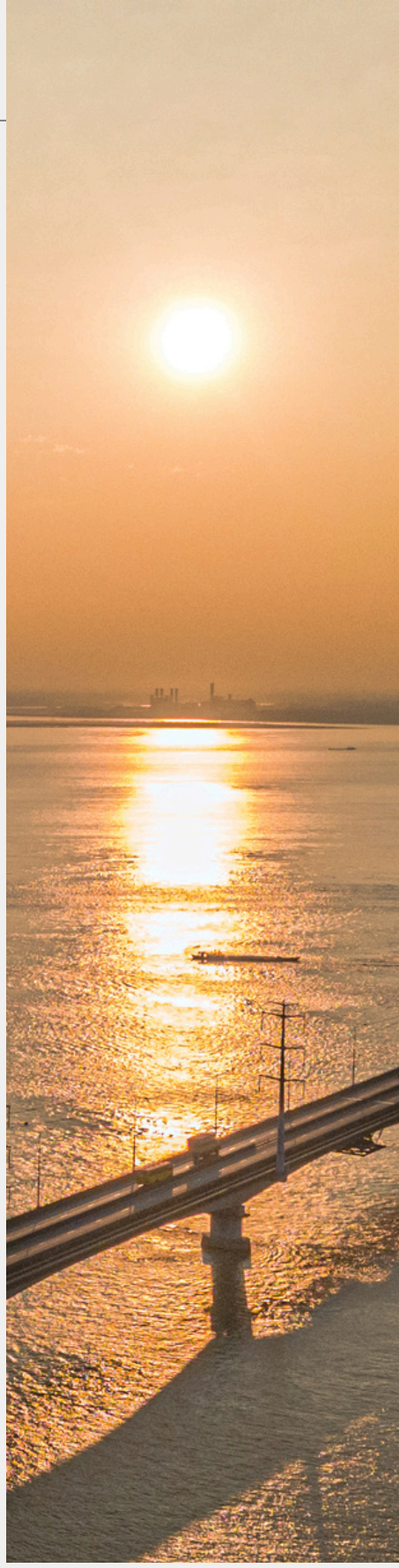
Acronyms

Acronym	Full form
AGR	Adaptation Gap Report
CAR	Central African Republic
CBDR	Common But Differentiated Responsibilities
CCUS	Carbon Capture, Utilization and Storage
CDRI	Climate Debt Risk Index
CF	Climate Finance
CFAF	Climate Finance Action Fund
CMA	Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement
COP	Conference of the Parties
CPI	Climate Policy Initiative
CRDC	Climate-Resilient Debt Clauses
CRI	Climate Risk Index
CSR	Corporate Social Responsibilities
DRC	Democratic Republic of the Congo
ESF	Earth Solidarity Fund
FPIC	Free, Prior and Informed Consent
GCF	Green Climate Fund
GDP	Gross Domestic Product
IBRD	International Bank for Reconstruction and Development
ICJ	International Court of Justice
IDMC	Internal Displacement Monitoring Centre
IEA	International Energy Agency
IFC	International Finance Corporation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
KII	Key Informant Interview
L&D	Loss and Damage



Acronyms

LDC	Least Developed Country
LL	Lower-Left quadrant
LMIC	Low- and Middle-Income Countries
LR	Lower-Right quadrant
MDB	Multilateral Development Bank
MENA	Middle East and North Africa
NAP	National Adaptation Plan
NCI	Natural Capital Index
NCQG	New Collective Quantified Goal
ND-GAIN	Notre Dame Global Adaptation Initiative
NDB	New Development Bank
NDC	Nationally Determined Contribution
NRLG	Natural Rights-Led Governance
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PDR	People's Democratic Republic
SDG	Sustainable Development Goal(s)
SDR	Special Drawing Rights
SEI	Stockholm Environment Institute
SIDS	Small Island Developing States
UL	Upper-Left quadrant
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UR	Upper-Right quadrant
USD	United States Dollar
WRI	World Resources Institute

Executive Summary

Background

The principle of common but differentiated responsibilities under the Kyoto Protocol obliges high emitting developed countries to support vulnerable nations financially. Yet Least Developed Countries (LDCs), which produce under 3.3% of global emissions but suffer 69% of climate-related deaths, are now heavily indebted for adaptation, mitigation, and loss-and-damage efforts. Since 1993, climate disasters have killed about 765,000 people and caused USD 4.2 trillion in losses.

The International Court of Justice has clarified that such financial cooperation is a legal duty, not charity. However, rising external debt service has pushed many LDCs into a "climate debt trap," where they borrow to cope with crises they did not cause. Such a mismatch of debt-based climate finance undermines both sustainability and trust in the global climate finance system. LDCs thus face a twin crisis of worsening climate impacts and mounting debt burdens. Climate Debt Risk Index (CDRI'24) has documented these risks, and CDRI'25 will extend the analysis to 55 vulnerable countries to monitor trends, assess financing structures, and identify equitable and propose ways to offer equitable and sustainable finance solutions.

Overview of the Study

Climate Debt Risk Index (CDRI) assesses how countries manage the financial burden of climate change by examining the intersection of climate finance, vulnerability, and debt risk. It was designed to reveal justice gaps in climate finance, framing the issue as one of rights and accountability. The index highlights a key contradiction in the global financial system: when low-emitting nations must borrow to cope with climate impacts, the system violates the polluter-pays principle.

CDRI'25 broadens this analysis by adding indicators of debt, exposure to climate hazards, governance, and ecological stewardship, and by examining how these interact to create "climate debt traps." Using the Natural Rights-Led Governance (NRLG) framework, the index aligns indicators with NRLG pillars to identify where current finance practices infringe on the basic rights of people and ecosystems to exist, thrive, and recover. Countries relying on loan-heavy climate finance and constrained by weak fiscal capacity, high poverty, or limited environmental management face the greatest risks. In contrast, those with stronger governance and higher shares of grants perform better.

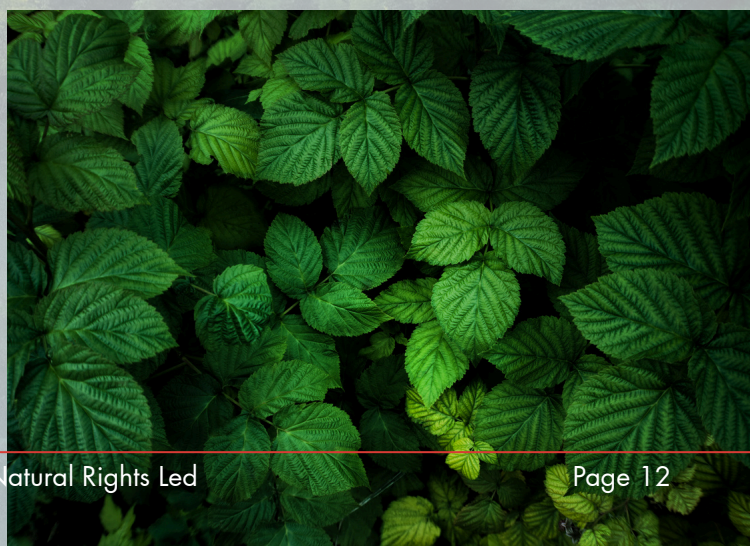
CDRI'25 evaluates 55 countries: 13 falls in the very high-risk group including Burkina Faso, Niger, Madagascar, and Mali due to severe climate exposure and low income. Thirty-four nations, such as Bangladesh, Tanzania, and Sri Lanka, are classified as high-risk. Six, including Samoa and Vanuatu, are moderate-risk, and Botswana and Tuvalu are low-risk. Regional trends show that the Sahel and coastal West Africa experience frequent climate disasters, small island states vary widely depending on debt levels, and South Asia's risks differ by country, with Bangladesh particularly exposed due to its reliance on loans. Overall, the balance between loans and grants determines resilience, with grants providing greater financial stability.

Results and Discussion

Data from the Climate Debt Risk Index reveal structural gaps in how climate finance is delivered. The disbursement-to-commitment ratio which shows how much approved funding reaches countries is lowest in Sub-Saharan Africa, with Angola at 0.18 and Burkina Faso at 0.40. South Asia performs moderately better, with Afghanistan at 0.97 and Bangladesh at 0.63. Fragile states in the Middle East and North Africa (MENA) and Pacific Small Island Developing States (SIDS) face similar bottlenecks. The evidence underscores the need for fast, grant-based, and easily disbursed funding to enable timely climate protection.

The Debt-to-Grant Ratio highlights major mismatches in financing structures. Bangladesh (2.70) depends heavily on loans, while Nepal (0.10) receives mostly grants. Guinea (0.76) in Sub-Saharan Africa shows rising loan dependence, and SIDS and fragile economies continue to rely on limited and unpredictable grants. These findings point to the need for "grant-first" financing and tailored debt-sustainability measures.

The Adaptation-to-Mitigation Ratio shows uneven allocation across regions. South Asia prioritizes mitigation, as seen in Bangladesh (0.42), whereas Sub-Saharan Africa emphasizes adaptation, with Chad at 2.45. Fragile and conflict-affected states such as South Sudan (3.71) focus almost entirely



on immediate adaptation. Expanding grant-based adaptation finance is essential in regions with high climate hazard exposure.

The Climate Debt-to-GDP Ratio varies widely. Sub-Saharan Africa (Ethiopia 0.0017) and South Asia (Bangladesh 0.0077) show relatively small ratios, though continued borrowing could strain fiscal space. SIDS such as Kiribati (0.066) bear heavier burdens, while fragile states like Yemen are near zero. This suggests the need for debt relief and conversion of loans into grants.

The Per-Capita Climate Debt-to-Income Ratio is especially high in SIDS such as Cabo Verde (0.17) and Kiribati (0.06). Sub-Saharan Africa and South Asia generally record low values (≤0.01), but even small debts such as Mozambique's 0.04 can escalate quickly with additional borrowing, reinforcing the importance of grants and relief.

The Per-Capita Climate Debt-to-CO_2 Ratio exposes the inequity faced by low-emitting nations. South Asia records high burdens, with Bangladesh at 29.53 and Maldives at 2.72, while Sub-Saharan Africa shows extreme values, for instance Niger at 103.23 and Rwanda at 93.11. SIDS such as Cabo Verde (287.95) carry the highest loads, indicating the urgent need for grant-first funding, debt conversion, and climate debt swaps.

The Per-Capita Climate Debt vs. Natural Capital Index shows an "ecological wealth paradox." Many Sub-Saharan countries, such as the Democratic Republic of Congo, have rich natural capital but low debt, while others like Senegal and Cabo Verde hold high debt despite limited natural resources. South Asia maintains moderate values in both, and SIDS such as Kiribati and Cabo Verde combine high debt with low ecological capacity.

Debt-for-nature swaps and grant-based adaptation funding are needed to address this imbalance.

The Total Climate Debt-to-Debt Service Ratio signals growing risks. Sub-Saharan Africa mostly remains below danger levels (e.g., Chad 0.03), but Cabo Verde (1.75) and Niger (1.25) face severe strain. Bangladesh (0.46) falls in the moderate-risk range, while SIDS like Cabo Verde exhibit structural vulnerability. High-burden countries require debt swaps and grant-based support.

Per-capita cumulative debt levels further illustrate the disparity: Cabo Verde (USD 554.75), Kiribati (USD 167.93), and Bangladesh (USD 79.61) carry heavy loads due to climate exposure and limited revenue bases. Moderate burdens are seen in the Philippines (USD 20.00) and Mozambique (USD 14.32), while several African and small island states maintain low debt levels. Heavily indebted nations need immediate grant-based finance and debt relief.

Overall, climate finance distribution remains uneven. Loan financing dominates energy and transport sectors, while grants are concentrated in agriculture, disaster preparedness, and water. Countries like Bangladesh and Senegal, which face high climate exposure, also bear disproportionate debt loads. Adaptation finance remains insufficient, and delayed disbursement continues to hinder resilience-building in fragile and small island economies.

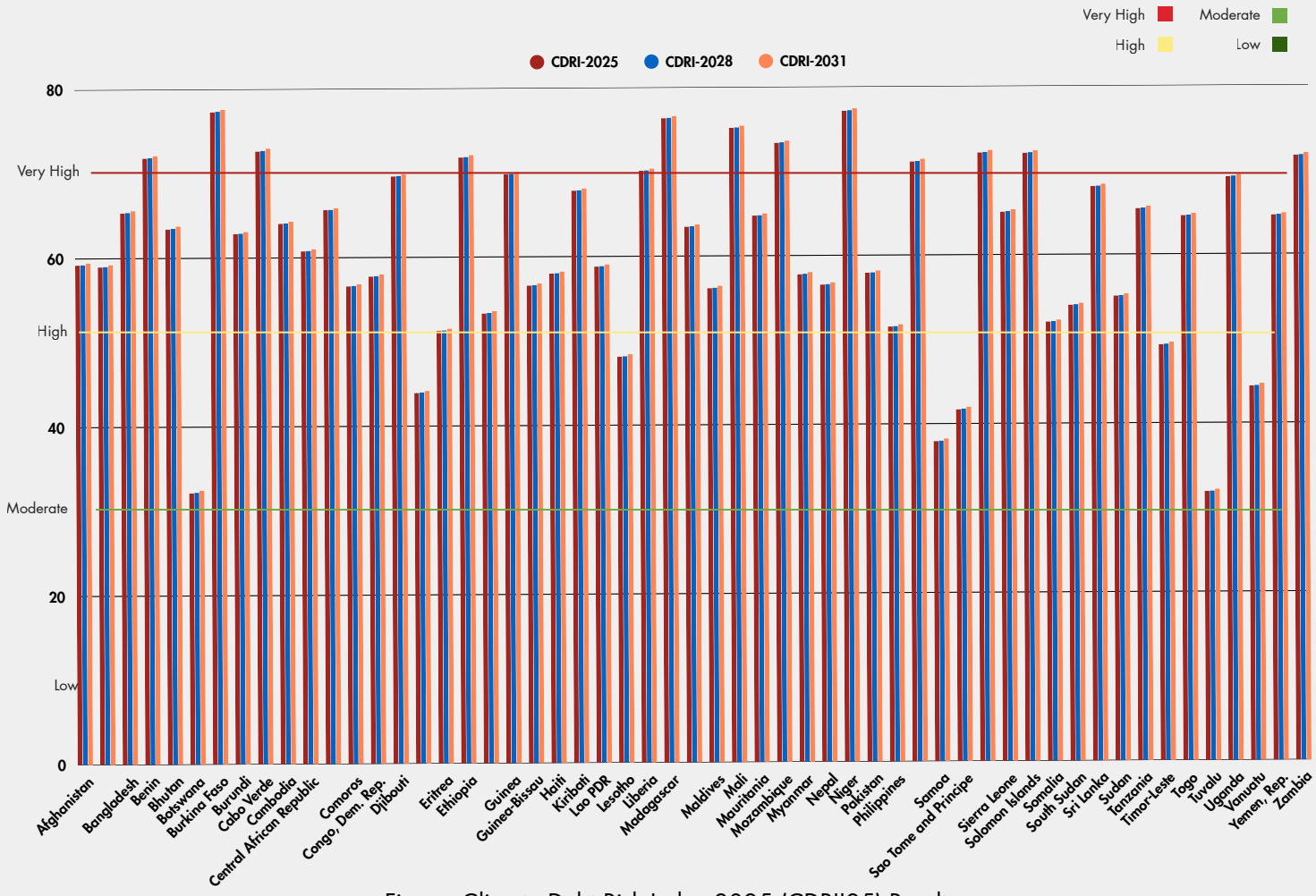


Figure: Climate Debt Risk Index 2025 (CDRI'25) Results

have small ratios, however, increasing loans could be a burden to fiscal space. The heavier burdens are experienced by SIDS such as Kiribati (0.066), whereas weak states such as Yemen are practically zero. It should be centered on grant conversion and debt relief.

The Per-Capita Climate Debt-to-Income Ratio is high in SIDS such as Cabo Verde (0.17), Kiribati (0.06), whereas Sub-Saharan Africa and South Asia tend to have low scores (≤0.01). Yet, small per-capita debts in Africa (e.g., Mozambique 0.04) and South Asia can grow as more loans are taken, which explains the necessity of grants and relief.

Misclassification of Climate Finance

Over the past decade, countries have reported billions in climate finance that instead funded fossil fuel projects and unrelated ventures—from Japan's coal-fired plants in Bangladesh and Indonesia to the U.S. financing a Marriott hotel in Haiti and Italy backing luxury chocolate shops in Asia. Institutions like the EBRD labeled a Moroccan coal port as climate finance, while the World Bank overstated up to $41 billion in untraceable spending. France even counted loans for canceled projects, and Belgium included a rainforest-themed romance film. These distortions inflate official figures, misdirect climate funds, and erode trust—fueling calls for clearer definitions and strict global reporting standards.

The Neo-Colonialism of Climate Debt

Climate Debt Risk Index (CDRI) reveals the climate debt trap, with vulnerable countries, who contribute insignificant emissions, having to borrow billions in order to respond to climate disasters. Between 2009 and 2022, the climate debt in Least Developed Countries (LDCs) increased by more than 21 billion to less than 21 billion. Countries like Madagascar, Mozambique, and Sri Lanka face high CDRI scores, with the debt burden intensifying after each disaster. This financial strain shifts resources away from essential services like healthcare and education. This imbalance is clear: the 10 percent richest people in the world produce more than half of the global emissions, whereas the poorest, who are the primary victims of climate change, are forced to pay with life and increasing debt. This has exposed vulnerable countries to financial devastation rather than financial resiliency because more than 70 percent of climate finance is provided as loans. The answer is in the reorganization of finance by grants, debt relief, and climate debt swaps, as to the historical culpability of rich countries in climate damage.

Potential Way Forward

The scale of untapped global revenue sources underscores how the climate crisis persists not because of financial scarcity but because of structural choices. A carbon levy aligned with Article 6.0 and priced at USD 100 per tonne of CO_2e across the estimated 65 $GtCO_2e$ of global emissions could yield roughly USD 6.5 trillion annually, with even a modest arms-revenue levy adding another USD 0.06–0.12 trillion. Allocating these resources through an equity-centred framework generates a distributive landscape that mirrors global need: a dedicated LDC Climate Justice Window alone would command nearly one-third of total flows (USD 1.92 trillion), reflecting acute vulnerability and constrained fiscal space; a quarter would support the wider Global South transition (USD 1.5 trillion); one-fifth would facilitate domestic just transitions that ensure labour and sectoral alignment (USD 1.2 trillion); and the remainder would strengthen nature and biodiversity priorities consistent with NRLG principles (USD 0.9 trillion) and governance, MRV, and innovation systems (USD 0.48 trillion). Together, these figures illustrate that a rule-based global fiscal architecture could mobilize orders of magnitude more than the current climate finance system delivers, while distributing resources in ways that respond to differentiated responsibility, ecological stewardship, and justice-based transition needs.

Pathway to Climate Debt Freedom

- **Supply side (Developed Countries):** Make grants the default for adaptation and loss & damage, deliver 100% debt relief, scale debt-for-nature swaps, provide unconditional natural-rights–based support, and establish an Earth Solidarity Fund, multiple sourced (public, philanthropy and private) to mobilize real-time vulnerability specific direct grants to vulnerable communities.

- **Flow of funds - bilateral, MDBs, multilaterals:** Provide grant-first approach aligning with the Natural Rights Led Governance System investment, shift portfolios so adaptation and loss & damage are financed primarily with grants. Moreover, to empower community-led MRV with transparent finance rules, link debt relief to resilience and nature protection, and reform MDBs toward rights-based, grant-focused climate finance with balanced mitigation–adaptation support. Stand up regional funds (e.g., SARF) capitalized by CIF, AF, GCF and partners.

- **Demand side - vulnerable LDCs:** Mobilize innovative finance, carbon pricing, pollution taxes, debt-for-nature swaps, bio-finance, strategic philanthropy, and private partners, while placing communities, especially youth, at the center of nature-led action. Establish a Natural Rights Fund in every LDC, financed by redirected fossil-fuel subsidies, carbon and pollution taxes, CSR, and Zakat, to provide predictable resources to frontline actors.

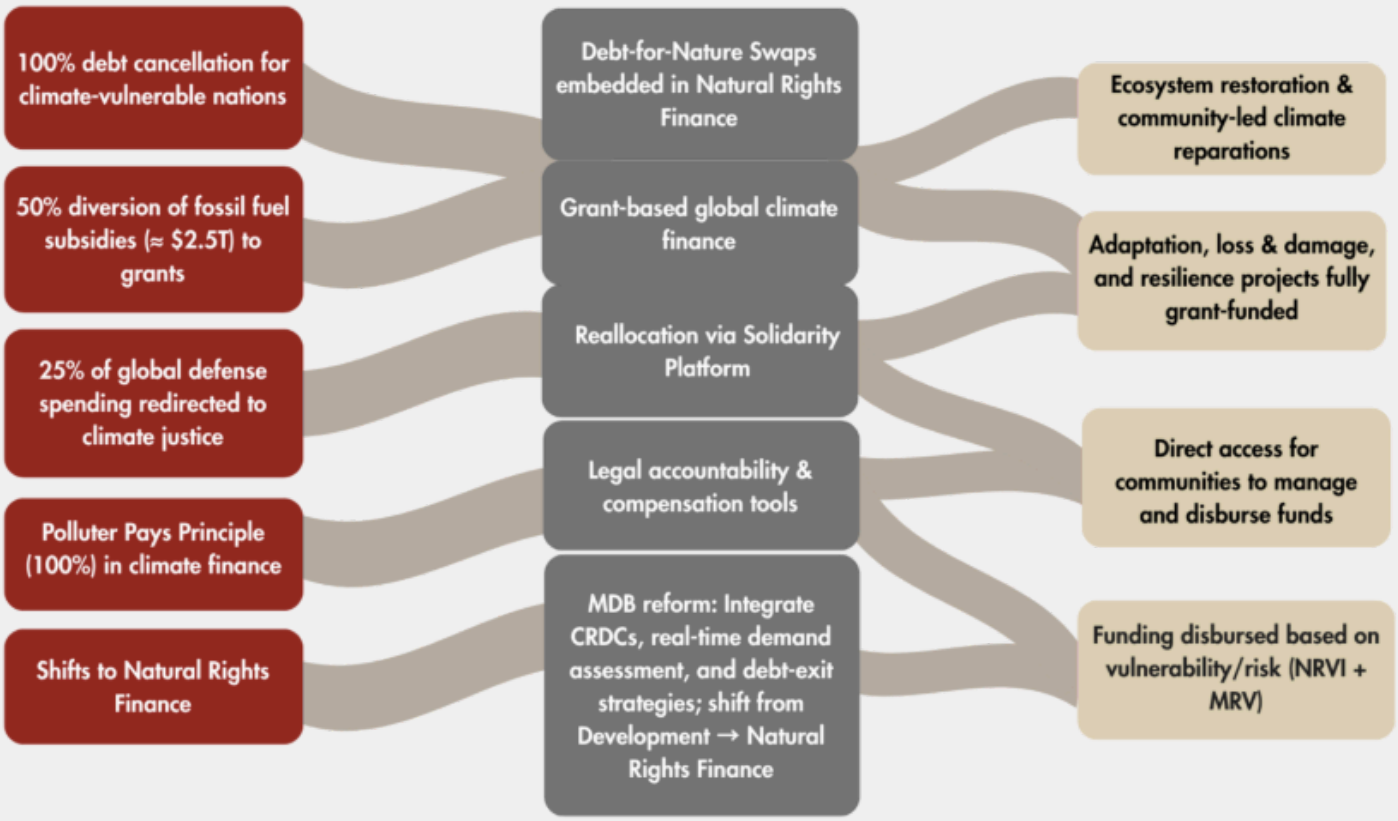
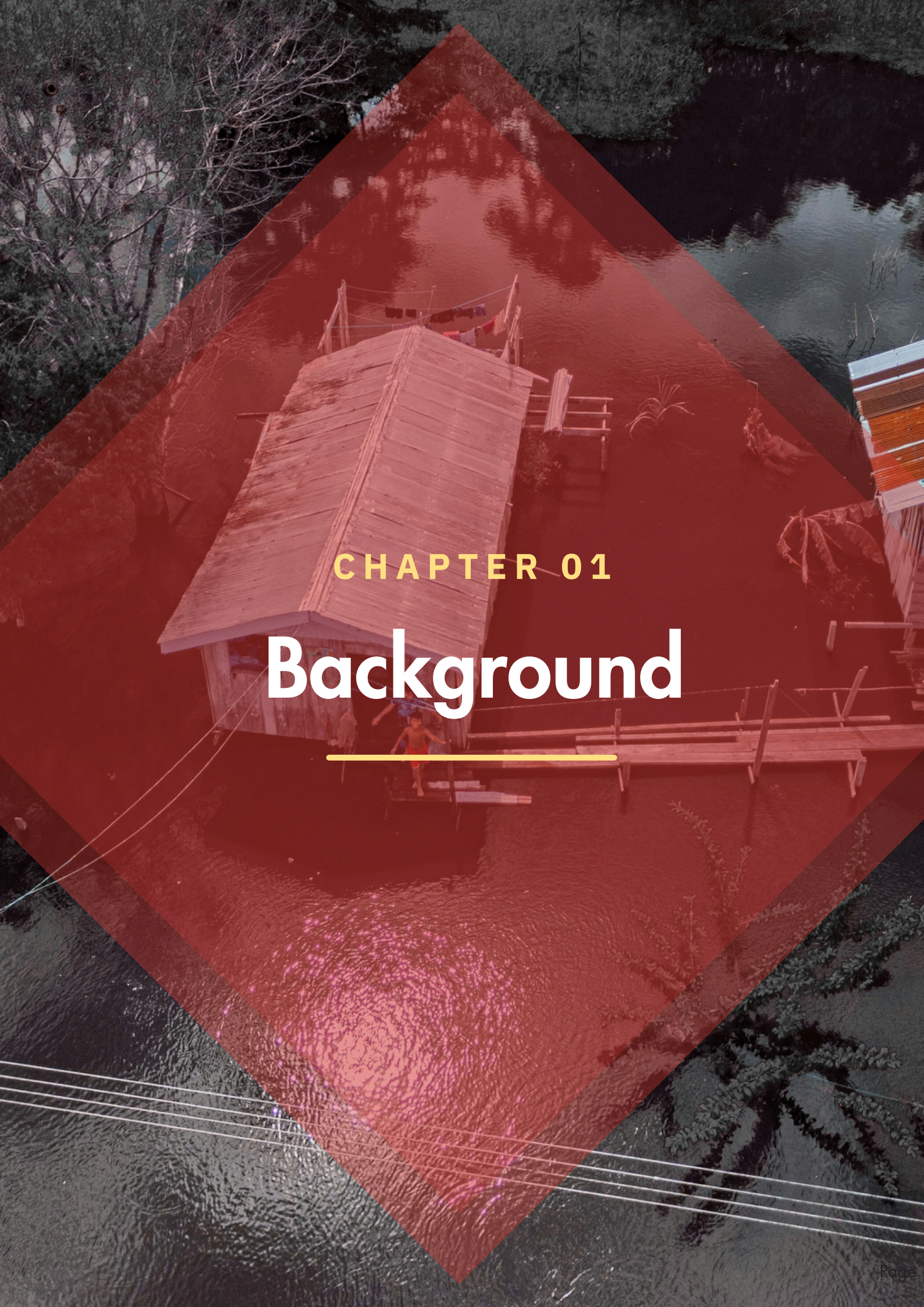


Figure : Potential Pathways for Equitable and Justice Based Climate Finance Towards Vulnerable Communities



CHAPTER 01

Background

1.1 Climate Finance Paradigm

1.1.1 The Justice-Based Promise of Climate Finance

The global framework for climate finance is rooted in the principle of Common But Differentiated Responsibilities (CBDR), established under the 1997 Kyoto Protocol. This principle recognizes that developed countries, as the main historical contributors to greenhouse gas emissions, carry a greater obligation to address climate change than developing nations, particularly the Least Developed Countries (LDCs). Although LDCs produce less than 3.3 percent of global output, they bear a disproportionate share of climate impacts (UNFCCC, 1998; IPCC, 2022).

The Copenhagen Accord (2009) and the Paris Agreement (2015) reaffirmed this commitment, requiring developed countries to provide new and additional financial assistance primarily in the form of grants to help vulnerable nations adapt, cut emissions, and manage loss and damage (UNFCCC, 2009; UNFCCC, 2015). Article 9.1 of the Paris Agreement defines such support not as charity but as a legal obligation under the polluter-pays principle, meaning that those most responsible for emissions must bear the cost of their impacts (UNFCCC, 2015).

For LDCs, this commitment is essential for accessing grant-based finance that enables resilience and recovery without worsening debt burdens. Yet, despite their minimal contribution to global emissions, LDCs have experienced 69 percent of all disaster-related deaths over the past five decades and continue to face staggering losses an estimated 765,000 lives and USD 4.2 trillion in damages since 1993 (CRI, 2025; IPCC, 2022). In practice, fulfilling this principle would mean allowing these countries to rebuild and adapt to climate impacts without incurring additional fiscal strain.

1.1.2 A Broken System: From Grants to Loans

In practice, climate finance has diverged sharply from its original purpose. By the end of 2023, multilateral climate funds had received total pledges of about USD 61 billion, yet only 55 percent had been disbursed through approved projects benefiting climate-vulnerable nations (OECD, 2023). During 2021–2022, developed countries reported mobilizing USD 1.27 trillion in climate finance, but less than 5 percent took the form of grants. The remainder consisted largely of loans and other non-grant instruments (OECD, 2023).

This imbalance reveals a growing gap between promise and delivery. The Copenhagen and Paris commitments to provide new and additional grant-based finance remain largely unmet, eroding the principle of fair climate responsibility. As a result, vulnerable countries such as Bangladesh now face mounting debt burdens instead of the promised support to adapt to floods, cyclones, and rising seas. What was intended as a system of solidarity has instead become a source of fiscal strain.

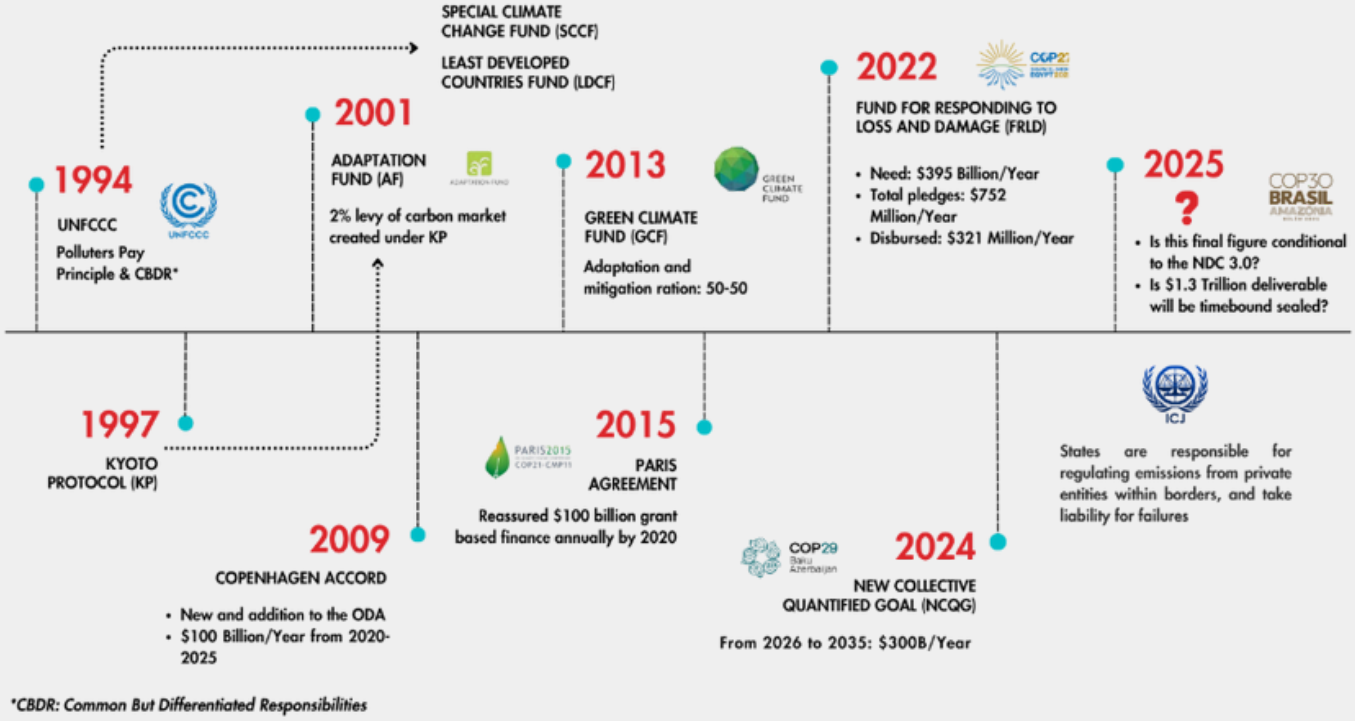


Figure 1: Pathway of Climate Finance Mechanisms

1.1.3 Growing Climate Debt Burden: LDCs Pay Twice

The LDCs face a challenging position: they contribute the least to global emissions but are the most to being harmed by climate change. They now face a compounding crisis: first pay through the devastating human and economic costs of climate disasters and then pay again through the financial burden of servicing the loans acquired to address those same impacts. Bangladesh, for instance, go to forced internal migration and escalated poverty due to frequent flooding and extreme weather. According to Internal Displacement Monitoring Centre (IDMC), 9.8 million people were internally displaced by disasters across 94 countries as of 31 Dec 2024. In Bangladesh alone, the number of total displacements were 2.4 million only in 2024 (IDMC, 2025). However, most of the climate finance contributes to additional national debt instead of paying it down. Among $69.6 billion worth of climate finance, over 76% offered as loans, with less than 5% as grants to the LDCs in 2021(OECD, 2023; CPI, 2023).

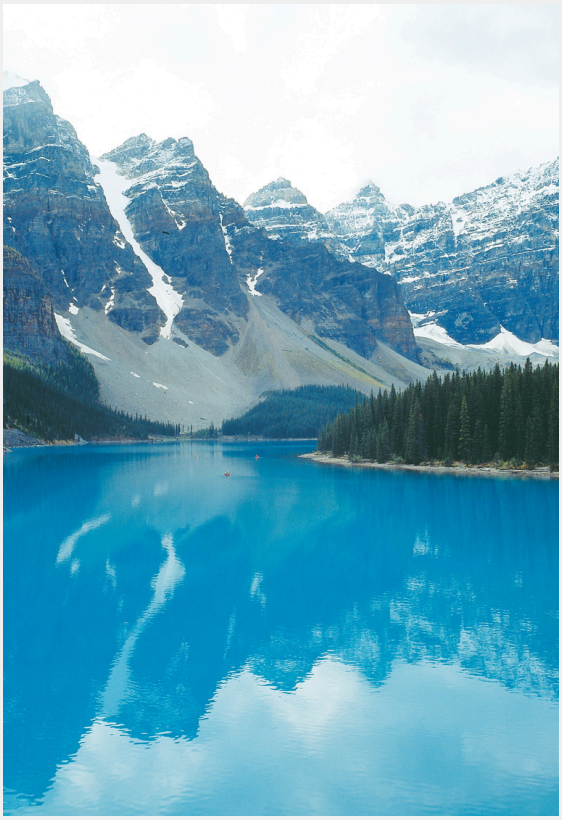
This debt-intensive strategy compromises the promise of "new and additional" funding and diminishes fiscal space, necessitating reallocation of scarce resources from priority services like health, education, and infrastructure to servicing debt. This results in "climate debt trap" where the utilization of climate finance, originally meant to build resilience, widens fiscal vulnerability. In 2021, total external debt service for the least developed countries (LDCs) rose to $50 billion, from $31 billion the previous year, with the climate-labeled borrowing rising by a rate higher than the capacity to pay back (World Bank, 2022). In the Climate Debt Risk Index (CDRI) of 2024, it was revealed that at least ten LDCs, including Bangladesh, are getting more climate loans than grants, and this consequently worsening this situation (M. Zakir Hossain Khan, 2024). Low-income nations spend well over $230 million each day on debt service globally which inhibits investment in resilience and development (Jubilee Debt Campaign, 2021).

1.1.4 Barriers to Access and Trust

Access to climate finance represents an additional barrier. Least Developed Countries (LDCs) collectively capture less than 3% of global climate finance, and even when funds are allocated, disbursements are slow typically; only 44% of approved amounts are received by LDCs due to bureaucratic impediments and complex approval processes (OECD, 2023; Green Climate Fund, 2023). In the case of Bangladesh, for example, delayed disbursements result in communities waiting for years for projects to come to view, thereby rendering them susceptible to persistent climate shocks. This loan-centric, unevenly distributed, and chronically slow system undermines trust in the global climate finance framework.

1.1.5 Legal Obligations: From Aid to Reparations

Historic transformation is unfolding in the field of international law. In 2025, the International Court of Justice (ICJ) issued an advisory opinion supporting the legal basis of climate finance. It clarified that states have binding legal obligations to protect the climate system, and where there is a breach, they must make full reparation, including compensation (ICJ, 2025). Furthermore, the ICJ also stated that financial cooperation through the Paris Agreement represents a legal obligation, not a discretion. This view shifts the focus of climate finance towards the domain of reparative justice, integrating with the principle of the CBDR and the moral argument that the polluters must pay. For the least developed nations like Bangladesh, this legal standard reinforces their right to provide grant-based support for adaptation and loss and damage, highlighting the notion that the financial support represents a right, not charity.



1.1.6 Progress and Gaps: Loss & Damage, GCF, and NCQG

Recent 2024-2025 developments reveal momentum but also continuing gaps. In December 2023 at COP28, the Loss and Damage Fund was put into operation, the historic acknowledgment that loss-inflicted, vulnerability-ridden states require grant funding, not loans. Initial commitments topped $700 million within days, marking good momentum (UNFCCC, 2023). Nevertheless, the agreed governance arrangements of 2024 must now provide predictable, scaled-up funding to match estimates of trillions of dollars of needs in the decades ahead. The Green Climate Fund (GCF) also made history through second replenishment, where 31 nations agreed to provide $12.8 billion for the 2024-27 period. Least Developed Countries (LDCs) constitute nearly 40% of GCF-approved projects, illustrating their commitment to prioritizing vulnerable nations. Nevertheless, only approximately 30% of GCF disbursements have been allocated to LDCs due to intricate procedures and capacity limitations (Green Climate Fund, 2025). Efforts are currently underway to simplify approval processes and enhance readiness support, with the objective of directing 50% of adaptation finance towards LDCs and Small Island Developing States (SIDS). However, the overarching trend remains that only 55% of multilateral climate pledges convert into approved, on-the-ground projects for vulnerable nations (OECD, 2023).

Negotiations at the COP29 in Baku (2024) agreed upon a (NCQG) of "at least $300 billion annually by 2035" for Climate Finance (UNFCCC, 2024). While significant, this goal remains much lower than the estimated $1.3 trillion required each year to cover the effects of the climate for the Least Developed Countries (LDCs) (UNFCCC, October 2024). Furthermore, the absence of two qualitative weaknesses undermines the ambition of the goal: the continued predominance of loan-dominant finance and the absence of defined commitments towards favoring public grants over private or debt-creating instruments.

Figure 2 : Qualitative Weaknesses of Climate Finance

1.1.7 CDRI'25: A Path to Accountability and Justice

These developments mark a critical juncture. The principle of grant-based relief for climate harm already suffered has been established by the Loss and Damage Fund. Scale and infrastructure have been offered by GCF, but they must improve access and increase its grant share. In this regard, NCQG emerges as a step forward, risks entrenching loan-heavy finance unless it prioritizes public grants and aligns with actual needs. Against the ICJ's legal framing, the path forward is clear:

- Provide grants first for adapting and for loss and damage, making sure that funding does not increase debt.
- Immediate and convenient access to climate funding with significantly higher distribution rates to make payments where they are most required.
- Debt relief or swaps to alleviate the distress caused by climate-labeled borrowing.
- A new NCQG to accommodate the needs, which centers on public grant funds, and validates historical responsibilities.

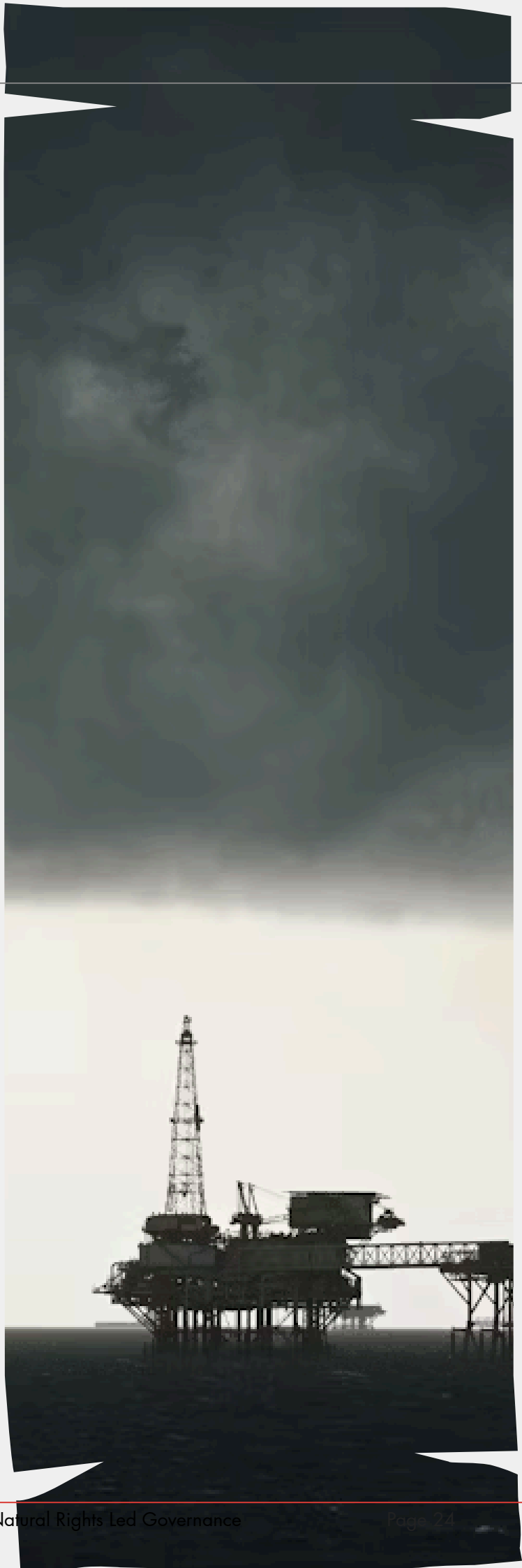
Here, Climate Debt Risk Index (CDRI'25) appears as a key instrument in this context. By tracking the risks of climate and debt, CDRI'25 exposes the injustice of the present system and calls for action. For vulnerable states like Bangladesh, where millions are hit by climate change and heavy loans exert burdensome pressure on national budgets, CDRI'25 provides a means of demanding debt-free, needs-based, and rights-based finance. Unless we bring back the original intention of the climate finance consisting of liability, additional financing, and grants, vulnerable states will continue to pay twice: once to address the climatic issues, and then again to service the loans undertaken to address them. CDRI'25 indicates the path to bringing climate finance back onto the foundation of the core values of justice and responsibility.

1.1.8 MDBs' Loan-Heavy Climate Finance: Undermining Justice for Vulnerable Nations

Global climate finance through multilateral development banks (MDBs) has reached historic highs, disbursing $125 billion in 2023, of which $74.7 billion went to lower

and middle-income countries. That growth mirrors resource mobilization improvements but covers deeply embedded structural flaws. Adaptation finance remains disproportionately low, and by far most MDB support remains channeled through the prism of investment loans. They have disbursed 67% support through investment loans between 2019 to 2023, exacerbating debt burdens upon economies that are already stressed. Grant finance fell to 6.7 percent ($4.98 billion), down from 10 percent ($6.08 billion), and nearly three-fifths of low-income countries are threatened by increased risks of debt distress. Finance concentration upon the middle-income economies, combined with the shrinking proportion going towards the most vulnerable climate-affected countries, namely the LDCs and the SIDS, signals an increasing equity gap, even though the dramatic disbursement increase has occurred (World Bank, 2023).

A further ongoing flaw is the continued investment of Multilateral Development Banks (MDBs) in fossil fuels, which goes against their Paris commitments and weakens reporting transparency. Though private co-financing ratios have risen well from $0.25 to $0.38 per public dollar, the mobilization remains far short of the "billions-to-trillions" level of ambition needed to fill global investment demands. MDBs' growing reliance on guarantees, which have increased by 100 percent, or doubled, to 6 percent of finance is showing promise but remains underexploited. Efforts toward the establishment of an orderly results-tracking system, launched through the MDB Common Approach to Measuring Climate Results (2024), are a welcome step, as they associate financial flows and concrete mitigation and adaptation results. However, these are disproportionate and insufficient for delivering systemic transformation. (WRI, 2024).



The next stage of MDB reform comes next as governments negotiate the new Collective Quantified Goal (NCQG) of the Paris Agreement at COP29. Plans to revise capital-adequacy norms, widen concessional windows, and launch hybrid capital instruments have the potential to triple MDBs' collective annual financing to $390 billion by 2030; if pursued fully. Nevertheless, for these shifts to make a difference, MDBs must balance mitigation and adaptation finance, announce fossil investments transparently, and function as an integrated system backing country-led transitions. If these transitions are not undertaken, the 2023 record amounts risk concealing the fundamental problem that climate finance remains too debt-oriented, too mitigation-oriented, and too slow to reach the frontlines of climate vulnerability.

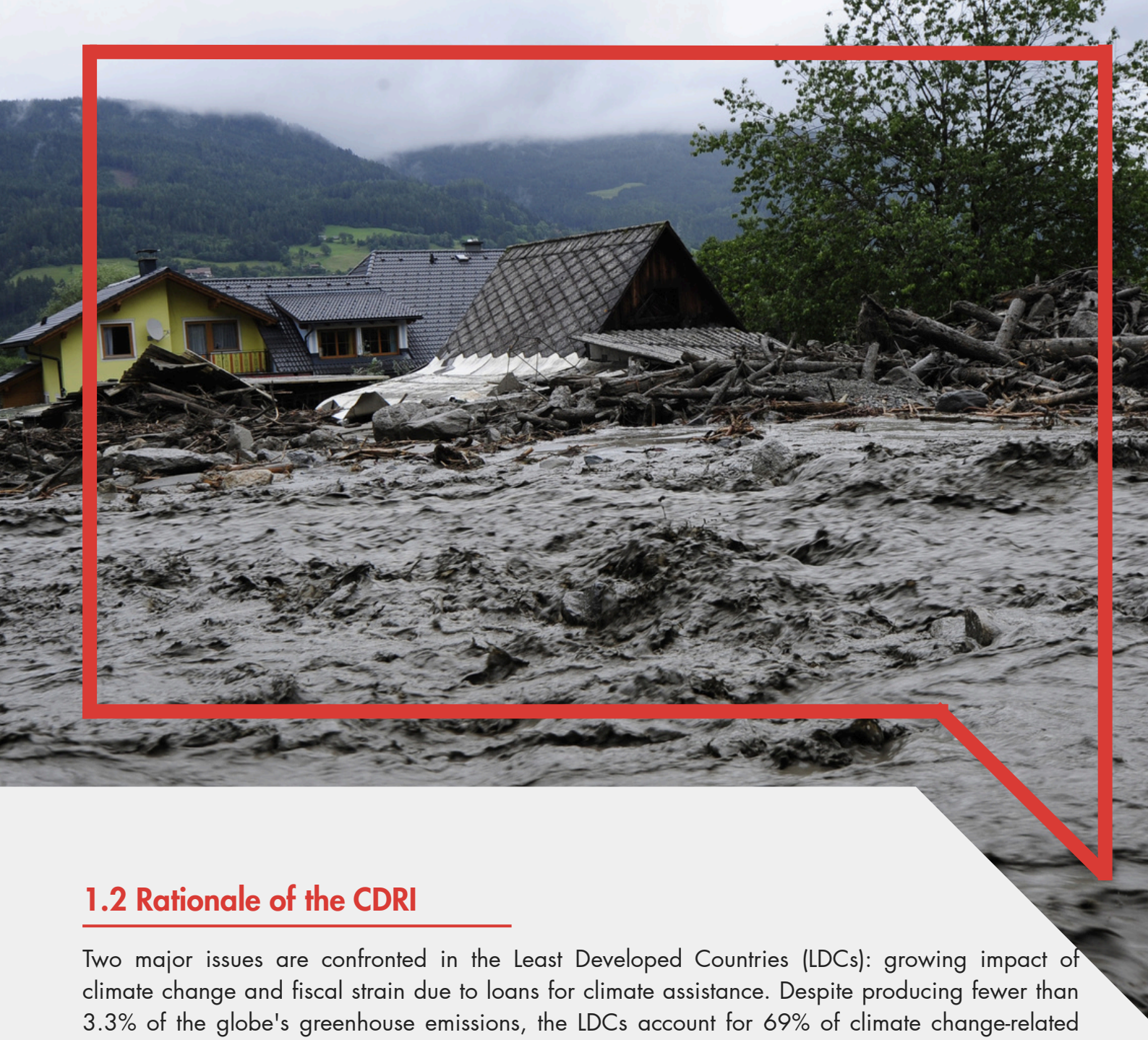
1.1.9 From ODA to Obligation: Grounded on Natural Rights

Climate finance requires a paradigm shift from a charity-based, loan-centric system to a rights-based, justice-centric system. Existing climate finance system, predominantly loans-based and low on grants, does not benefit vulnerable countries like Bangladesh or Mozambique. It's time to make the big shift from viewing climate finance as loans or even aid to viewing it as a right of justice. An emerging new paradigm, **Natural Rights Led Governance (NRLG)**, provides this fresh perspective. Consistent with NRLG, assist to vulnerable countries should be considered an obligation based on historical responsibility and ecological justice, not generosity. That mirrors the original logic of the UNFCCC: big emitters owe a climate debt, and finance should be used to pay it off-through grants and compensation, not loans putting victims further into debt. Conceptualized by CBDR, all states are stakeholders of the fight against climate, but all are not equally culpable or capable.

In practice, that means developed polluters must deliver grant-first climate finance for adapt, loss & damage, debt relief where shocks occur, and justice-related revenue streams (such as a climate damages charge on fossil profits or global carbon price sent to vulnerable states).

NRLG also calls for democratized finance: local communities and indigenous people having direct access, community-led design, respect for indigenous knowledge, and stewardship of nature's own rights. That shifts us from top-down projects to locally led resilience that serves people and ecosystems.

Overall, the climate fund should be a tool of justice and collective planet stewardship; donors meeting an obligation, recipients asserting agency. Without a lens of justice, climate finance does more harm than good. When it is fair, it can be an effective instrument of real and equitable cooperation in our transforming world.



1.2 Rationale of the CDRI

Two major issues are confronted in the Least Developed Countries (LDCs): growing impact of climate change and fiscal strain due to loans for climate assistance. Despite producing fewer than 3.3% of the globe's greenhouse emissions, the LDCs account for 69% of climate change-related fatalities over the past five decades (IPCC, 2022). Global commitments agreed upon through the Copenhagen Accord (2009) and Paris Agreement (2015) were new and additional support primarily using grants to assist in adaptation, mitigation, and loss and damage (UNFCCC, 2009; UNFCCC, 2015). For the LDCs, though, this has largely been debt-creating tools, prolonged disbursements, and finances focused more on mitigation than towards immediate requirements for adaptation.

Climate Debt Risk Index 2024 (CDRI'24) showed a worrying trend of rising climate debt risk, with countries like Bangladesh having high debt-to-grant ratios, unmet financial promises, and increasing debt exposure by 2030 (M. Zakir Hossain Khan, 2024). These trends show that current climate finance systems do not provide fairness and justice and are creating "climate debt traps" that harm financial stability and efforts to build resilience in vulnerable countries. Recent events, such as new climate finance promises after COP28, the creation of the Loss and Damage Fund, and ongoing talks about the (NCQG), highlight the urgent need to check if these actions are moving towards fair, needs-based, debt-free finance or continuing unfair systems (UNFCCC, 2023; UNFCCC, 2024).

Climate Debt Risk Index 2025 (CDRI'25) fills this gap by providing a thorough, data-driven assessment of 55 vulnerable economies. It allows to support the advocacy of questioning the status quo and promoting climate justice in the field of finance. The selection of 55 nations is an extension of the initial 20 countries analyzed in CDRI'24, which considered the most exposed to connected climate and debt risks. To maintain thorough coverage, CDRI'25 adds all 48 present Least Developed Countries (LDCs) by 2025, plus 4 recent graduates of the category, and our 3 of our neighboring countries in South Asia, reflecting their continued vulnerability to the impact of climate and debt.

CDRI'25 stands apart from the rest of vulnerability indices, such as ND-GAIN Index and German watch's Climate Risk Index (CRI), as it addresses the issue of climate debt and equity. ND-GAIN assesses vulnerability (such as risks to food, water, and health) and readiness (such as economic and leadership capacity), but not financial liability (ND-GAIN, 2025). CDRI'25, on the other hand, accounts for the impact of the climate debt, which are loans borrowed for the purpose of mitigation and adaptation, and links it to vulnerability and funding shortfalls. Furthermore, whereas CRI considers historical losses due to extreme weather events, but does not link these to present financial issues or future funding requirements (Germanwatch, 2025), CDRI'25 has the following distinguishable characteristics:

Comprehensive Debt Focus: CDRI'25 incorporates the financial burdens of climate debt, offering a perspective on how loans exacerbate fiscal strain in vulnerable nations, unlike the broader vulnerability focus of ND-GAIN or CRI.

Equity-Centric Metrics: It uses unique indicators, such as climate debt per ton of CO_2 emitted and debt per unit of natural capital, to highlight disparities between countries' contributions to emissions and their capacity to fund resilience, emphasizing climate justice.

Dynamic Country Typologies: CDRI'25 employs a Fiscal Strain vs. Justice Gap model, categorizing countries into four quadrants based on debt and vulnerability profiles. This enables tailored policy recommendations, such as grant-first financing or debt-for-nature swaps, unlike the static frameworks of ND-GAIN and CRI.

Real-Time Data Integration: Updated annually with data from Nationally Determined Contributions (NDCs), sectoral analyses, and current vulnerabilities, CDRI'25 is more responsive to evolving national and global conditions than the less frequent updates of ND-GAIN and CRI (UNFCCC, October 2024).

By integrating debt-related metrics, equity considerations, and sector-specific vulnerabilities, CDRI'25 provides a dynamic and holistic framework to assess and address global climate debt and financing gaps. It equips policymakers and advocates with the tools to push for a climate finance system that prioritizes grants, meets real needs, and upholds justice for the world's most vulnerable nations.

1.3 Objective of the Study

Climate Debt Risk Index 2025 (CDRI'25) aims to evaluate and estimate the debt risks of international climate finance for the Least Developed Countries (LDCs) and recent graduated LDCs. The primary objectives are:

- Quantify climate debt risks across 55 vulnerable countries using an updated composite index that incorporates per capita climate debt, loan-to-grant ratios, debt-to-GDP levels, disbursement efficiency, and climate vulnerability scores.
- Observe trends over time, providing 2028 and 2031 projections to have an estimate of debt risks rising or falling under the current patterns of financing.
- Evaluate country-specific climate finance architectures and their system-wide shortcomings, including failure to effectively deliver funds, excessive leveraging of loans, and imbalance towards mitigation relative to adaptation funding.
- Suggest the universal pathway model, based on the experiences of the LDCs, to help vulnerable nations towards the sustainable and equitable balance of grants, concessional loans, and private climate investment.

1.4 Scope of the Study

CDRI'25 strengthens the foundations of the CDRI'24. It covers extended geographic areas and rigorous analysis. The scope includes:

Geographic Coverage: Examination of 55 countries, including 48 active LDCs and 4 recent graduates of LDCs, 3 neighboring South Asian countries, offering the first detailed, multi-country estimate of climate debt risks for the most vulnerable economies of the world.

Variables and Indicators: Incorporation of updated data on per capita climate debt, loan-to-grant ratios, climate finance inflows from multilateral and bilateral sources, disbursement-to-commitment efficiency, credit ratings, macroeconomic indicators, and climate vulnerability metrics.

Temporal Analysis: A new index for 2025, with predictions going up to 2028 and 2031, to understand future debt risks based on current and expected climate finance trends.

Comparative Diagnostics: Comparing various countries and sectoral breakdowns (loss and damage vs. mitigation vs. adaptation), identifying patterns of inequities and risks of distributing the flow of climate finances.

CHAPTER 02

Analytical Framework

2.1 Interplay of Natural Rights Led Governance (NRLG) in Climate Finance

Global climate finance was promised as new, additional, grant-based support under CBDR and polluter-pays, especially for countries that emit little but face repeated climate losses. In practice, most of what is reported as climate finance now comes as loans or loan-like instruments, and only about half of multilateral pledges are actually disbursed. This gap between promise and delivery is the starting problem.

Debt in place of relief: climate-vulnerable countries continue to assume new borrowing to address impacts for which they bear minimal responsibility.

Delayed disbursement: approved climate resources frequently arrive too late to support timely protection and recovery.

Under-served adaptation needs: financing patterns favor mitigation with clearer financial returns, while urgent adaptation and resilience priorities remain constrained.

Constrained access for LDCs and SIDS: the most exposed country groups face structural barriers to securing climate finance on grant-like or highly concessional terms.

Existing governance systems have fallen into a Development-Destruction Trap, where the pursuit of progress erodes ecological foundations and deepens inequality. Development has become synonymous with exploitation-of land, water, and people-while ignoring the natural limits that sustain life. This model has produced short-term gains but long-term collapse: biodiversity loss, rising debt, food and water insecurity, and intensifying climate disasters.

CDRI'25 exposes this systemic failure through the lens of NRLG. It holds that both people and ecosystems have the inherent right to exist, thrive, and recover, and that any financial mechanism violating these rights is unjust. By aligning specific indicators with NRLG pillars, CDRI'25 identifies where the current finance system breaks these principles.

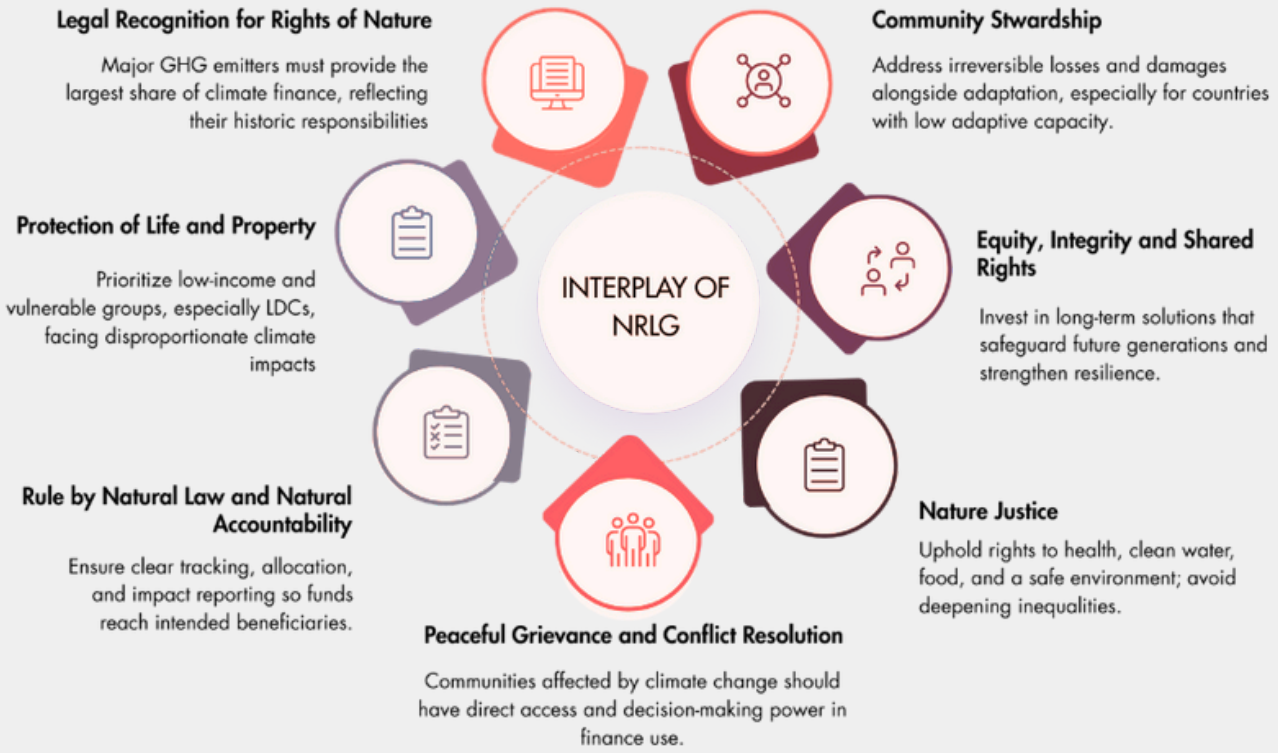


Figure 3 : Interplay of Nature Justice in Climate Finance

In doing so, it transforms diagnosis into direction: from a debt-driven, delayed, and unequal system toward one that is grant-based, accountable, and community-led. CDRI'25 demonstrates that climate justice cannot emerge from the same structures that perpetuate harm; it must be rebuilt through rights-based, transparent, and restorative finance that honors both nature and humanity. Only then can climate finance escape the trap and operate in harmony with the principles of equity, integrity, and regeneration envisioned by NRLG.

Nature Justice holds that people and ecosystems have inherent rights to exist, thrive, and recover. When climate finance comes as debt-heavy, delayed, or misdirected flows, it violates those rights by making vulnerable countries pay for harms they did not cause. CDRI links the NRLG paradigms with hard metrics—such as debt-per-tonne of CO_2 and adaptation–loss and damage gaps—to frame climate finance as a binding obligation, including debt-free support where appropriate, instead of charity.

Legal Recognition for Rights of Nature
Major GHG emitters and high-profit corporations must provide the largest share of climate finance, reflecting historic responsibility and financing obligations for mitigation, adaptation, and loss and damage in vulnerable countries.

Protection of Life and Property
Finance must first secure lives, livelihoods, and critical services in LDCs and other exposed communities, with dedicated grants for adaptation and for irreversible losses and damages where resilience limits are crossed.

Nature Justice
Climate finance must uphold rights to health, clean water, food security, culture, and a safe environment, avoiding measures that deepen inequality, displace communities, or degrade ecosystems.

Rule by Natural Law and Natural Accountability
All climate finance flows require clear rules for allocation, tracking, and impact reporting so that resources reach intended communities, prevent mislabeling or "greenwashing," and align with ecological limits.

Equity, Integrity, and Shared Rights
Allocation rules should prioritize low-income and marginalized groups, especially LDCs and frontline communities, while protecting future generations through long-term, grant-leaning solutions rather than locking countries into climate debt.

Peaceful Grievance or Conflict Resolution Mechanism
Affected communities need accessible mechanisms to challenge harmful projects, reclaim misused funds, and seek remedy when finance deepens risk, debt, or dispossession.

Entrusting Community Stewardship
Communities on the frontlines need direct, simplified access to funds and decision-making authority so that projects are locally led, socially just, environmentally sound, and supportive of sustainable development pathways.

Figure 3a : Interplay of NRLG paradigms in Climate Finance

2.2 Rationale for Observed Indicators and Variable Selection

CDRI'25 recognizes that the quality, composition, and access of climate finance are no less critical than the aggregate volume distributed. Building on lessons from CDRI'24 and latest reviews from UNFCCC, Climate Policy Initiative (CPI), and Oxfam, CDRI'25 regularly tracks eight habitual inequity and fiscal vulnerability indicators in Least Developed Countries (LDCs) to highlight system-wide difficulties and a more just and efficient climate finance system (UNFCCC, CPI, Oxfam).

Indicator	Description
Debt-to-Grant Ratio	Shows how much climate finance comes as loans (which must be repaid) versus grants (free aid). A high ratio means that the countries like Bangladesh are stuck with more debt than help.
Disbursement-to-Commitment Ratio	Measures how much of the promised climate funds reach countries. A low ratio means delayed or unfulfilled promises, leaving communities waiting for support.
Adaptation-to-Mitigation Ratio	Compares funding for adaptation (e.g., flood defenses) to mitigation (e.g., cutting emissions). A low ratio shows that urgent needs like disaster protection are underfunded.
Climate Debt-to-GDP Ratio	It indicates how big a country's climate loans are compared to its economy. A high ratio signals heavy climate debt burdens that strain national budgets.
Per-capita Climate Debt to Per-capita Income	Measures climate debt per person relative to their income. A high value shows how loans burden individuals, especially in low-income countries.
Per-capita Climate Debt to Per-capita CO2 Emission	Compares debt per person to a country's emission. A high ratio highlights unfairness: low emitters pay more for climate impacts they did not cause.
Per-capita Climate Debt with respect to Natural Resources Index	Assesses climate debt per person against a country's natural resources (e.g., forests, water). A high value indicates ecosystems are undervalued in finance decisions.
Per-capita Climate Debt Burden	Tracks the overall climate debt each person carries. A high burden means individuals face greater financial stress from climate loans.

The eight indicators tracked by the CDRI'25 correspond to eight composite variables in the 2025 index, enabling a comprehensive assessment of climate finance inequities and fiscal vulnerabilities in Least Developed Countries (LDCs).

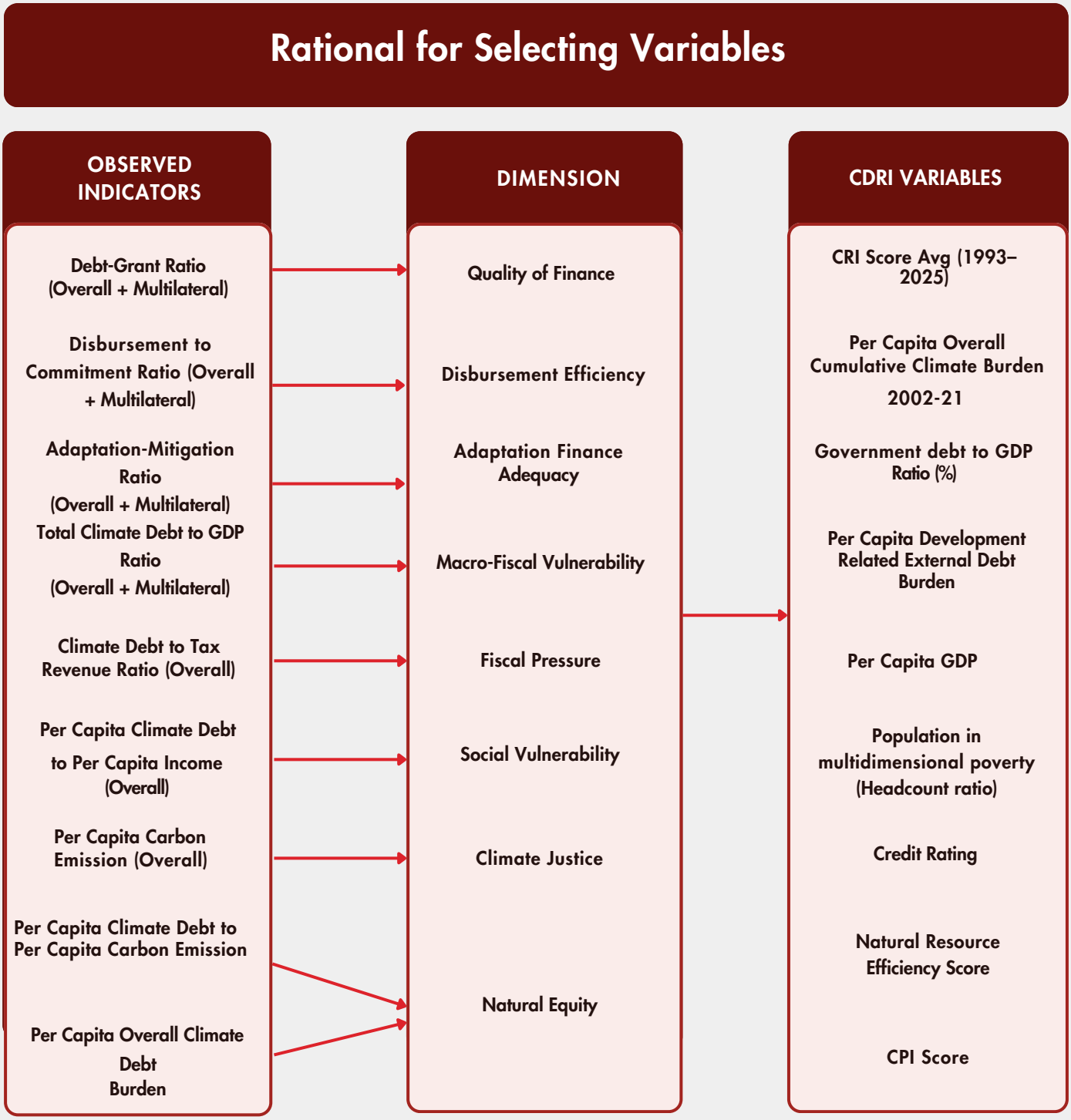


Figure 4: Rationale for Selecting Variables of CDRI

2.3 Methodology for Estimating and Forecasting CDRI'25

2.3.1 Variables and Approach

CDRI'25 employs a robust method of estimating and forecasting climate debt risks through aggregating climate exposure as well as financial capacity indicators. The index gives eight principal variables to measure inequities as well as vulnerabilities within LDCs as well as graduated LDCs:

Variable Name	Measures/ Unit	Description	Calculation Technique	Source of Data
CRI Score (Climate Risk Index)	Index Score	Measures climate vulnerability, with an inverse relationship to the Climate Debt Risk Index (CDRI).	Derived from climate impact assessments and vulnerability measures	Germanwatch[1]
Per Capita Overall Cumulative Climate Burden	USD per capita	Measures the financial cost of climate impacts per capita.	Calculated by dividing total climate-related financial burdens by population size for each year and adding them cumulatively	Authors' Estimation from SEI-AID ATLAS database
Government Debt to GDP Ratio	Percentage (%)	Represents the percentage of a country's government debt relative to its GDP.	Ratio of total government debt to national GDP	World Bank, IMF
Per Capita Development-Related External Debt Burden	USD per capita	Captures the external development debt burden in relation to population size.	Divides total external development debt by population size	Authors' Estimation from SEI-AID ATLAS database
Per Capita GDP	USD per capita	Indicates a country's economic wealth, with an inverse relationship to the CDRI.	Calculated from total GDP divided by population size	World Bank
Population in Multidimensional Poverty	Percentage of population (%)	It shows the proportion of the population in poverty, indicating increased climate vulnerability.	Ratio of population in poverty to total population	Macrotrends, World Bank
Credit Rating (Moody's)	Rating score (e.g., Aaa, Baa)	Reflects a country's financial stability and capacity to manage debt.	Based on Moody's financial stability and creditworthiness assessment	Moody's and Trading Economics
Natural Efficiency Index	Index Score	Efficient use of natural, human, and financial capital (domestic/imported) to produce output, driving competitiveness and national wealth.	Derived by combining per-capita resource consumption (intensity) with resource use per unit of economic output (efficiency)	Solability[2]

2.3.2 Normalization and Weighting

To create a clear and consistent measure of climate debt risks, CDRI'25 standardizes its eight variables on a 0-10 scale, where higher values indicate greater risk. Variables like per-capita GDP, Climate Risk Index (CRI) score, and natural-efficiency index, which naturally show lower values for higher risk, are inverted before scaling to ensure alignment. The following normalization formula was applied:

$$Normalized\ Score = 10 \times \frac{Max\ Value - Min\ Value}{Max\ Value - Variable} \ldots (2.1)$$

For variables like climate burden and poverty (which positively affect CDRI), the following normalization formula was used:

$$Normalized\ Score = 10 \times \frac{Max\ Value - Min\ Value}{Variable - Min\ Value} \ldots (2.2)$$

CDRI for each country was calculated as a weighted average of the normalized variables. The weights were assigned based on the relative importance of each variable in assessing climate debt risk.

Table 3: Data Source and Weight

Variable	Weight (%)	Explanation	Sources
CRI Score (Climate Risk Index)	15%	Reflects climate exposure without overshadowing socioeconomic factors crucial for resilience.	(Eckstein, 2018)
Per Capita Climate Burden	25%	Indicates long-term individual financial strain from cumulative climate exposure, especially relevant in highly vulnerable regions.	-
Debt-GDP Ratio	5%	Captures the overall debt burden of a country's government but is secondary to immediate climate and poverty burdens.	(IMF, 2019)
Per Capita Development-Related External Debt Burden	5%	Measures external debt burden relative to population size, acknowledging its impact as secondary.	(IMF, 2019)
Per Capita GDP	10%	Represents economic wealth, reflecting resilience benefits without overvaluing wealth as a single measure.	(Mendelsohn, 2006)
Population in Multidimensional Poverty	15%	Higher ratio indicates increased vulnerability; reflects the significance of poverty in resilience.	-
Credit Rating (Moody's)	15%	Indicates financial stability and capacity for managing debt; reflects high importance in adaptive capacity and financial access.	(Buhr, 2018), Notre Dame Global Adaptation Initiative, 2021)4
Natural Resources Efficiency Index	10%	Indicates the efficiency of a country's natural resources usage, reflecting the chance of escaping debt trap.	Solability

These weights ensure CDRI'25 captures both climate and financial vulnerabilities in a balanced, transparent way, grounded in empirical findings.

We normalized each variable to a 0–10 scale, applied the respective weights, and summed them. Multiplying this weighted sum by 10 produced the final CDRI'25 score for each country on a 0–100 scale.

The formula to calculate CDRI'25 is:

$$
\begin{aligned}
&\textit{Country Specific CDRI (2025)} \\
&= 10 \\
&\times [(0.15 \times \textit{Normalized CRI Score}) \\
&+ (0.25 \times \textit{Per Capita Overall Cumulative Climate Burden Percentile Score}) \\
&+ (0.05 \times \textit{Normalized Debt to GDP Score}) \\
&+ (0.05 \\
&\times \textit{Normalized Per Capita Development Related External Debt Burden Score}) \\
&+ (0.15 \times \textit{Normalized Inverted Per Capita GDP Score}) \\
&+ (0.15 \times \textit{Normalized Population in Multidimensional Poverty Score}) \\
&+ (0.15 \times \textit{Indexed Credit Rating}) \\
&+ (0.10 \times \textit{Indexed Natural Resources Efficiency Index})] \quad \text{.....(2.3)}
\end{aligned}
$$

2.3.3 Governance and Forecasting

In forecasting 2028 and 2031 climate debt risks, CDRI'25 makes use of a Governance Score which is a weighted aggregate of indices of transparency, control of corruption, and rule of law from such lists as the Corruption Perceptions Index (CPI) (Transparency International, 2025). The governance indicators were then pooled in a single Governance Score using the following equation:

$$\textit{Governance Score} = (\textit{CPI} \times 0.02) + (\textit{Control of Corruption} \times 0.015) + (\textit{Rule of Law} \times 0.015) \quad \text{.....(2.4)}$$

[1] We did the normalization in 0-10 scale, but our final CDRI Index is in 0-100 scale. The scaling methodology in our report aligns closely with established approaches used in the Worldwide Governance Indicators (WGI) and Human Development Index (HDI), reinforcing the robustness of our analytical framework. Like WGI, which standardizes diverse indicators to a common scale and applies weighted aggregation, our use of PCA for weighting captures the relative importance of each parameter, followed by normalization on a 0-10 scale. The HDI's methodology further parallels ours, as it normalizes indicators and then resizes them for interpretability (0-1 scale, often presented as 0-100), a step mirrored in our final 0-100 scaling. These consistent practices validate our approach as a statistically sound and widely recognized scaling methodology.

This score is normalized to a 0–10 scale and integrated with updated financial variables.

The Per Capita Climate Debt for each country was forecasted for 2028 and 2031 based on historical growth trends. The Compound Annual Growth Rate (CAGR), as detailed by Investopedia, for Per Capita Climate Debt was calculated as follows:

$$Growth\ Rate = \left(\frac{Per\ Capita\ Climate\ Debt\ 2022}{Per\ Capita\ Climate\ Debt\ 2015}\right)^{\frac{1}{Years}} - 1 \quad \text{.....(2.5)}$$

To evaluate heteroscedasticity in Climate Debt Risk Index (CDRI) variables, we performed statistical as well as visual tests to determine whether the variance of residuals is consistent enough. To enhance the CDRI as well as to determine what are the most significant contributors in climate-related financial risk, we applied three analytical techniques: Multiple Linear Regression, Principal Component Analysis (PCA), as well as Weight Optimization with python codes. We estimated per-capita climate debt based on historical trends with compound growth rates as well as utilizing these estimates within the index.

With the growth rate from Equation 2.5, predictions of Per Capita Climate Debt for 2028 and 2031 were made with these equations:

$$\textbf{\textit{Per Capita Climate Debt 2028}} = Per\ Capita\ Climate\ Debt\ 2022 \times (1 + Growth\ Rate)^{6} \quad \text{.....(2.6)}$$

$$\textbf{\textit{Per Capita Climate Debt 2031}} = Per\ Capita\ Climate\ Debt\ 2022 \times (1 + Growth\ Rate)^{9} \quad \text{.....(2.7)}$$

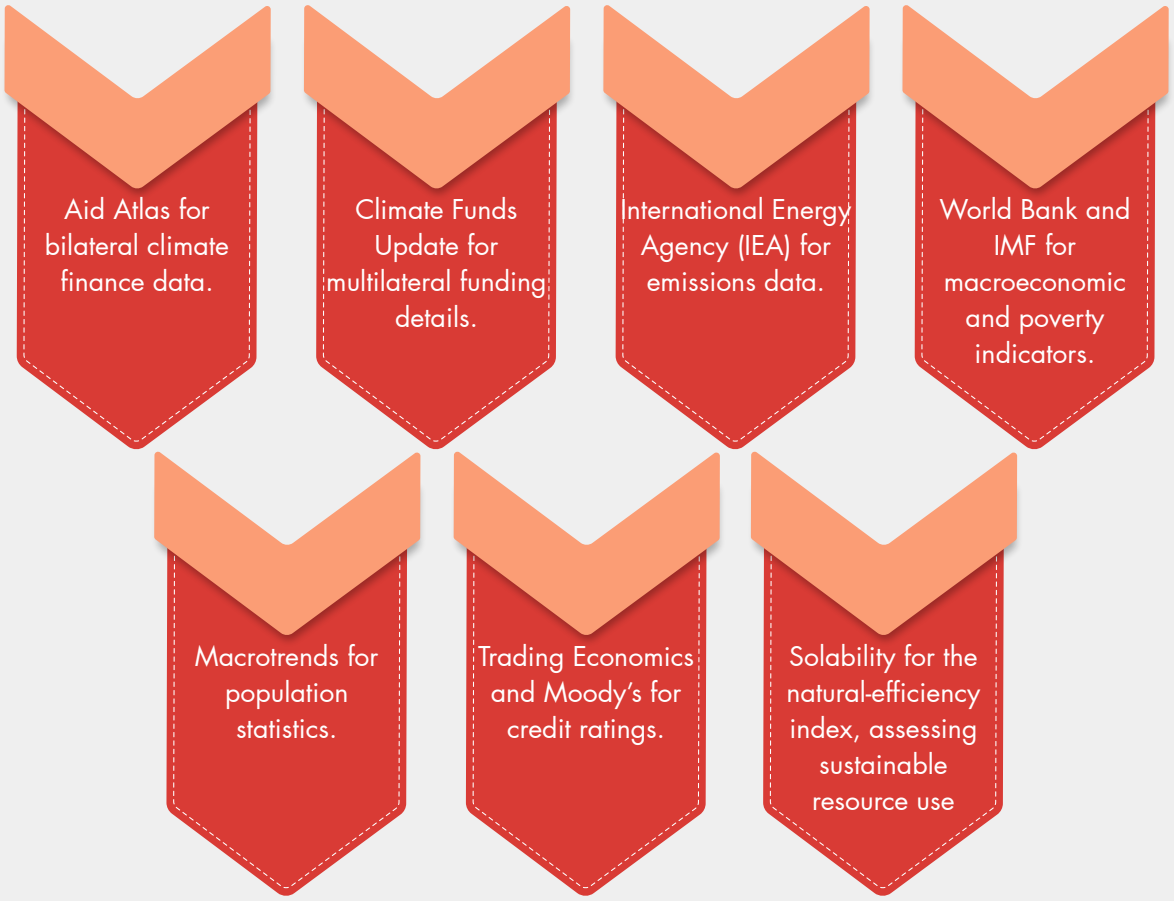
Standard tests are also used to check for inconsistencies in data variability, ensuring the index remains robust and reliable.

2.3.4 Data Sources and Processing for CDRI'25

Climate Debt Risk Index 2025 (CDRI'25) draw on a diversified dataset to assess climate debt risks within 55 vulnerable countries, both least developed countries (LDCs) and recent LDC graduates. Primary data sources are collected from Key Informant Interviews (KIIs) with finance experts, policymakers, as well as from civil society organizations, providing direct insights on climate finance matters.

organizations, providing direct insights on climate finance matters.

Secondary sources contribute a robust foundation which includes:



CDRI'25 comprises 55 countries with special emphasis on those which are most vulnerable to effects from climate, revealed through their high long-term Climate Risk Index (CRI) scores. This implies that the analysis focuses on those countries with highest climate as well as debt challenges.

The approach involves the application of standardized procedures for delinking climate-labeled projects from broader financial flows. The loans and grants-related data are combined to calculate critical indicators such as loan-to-grant ratios and adaptation-to-mitigation ratios with the help of SUMIF-based rollups for consistency and accuracy. The approach provides a clear picture of the disbursement of climate finance and highlights differences both in terms of composition as well as delivery.

2.3.5 Composite Framing for Cross-Country Analysis

CDRI'25 uses a structured approach to analyze climate finance inequities across 55 vulnerable countries, including Least Developed Countries (LDCs) and recent LDC graduates. To compare countries fairly, each indicator is converted into a standardized z-score. Two key composite measures are calculated:

Fiscal Strain: This reflects financial stress, calculated as the average z-score of four indicators: Debt-to-Grant Ratio (showing reliance on loans over grants), 1 minus Disbursement-to-Commitment Ratio (highlighting delays in fund delivery), Debt-to-GDP Ratio (measuring national debt burden), and Per-Capita Debt-to-Income Ratio (indicating individual financial strain). Thus, Fiscal Strain = mean z of {Debt-Grant, 1–Disbursement/Commitment, Debt/GDP, Per-capita Debt/Income}.

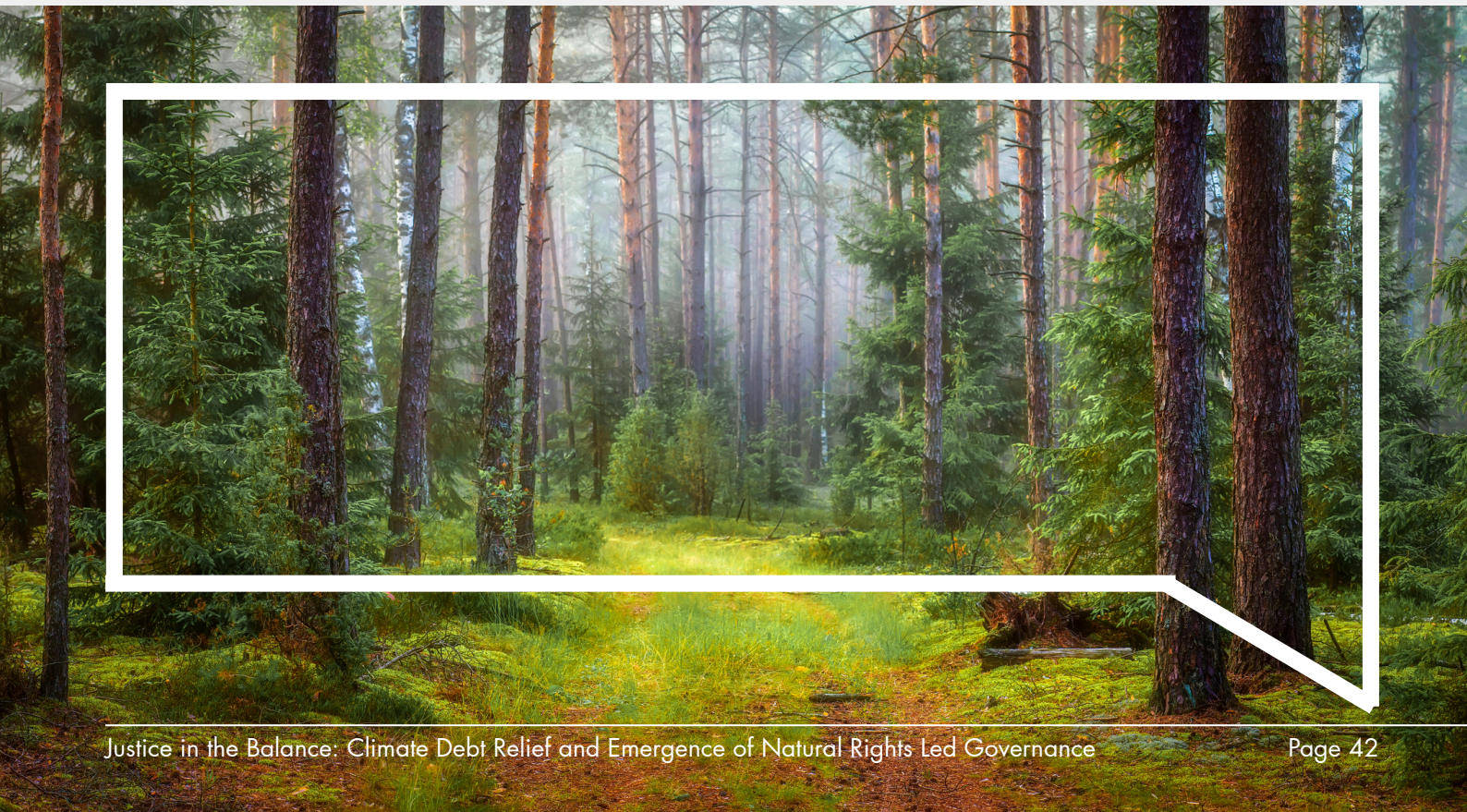
Justice Gap: This captures inequities in climate finance, based on the average z-score of Per-Capita Debt per tCO_2 (revealing unfair debt burdens for low emitters) and Debt per Natural Capital (showing misalignment with natural resource value). Thus, Justice Gap = mean z of {Per-capita Debt per tCO_2, Debt per Natural Capital}

Composite Score: The final composite is an equal-weighted average of Fiscal Strain and Justice Gap (0.5 each), providing a balanced view of financial and equity challenges. Thus,

$$Composite = 0.5 * Fiscal\ Strain + 0.5 * Justice\ Gap \quad \text{.....(2.8)}$$

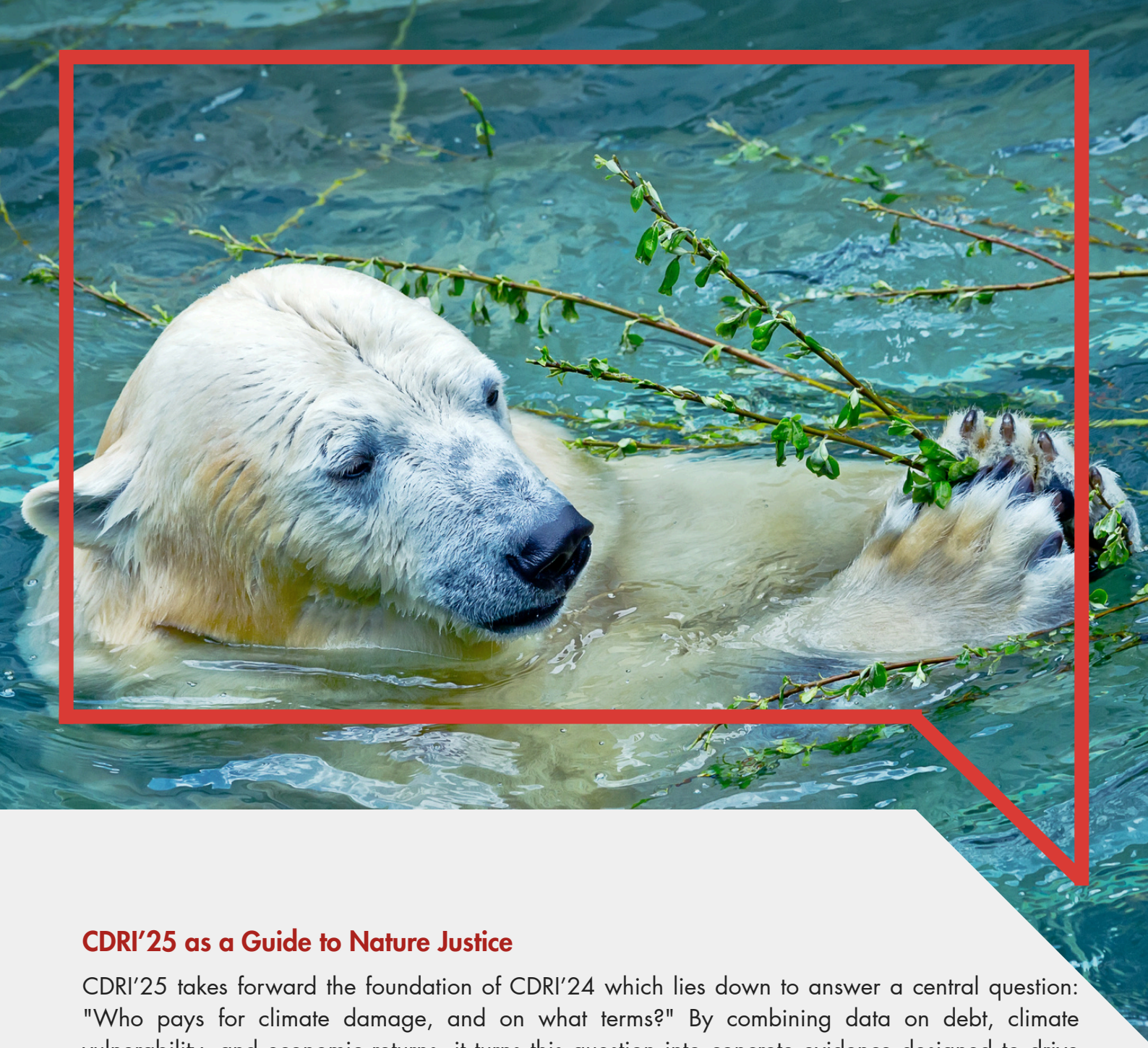
Countries are then grouped into four quadrants based on median values of Fiscal Strain and Justice Gap: Upper-Right (high strain, high gap), Upper-Left (high strain, low gap), Lower-Right (low strain, high gap), and Lower-Left (low strain, low gap).

This quadrant framework complements the 0-100 CDRI score by offering a distributional perspective rooted in the polluter-pays principle, human rights, and equity. It guides recommendations for grant-first support, faster fund delivery, and debt relief in countries facing the highest risks.



CHAPTER 03

Climate Debt Risk Index 2025



CDRI'25 as a Guide to Nature Justice

CDRI'25 takes forward the foundation of CDRI'24 which lies down to answer a central question: "Who pays for climate damage, and on what terms?" By combining data on debt, climate vulnerability, and economic returns, it turns this question into concrete evidence designed to drive policy change. Encompassing 55 countries, CDRI'25 puts climate finance as a matter of justice rather than charity, showing when aid assists vulnerable countries and where it adds unsustainable burdens of debt. Two fundamental principles drive this research:

Rights and Responsibility: When low-emitting countries like Bangladesh must borrow to survive cyclones, droughts, or rising seas, the global finance system fails the polluter-pays principle. CDRI'25 identifies loan-heavy finance as a risk and promotes grant-based, timely support as a solution for stability.

People and Nature: Climate debt risk is not just a matter of finance; it involves societies and ecosystems. CDRI'25 follows such indicators as Climate Risk Index (CRI) hazard scores, multidimensional poverty levels, income levels, credit scores, as well as a natural-resource efficiency index. If a country possesses vast forests or coasts without much capacity to capitalize on them in terms of resilience, it can still be exposed to high levels of debt risk despite moderate borrowing.

CDRI'25 is therefore an instrument of nature justice that assesses risk of debt considering climate exposure, means of finance, and rights of exposed communities and ecosystems vulnerable to impacts from climate.

The Interplay Behind "Climate Debt Trap Risk"

CDRI'25 integrates finance, climate vulnerability, governance, as well as environmental stewardship under a single 0 - 100 score that captures the interplay of the "climate debt trap." The score is guided by four interlinked clusters that allow a holistic assessment of risks and injustices in climate finance provision.

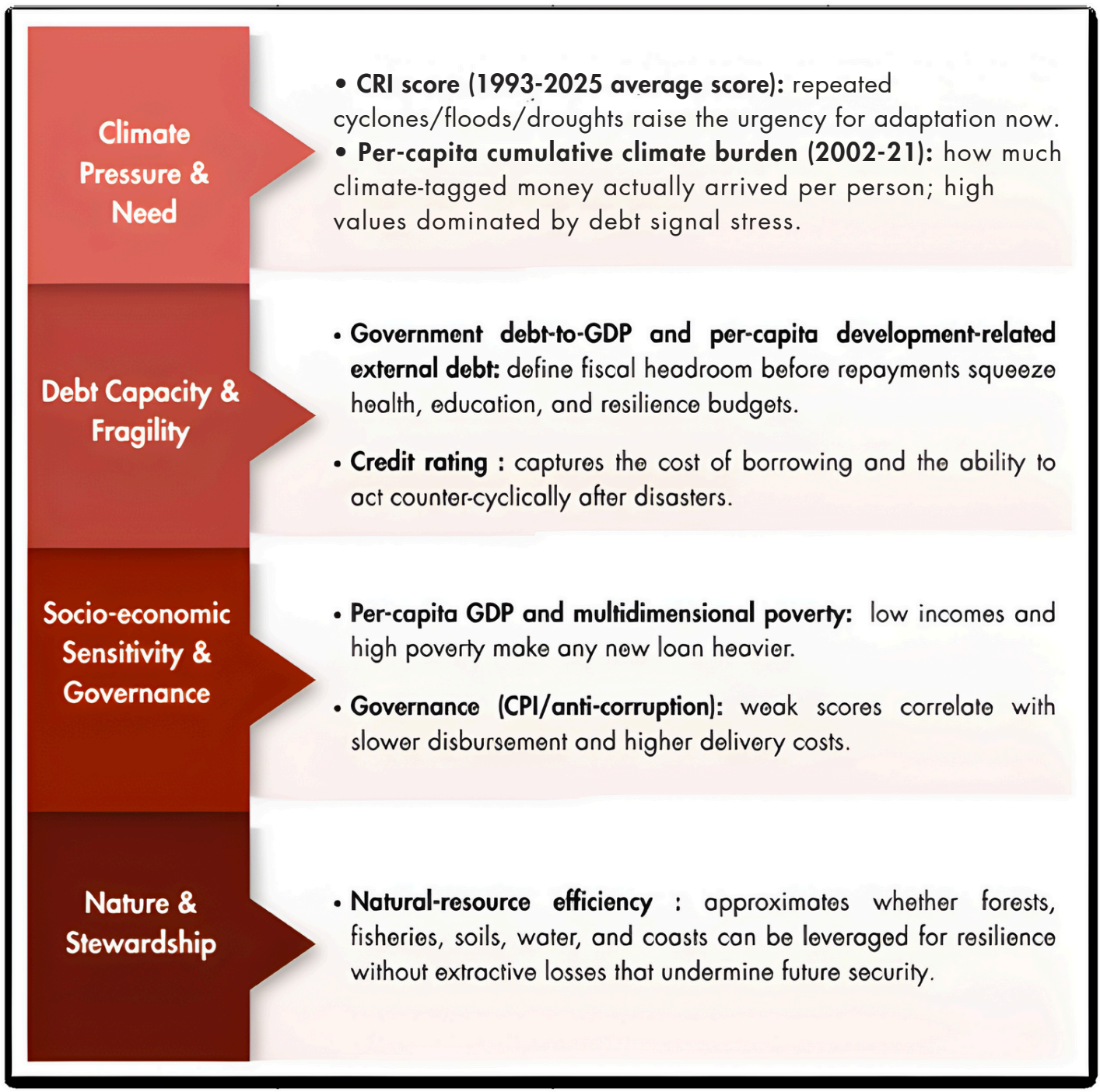


Figure 5: The Interplay Behind Climate Debt Trap Risk

CDRI'25 shows that climate debt risk is amplified when vulnerable nations are presented with essential climate needs while simultaneously possessing few economic resources, weak credit ratings, high poverty rates, and weak natural resources governing capacity, particularly when climate funding is largely loans. In contrast, when nations possess high incomes, good credit ratings, low poverty rates, predictable fund disbursements, as well as larger grants over loan volumes, then risk declines.

3.1 Country Specific CDRI'25 Score and Forecasts

Table 4: CDRI'25 Results

Country	Climate Debt Risk Index-2025	CDRI-2028	CDRI-2031	Debt-Trap Risk
Afghanistan	59.21	59.25	59.45	High
Angola	58.98	59.03	59.25	High
Bangladesh	65.37	65.42	65.63	High
Benin	71.85	71.9	72.14	Very High
Bhutan	63.44	63.51	63.79	High
Botswana	32.16	32.23	32.49	Low
Burkina Faso	77.3	77.36	77.59	Very High
Burundi	62.86	62.91	63.11	High
Cabo Verde	72.63	72.7	72.97	Very High
Cambodia	64.05	64.1	64.3	High
Central African Republic	60.77	60.82	61.02	High
Chad	65.64	65.68	65.88	High
Comoros	56.6	56.65	56.85	High
Congo, Dem. Rep.	57.75	57.8	58	High
Djibouti	69.6	69.66	69.87	High
Equatorial Guinea	43.93	43.98	44.17	Moderate

Country	Climate Debt Risk Index-2025	CDRI-2028	CDRI-2031	Debt-Trap Risk
Eritrea	51.29	51.34	51.54	High
Ethiopia	71.8	71.86	72.09	Very High
Gambia	53.31	53.37	53.6	High
Guinea	69.8	69.85	70.06	High
Guinea-Bissau	56.59	56.64	56.84	High
Haiti	58	58.05	58.24	High
Kiribati	67.81	67.86	68.07	High
Lao PDR	58.8	58.86	59.07	High
Lesotho	48.11	48.17	48.4	Moderate
Liberia	70.13	70.18	70.39	Very High
Madagascar	76.34	76.39	76.59	Very High
Malawi	63.48	63.53	63.75	High
Maldives	56.18	56.24	56.47	High
Mali	75.17	75.22	75.43	Very High
Mauritania	64.75	64.8	65.02	High
Mozambique	73.37	73.42	73.62	Very High
Myanmar	57.78	57.83	58.03	High
Nepal	56.54	56.6	56.82	High
Niger	77.13	77.19	77.41	Very High
Pakistan	57.92	57.97	58.19	High
Philippines	51.53	51.59	51.81	High

Country	Climate Debt Risk Index-2025	CDRI-2028	CDRI-2031	Debt-Trap Risk
Rwanda	71.08	71.14	71.4	Very High
Samoa	37.93	37.99	38.24	Moderate
Sao Tome and Principe	41.69	41.75	41.99	Moderate
Senegal	72.11	72.17	72.41	Very High
Sierra Leone	65.08	65.14	65.36	High
Solomon Islands	72.05	72.11	72.35	Very High
Somalia	52.04	52.09	52.27	High
South Sudan	54.02	54.07	54.25	High
Sri Lanka	68.07	68.12	68.34	High
Sudan	55.08	55.13	55.32	High
Tanzania	65.43	65.49	65.72	High
Timor-Leste	49.29	49.35	49.58	Moderate
Togo	64.57	64.62	64.84	High
Tuvalu	31.86	31.92	32.14	Low
Uganda	69.17	69.23	69.43	High
Vanuatu	44.35	44.41	44.66	Moderate
Yemen, Rep.	64.61	64.66	64.85	High
Zambia	71.67	71.73	71.96	Very High

Climate Debt Risk Index 2025 (CDRI'25) evaluate 55 vulnerable economies, primarily Least Developed Countries (LDCs) and recent graduates, revealing a distribution skewed toward high climate debt risk:

Very High Risk (13 countries):

- Includes Burkina Faso (77.30)
- Niger (77.13)
- Madagascar (76.34)
- Mali (75.17)
- Mozambique (73.37)
- Cabo Verde (72.63)
- Senegal (72.11)
- Solomon Islands (72.05)
- Zambia (71.67)
- Rwanda (71.08)
- Benin (71.85)
- Ethiopia (71.80)
- Liberia (70.13).

High Risk (34 countries):

- Includes Bangladesh (65.37)
- Tanzania (65.43)
- Uganda (69.17)
- Sri Lanka (68.07)
- Guinea (69.80)
- Djibouti (69.60)
- Kiribati (67.81).

Moderate Risk (6 countries):

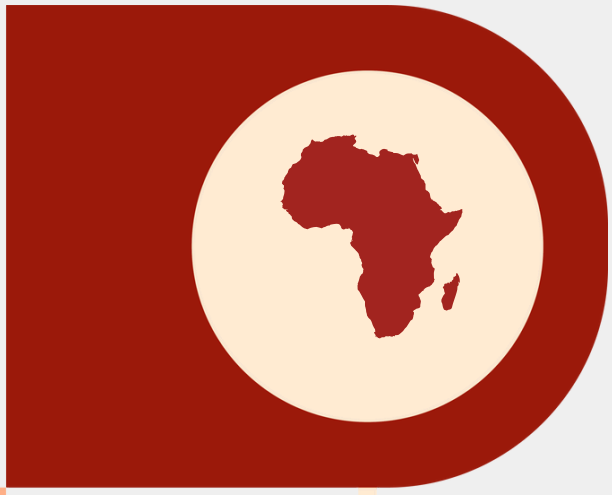
- Equatorial Guinea
- Lesotho
- Samoa
- São Tomé & Príncipe
- Timor-Leste
- Vanuatu

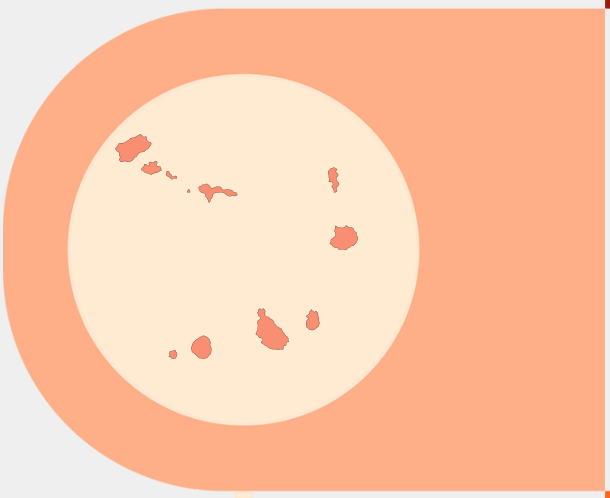
Low Risk (2 countries):

- Botswana (32.16)
- Tuvalu (31.87)

Three key patterns emerge:

Sahel and Coastal West Africa: Senegal, Benin, Mali, Niger, and Burkina Faso are classified as Very High because of recurring floods and droughts, low incomes, high poverty levels, and poor credit history that multiply effects of even minimal climate finance flows on already strained budgets.





Small Island Developing States (SIDS): The risk increases significantly with Cabo Verde (72.63) and Solomon Islands (72.05) being highly placed owing to high stock of debt and per-capita climate burdens with respect to small-sized revenue bases, while Samoa (37.93), Vanuatu (44.35), and Tuvalu (31.87) are placed lower where grants are prevalent or when debt is minimal.

South Asia: Bangladesh (65.37) ranks high due to intense hazard exposure, dense populations, and loan-heavy finance portfolios. Sri Lanka (68.07) faces debt overhang, while Nepal (56.54) and Bhutan (63.44) rank mid-high due to glacial/landslide risks and high public debt in small economies, respectively.

Many countries cluster in the middle, where the quality of finance will decide the next move. If more comes as loans and disbursement stays slow, risk climbs; if grants and quick-release funds expand, risk can ease without new debt.

3.2 Interpreting CDRI'25 Through a Nature-Justice Lens

CDRI'25 points to a crucial observation: if climate finance is provided through loans, it can end up causing more damage than benefit to elevating vulnerabilities. With an amalgamation of hazard exposure, finance quality, public financial health, governance, and ecological stewardship, the index points to areas where both societies and the ecosystem endure climate losses and the finance for response, violating the polluter-pays principle. The weighted indicators include:

1. **Necessity:** Long-term climate damage and loss (averages for the Climate Risk Index) and actual per capita climate finance provided.

2. **Sovereign Credit Rating:** Sovereign credit ratings, external debt per person, and gov debt ratios.

3. **Human Exposure:** Limited incomes and elevated multidimensional poverty, deepening the social impact of debt service.

2. **Governance Friction:** Weak Corruption Perceptions Index (CPI) scores and poor rankings, increasing borrowing costs and delaying delivery.

5. **Natural Capital:** Higher natural-efficiency scores suggest the potential to cushion shocks, whereas lower scores are indicative of minimal ecosystem margins.

3.2.1 Diagnostic Interactions

Frequency of Shock and Cash Emergencies:

The higher the scores for CRI (e.g., Haiti 15.88; Philippines 18.75; Cambodia 13.53), the more regular the disasters, prompting borrowing when grants prove insufficient (Germanwatch, 2025)

Ratings and Stock of Debt:

High debt-to-GDP ratios (e.g., Malawi 91.3%; Mozambique 93.9%; Lao PDR 115.9%; Maldives 123.1%) and weak credit ratings limit capacity for new loans, even concessional ones.

Social Cost of Poverty:

Deep poverty (Niger 90.97%; Madagascar 68.42%; Ethiopia 68.74%) implies that debt service takes money away from basic services and adaptation (World Bank, 2025).

Natural Assets as Buffers:

Healthy ecosystems like watersheds, mangroves, and forests can act as protective capital, but only when finance supports restoration rather than extraction to meet repayments.

3.2.2 Implications for Policy and Practice

CDRI'25 offers actionable recommendations to align climate finance with nature-justice principles:

- **Prioritize Grants in High-Poverty, Low-Rating Contexts:** In nations characterized by profound poverty and poor credit ratings, grants for adaptation and loss and damage are more effective in reducing risk than increasing loan volumes.

- **Make Rapid Disbursement:** Middle-tier countries' main weakness is delayed disbursement. Rapid-release mechanisms, pre-approved triggers, and immediate access to national and sub-national players can ensure that funds are disbursed to populations before the next disaster occurs.

- **Connect Debt Relief with Climate Action:** In high-debt nations such as Zambia, Sri Lanka, Mozambique, and Maldives, debt swaps and suspend clauses linked with climate catastrophes safeguard budgets and continue investments.

- **Invest in Nature as Infrastructure:** Nature as investment entails funding natural restoration of watersheds, mangroves, dunes, floodplains, and forests that increase natural efficiency scores while decreasing future climate finance needs.

- **Empower Community-Led Resilience:** In fragile settings like the Central African Republic, Niger, Somalia, South Sudan, and Haiti, small grants to local actors with simplified procedures better support resilience than sovereign loans.

- **Strengthening of Governance and Delivery:** Improved CPI performance and credit ratings, lower borrowing costs and deferrals. Streamlined approvals, outcome grants and technical assistance enhance impact.

CDRI'25 is not in support of reduced climate finance but rather grant-first support to adaptation, loss and damage, debt relief when in situations of high-debt distress, access with finance to support communities as well as safeguard ecosystems directly. From a nature-justice frame, the index shows where finance design upholds responsibility, care and where it unfairly burdens those least equipped to bear it.

CHAPTER 04

Global Landscape of Climate Finance

4.1 Adaptation Gap in Climate Finance

Increasing but Insufficient Adaptation Finance

Global international public adaptation finance to developing nations increased from US$22 billion in 2021 to US$27.5 billion in 2022, a record single-year increase since Paris Agreement (OECD, 2023). This is encouraging in view of achieving the Glasgow Climate Pact target of doubling 2019 adaptation finance by 2025, but it is still not enough. The total single-year adaptation requirements of Least Developed Countries (LDCs) and Small Island Developing States (SIDS), which are pegged at ~US$45 billion annually, come close to equaling total adaptation finance that is being delivered to all developing nations collectively, testifying to substantial underinvestment.

Concerns Over Finance Quality

While grants are on the rise, loans remain predominant, accounting for ~62% of adaptation finance, of which approximately one-quarter is non-concessional (CPI, 2023). In even highly vulnerable countries, such as where grants are 51% in LDCs and 64% in SIDS, non-concessional loan utilization is on a rise. In Africa alone, 57% of adaptation finance is on a debt basis

with external debt increasing more rapidly than GDP since 2010, again meaning that borrowing for adaptation shrinks future budget envelopes (World Bank, 2025). This is with immediate impact on households: i.e., loan-supported water infrastructures can lead to elevated water tariffs passing on costs to poor households as well as contravening principles of polluter payments as well as common but differentiated responsibilities (CBDR).

Shifts from Grants to Loans

Over time, funding for climate adaptation in vulnerable countries transitioned from being mostly grants-based to increased levels of loan finance from Multilateral Development Banks (MDBs) as well as from bilateral donors. In its earliest phases, grants made up the foundation of adaptations projects due to perceived immediacy of climate impacts. However, as adaptations requirements expanded with accelerated climate change, larger and more durably sustained funding needs accompanied increased utilization of both non-concessional as well as concessional loans. Here as well, MDBs played a leading role, lending funds to middle- as well as lower-income countries while Least Developed Countries (LDCs) became most reliant on concessional loans owing to friendlier terms. Despite both adaptation finances attaining its record high of US$27.5 billion in 2022, increased loan finance raises concerns over increasing debt burdens that can hamper long-term adaptation in vulnerable countries down the line (CPI, 2023).

Need for Innovative Solutions

The shift to loan-based finance has come with a demand for innovative tools, such as debt-for-adaptation swaps and blended finance, so that vulnerable nations can cope with climate risks without accumulating unsustainable debt.

The approaches aim at availing of climate finance that is compatible with equity as well as justice so that no extra financial pressure is exerted on those nations least guilty of causing climate change.

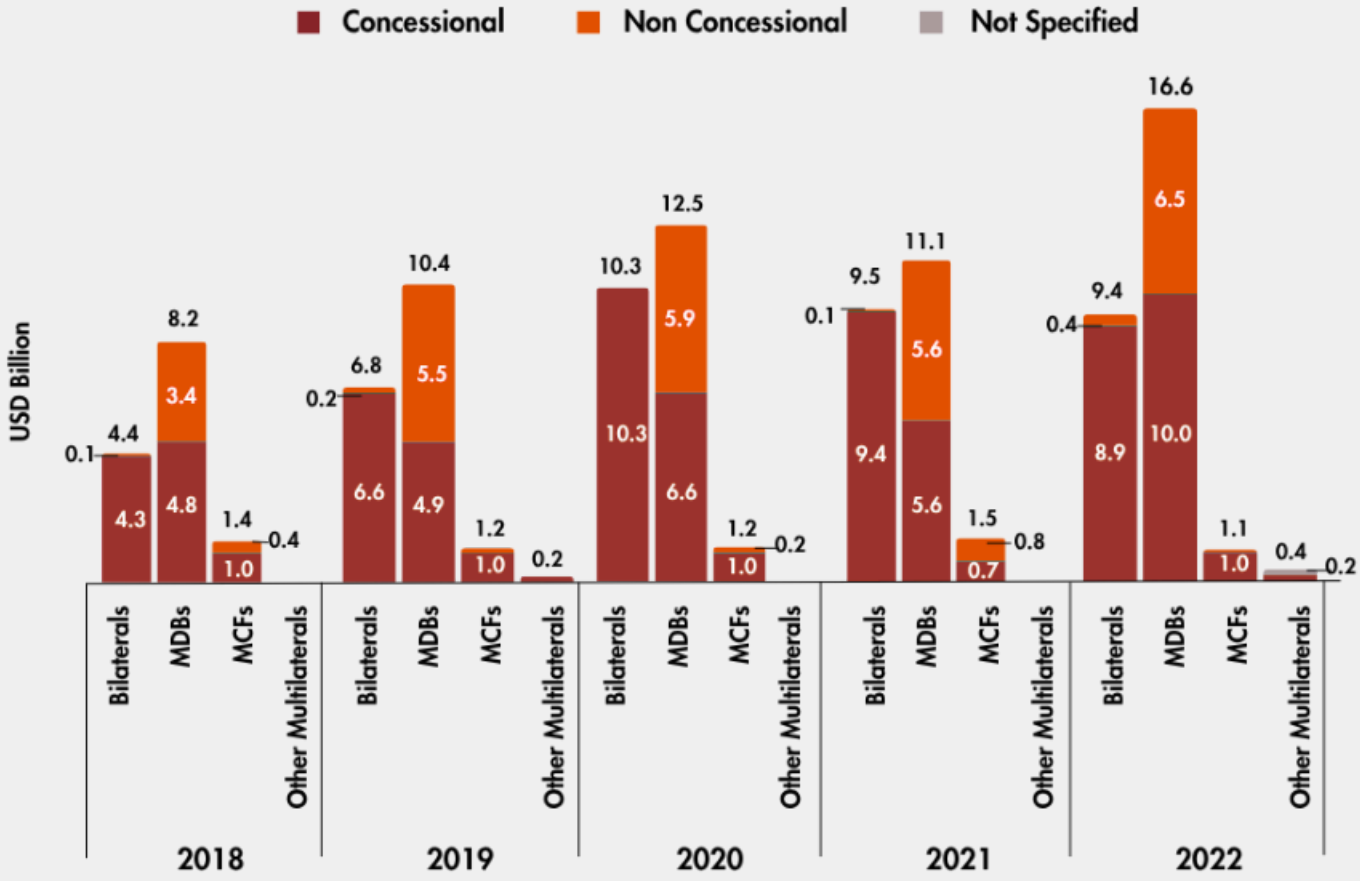


Figure 6: International Public Adaptation Finance Across Providers And Modes of Finance

Adaptation requirements globally are estimated to be between US$215 billion to US$387 billion per annum; however, 2022 public investments totaled a mere US$27.5 billion, thus highlighting a massive gap (AGR, 2023). Although statistics on domestic public expenditure and private adaptation finance are scarce, two noteworthy observations drew attention. First, over two-thirds of adaptation needs lie in public sector sectors like social protection, healthcare, and local infrastructure that heavily rely on government funding. Second, while private finance is underleveraged and not well monitored, it is inclined to focus on projects with apparent market paybacks like asset-specific resilience rather than broader public good like overall community flood protection (UNEP, 2024).

The 2024 Adaptation Gap Report calls for a shift from short-term, reactive measures to strategic, forward-looking programs that anticipate and manage climate risks (UNEP, 2024). In achieving this aim, three priorities are critical:

1 **Further Accessible Concessional Finance:**

It is essential that scarce concessional resources concentrate on pre-programmed rapid-release instruments with direct access for national and local actors to provide up-front support.

2 **Enabling Private Investment:**

Preparation of attracting private capital with specialized finance instruments, improved data, standard taxonomies, regulatory reforms, and stable policies is needed. Public finance, despite this, should remain central to adaptation efforts.

3 **Justice-Oriented Design:**

Financial instruments must refrain from passing on costs to vulnerable groups. In low-revenue countries with high poverty levels, grants rather than loans must be the norm for adaptation in avoiding placing additional financial burdens.

Despite increased adaptation finance, it is still insubstantial, over-reliant on loans, and too delayed to be channeled to those most in need. Without a categorical shift towards grant-based finance and swifter disbursal, vulnerable countries will continue to cope with climate shocks, thus deepening their own financial problems.

4.2 Mitigation Gap in Climate Finance

In 2023, total greenhouse emissions from around the world reached 57.1 gigatonnes of CO_2 equivalent ($GtCO_2e$), which was up 1.3% from 2022 levels (IEA, 2024). Fossil fuels alone made up 68% of total emissions, thus again showcasing their dominance. Existing Nationally Determined Contributions (NDCs) under the Paris Agreement are not sufficient in achieving global climate goals. By 2030, unconditional NDC commitments are projected to cut emissions by only 4% from 2019 levels while conditional commitments are forecast to cut 10%, both amounts short of short of 28% needed to stay on a 2°C trajectory and 42% needed for a 1.5°C outcome. This persistent mitigation gap that largely is not changing implies a rise in future costs of both climate adaptation as well as transforming to low-carbon systems.

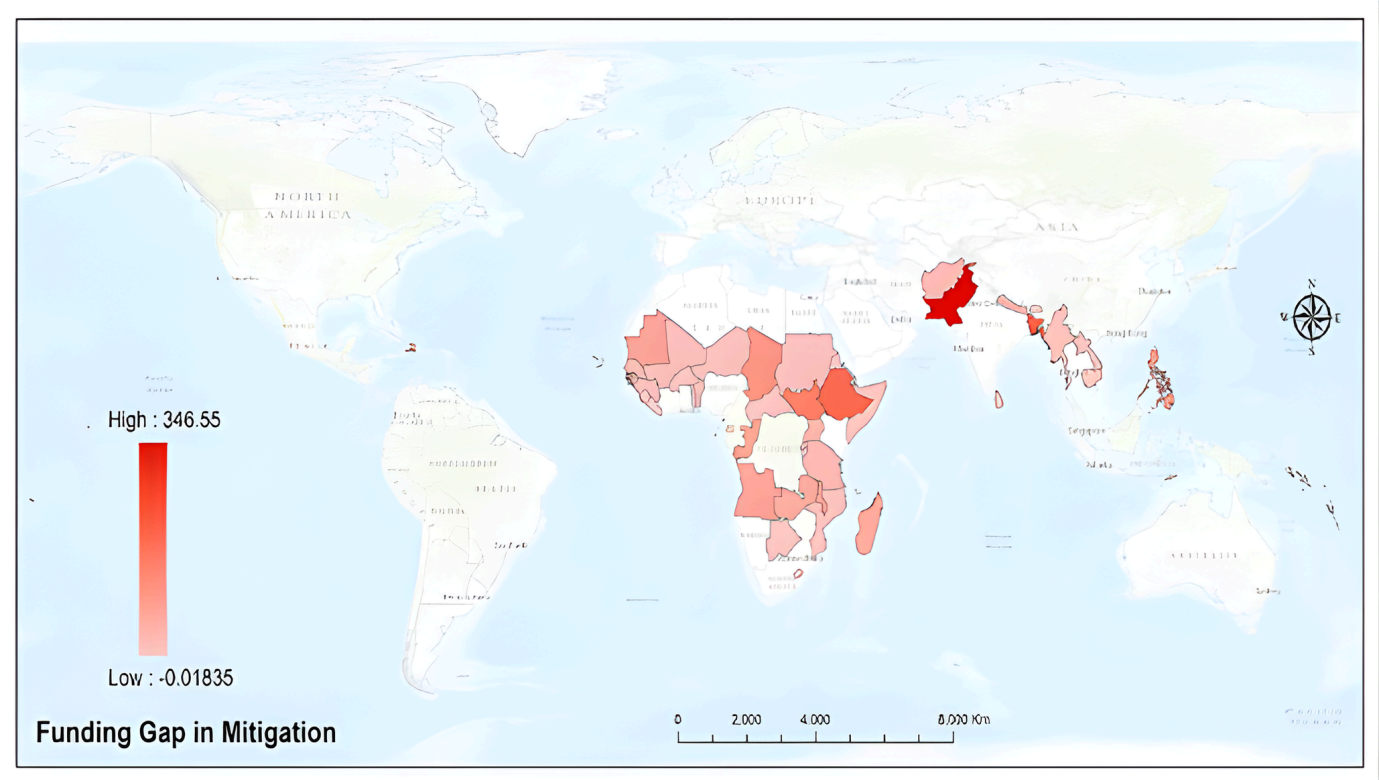


Figure 7: Mitigation Gaps as per NDC

Presenting nationally determined contributions under Paris Agreement reveals massive investment gaps for climate mitigation in the developing world, particularly Sub-Saharan Africa and Southeast Asia. There are substantial gaps as follows:

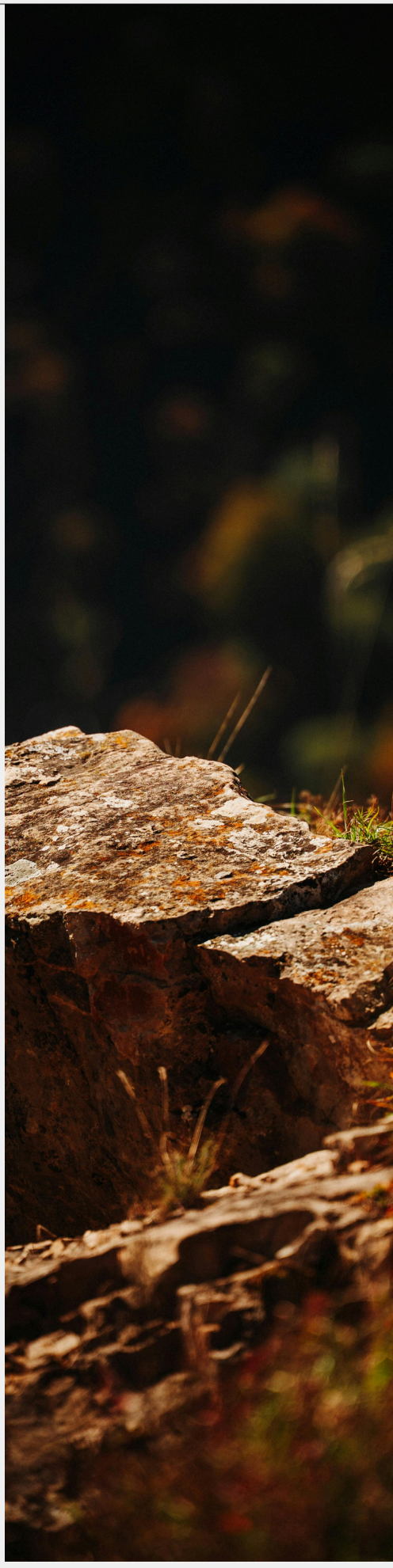
- Afghanistan: US$17.1 billion gap.
- Angola: US$44 billion gap.
- Bangladesh: US$140.34 billion gap.
- Pakistan: US$346.55 billion gap.
- Chad: Shortfall of US$66.91 billion, with similar gaps in Senegal and Burkina Faso.
- Southeast Asia: Nations such as Myanmar, Philippines, and Indonesia are presented with huge unfunded requirements for clean energy, energy efficiency, forest conservation, as well as urban transition.

The rare exception is Bhutan that is carbon-negative with surplus mitigation funding; such cases are outliers that highlight the broader challenge.

About 70% of Parties factored just transition into their new NDCs across mitigation, adaptation and means of implementation, with a whole economy/society framing to avoid worsening inequalities; only 8% explicitly plan to monitor it. Nearly all (98%) set domestic mitigation measures, and 80% cover at least one of six high-impact, low-cost options to 2035 (≤USD 200/tCO_2e), with afforestation/reforestation, solar power and reducing deforestation cited as needing the most support. Three-quarters reported quantitative targets linked to recent CMA priorities, 47% referencing the specific efforts; beyond NDC texts, extra domestic pledges on renewables tripling by 2030, low-carbon hydrogen and CCUS are projected to outstrip the NDC-based aggregates, pointing to headroom for faster action with stronger cooperation and support. NDCs increasingly note mitigation co-benefits from adaptation and address mitigation impacts via just transition, and many references domestic measures in priority areas with high mitigation potential.

On means of implementation, 75% included climate-finance information, with 21% more Parties than before presenting costed needs (especially for adaptation) and 63% citing financing strategies or investment plans. Reported needs total USD 1,970.8 -1,975.0 billion: USD 1,339 billion for mitigation (energy, AFOLU, IPPU, waste) and USD 560.5-564.6 billion for adaptation (agriculture, water, infrastructure, health, biodiversity, disaster risk management). Of those with costed needs, 84% expect a mix of international and domestic, public and private sources through bilateral channels, multilateral climate funds, MDBs and private investment while exploring sovereign and innovative tools (green, social and sustainability bonds; maritime levies; credit-guarantee de-risking; green credit lines).

On technology, 97% outlined priorities/needs (45% with both qualitative and quantitative detail); ~75% specified sectoral measures; 92% listed mitigation technologies (notably energy, transport, AFOLU) and 72% listed adaptation technologies, with many points to climate monitoring, observations, geospatial and digital tools including AI; 73% referenced innovation, research and demonstration; more than double previous NDCs. Capacity-building appeared in 84% of NDCs, and 66% said implementation depends on such support; needs span transparency, technology deployment and access to finance, with 25% newly highlighting loss-and-damage capacities and access to related funds; many also described institutional setups and stakeholder engagement. Overall climate-finance requirements in the revised figure exceed USD 1.3 trillion.



Barriers to Mitigation Finance

Some factors hamper flow of mitigation finance to developing nations:

1. **Macroeconomic Risks and Debt Burdens:** Poor sovereign credit ratings and the elevated levels of debt are resulting in high borrowing expenses that render expensive green capital inaccessible to nations with minimal fiscal space

2. **Difficult Project Economics:** Small markets, high capital cost, grid constraints, and low income in low-income countries result in financiers demanding harder terms or shorter loan maturities that compromise debt sustainability.

3. **Flawed Accounting Rules:** The current counting practices and NCQG) are collectively risking the prioritization of the volume of finance over its quality, allowing non-concessional loans to dominate funding flows.

A Justice-Aligned Approach to Mitigation Finance

In filling these gaps while upholding principles of common but differentiated responsibilities (CBDR) and polluter-pays, mitigation finance must be sequenced, concessional, and credible. Primary recommendations are:

Balancing Mitigation and Fiscal Resilience

Low-fiscal space countries with poor credit ratings and high poverty levels encounter the greatest number of mitigation funding gaps but are least capable of taking in non-concessional loans. Employment of unsuitable financial instruments can worsen future climate debt. Conversely, highly concessive and grant-based instruments that are compatible with principles of polluter-pays as well as CBDR can address emission reduction appropriately without jeopardizing fiscal prudence in vulnerable nations.

4.3 MDB Climate Finance and Loan-Grant Imbalance (2023)

4.3.1 Overall Volumes and Distribution

MDBs delivered $125 billion worth of climate finance in 2023 which is a record high figure. Some $74.7 billion (60%) was delivered to LMICs, up from an estimated $60.7 billion in 2022. The overall increase is good news that MDBs are showing up to play a significant role for climate action across the globe, but composition of finance is highly skewed in support of debt instruments.

Tuvalu records the largest disbursement-commitment ratio at 0.76, meaning that over three-quarters of committed resources were successfully disbursed. This illustrates a good absorptive capacity and efficient institutional implementation mechanisms. On the contrary, South Sudan records the least ratio of 0.04, where only 4 percent of committed resources were disbursed. This is a sign of critical constraints in executing projects that may be blamed on conflict, weak governance, and institutional weakness.

A group of countries which are Cabo Verde, Niger, Samoa, and Democratic Republic of Congo (whose ratios are 0.73-0.75) exhibit a quite high level of disbursement efficiency. In comparison, those fragile as well as conflict-impacted countries i.e., South Sudan, Somalia, West Bank and Gaza, and Botswana (whose ratios are 0.21 or below) exhibit significant gaps in delivery that are a manifestation of those system weaknesses like security risks, institutional gaps in capacity, as well as procedure-related delays.

4.3.2 Loan–Grant Composition

Between 2019-2023, 67% of climate finance to LMICs was through investment loans, with the share of grants decreasing markedly from 10% in 2022 ($6.08 billion) to 6.7% in 2023 ($4.98 billion), which is the lowest level of grant in five years.

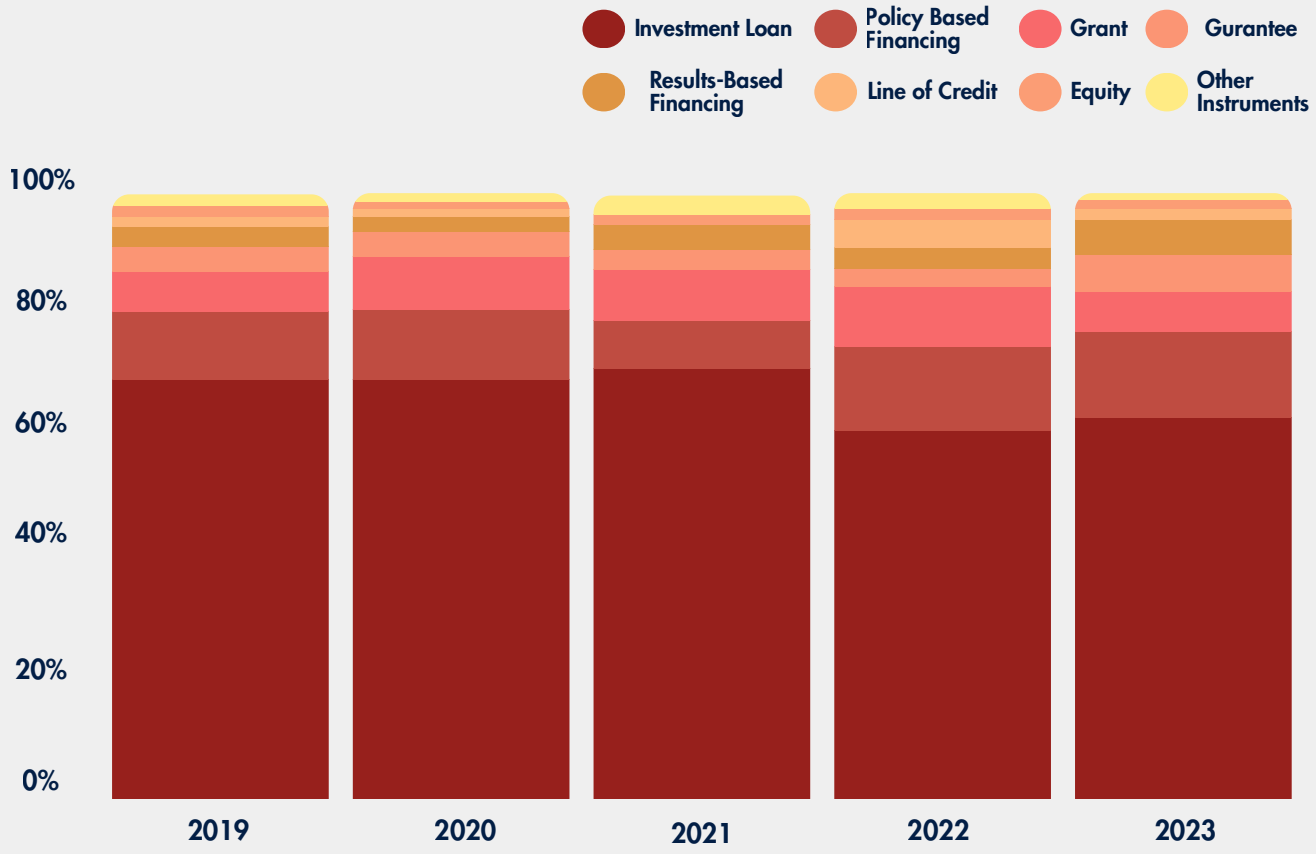


Figure 8: Share of Total Climate Finance from MDBs to Low-and Middle-Income Economics by Instrument

- **Highest share of climate loans:** Investment loans, particularly from IBRD and ADB's sovereign windows, dominate MDB portfolios.
- **Lowest share of grants:** 2023's 6.7% represents the smallest concessional effort at a time when three-fifths of low-income economies are in or near debt distress.

This means MDB climate finance is increasingly delivered in ways that add to debt burdens, rather than creating fiscal space.

Among those countries, Bangladesh possesses the highest loan to grant ratio of 0.94, thus it is significantly dependent on loan-based funding to finance its climate adaptation as well as mitigation initiatives. This is an indication that Bangladesh was successful in mobilizing high loan funding to tackle its climate finance requirements due to possibly its improved credit history as well as increased access to international capital markets. But such a high ratio also comes with sustainability concerns of its borrowing obligations since the climate projects are usually subjected to long-term funding with risks of economic returns.

4.3.3 Mitigation vs. Adaptation

Adaptation finance lags mitigation.

Highest adaptation share: African Development Bank (AfDB) at 52% (below its five-year average of 59%).

Least adaptation share: MDBs such as IFC (private-sector arm of the World Bank Group) and NDB demonstrate minimal adaptation commitment with most emphasis on projects that are related to mitigation.

The current imbalance reveals that several vulnerable nations are underfunded for climate resilience purposes, which makes them vulnerable to climate shocks. In countries studied, Niger is unique as it records the highest adaptation-mitigation ratio at 52.68. This means that Niger, most probably due to its high susceptibility to climate change, is placing more priority on adaptation rather than on mitigation. This high ratio is a sign that a country is facing high climate-related risks such as desertification as well as water scarcity, where adaptation approaches such as water preservation, agricultural innovation as well as climate-resilient infrastructure are a top priority.

Countries like Eritrea (0.00) and the Democratic Republic of Congo (0.07) register a worrisome lack of adaptation initiatives compared to mitigation, which is especially alarming since these are highly exposed to climate change. This lack of adaptation, especially among countries with weak ecosystems, can worsen climate-related effects with longer-term socio-economic and environmental damage. Botswana (0.02), Equatorial Guinea (0.02), and Burundi (0.00) register significantly low adaptation-mitigation ratios translating to significant underinvestment in adaptation, almost certainly at the expense of resilience-enhancing efforts. The countries might be overemphasizing mitigation efforts while neglecting critical adaptation needs like droughts, floods, and heatwaves/extreme temperatures.

Even Congo Dem Republic (0.07) and Chad (4.82), which have moderate adaptation investments, require a recalibration of focus to prioritize building adaptive capacity. These nations, located in some of the most climate-vulnerable regions, should urgently increase adaptation funding to protect both their populations and ecosystems.

4.3.4 Vulnerable Country Allocation

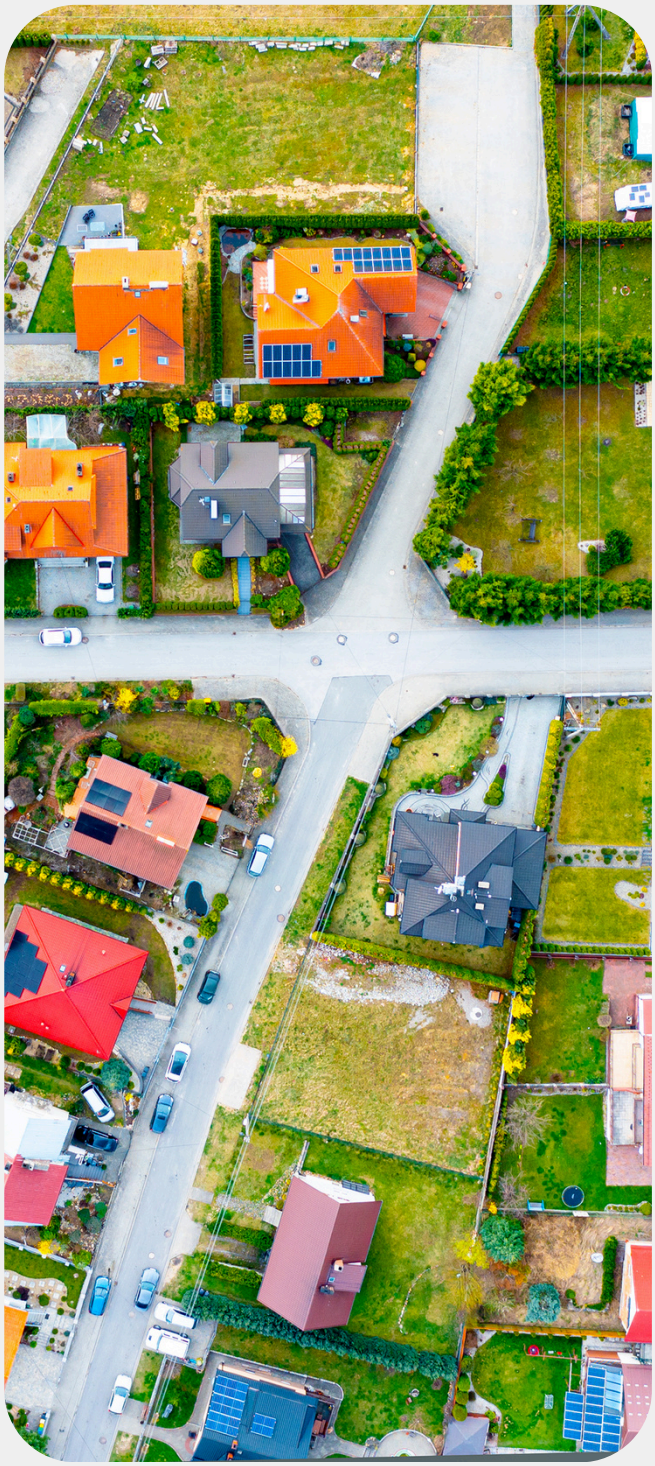
MDBs mobilized $16.3 billion to LDCs and SIDS in 2023 which is a record high, even though MDBs' share of total climate finance decreased in the last 12 months. Specifically, the worrisome part is the 65% cut of MDB climate finance to LDCs and SIDS countries from 2022 to 2023 that are the most vulnerable to mortality from disasters.

4.3.5 Private Sector Mobilization

The significant drop in the share of grants is concerning because highly climate-exposed nations, especially Least Developed Countries (LDCs) and Small Island Developing States (SIDSs) cannot afford additional debt without jeopardizing budgetary sustainability. Excessive lending puts them at risk of "climate debt trap" in which the finance consigned to enhance resilience increases pressure on debt while restraining future investment prospects.

Adaptation gap is another significant challenge: MDB portfolios are still skewed towards mitigation projects that are often financially remunerative, so adaptation (which is a public good-oriented and less bankable) is underinvested.

Lastly, as private mobilization is gradually getting better, MDBs themselves have underutilized potential to employ concessional finance and de-risking instruments more effectively. Widening grant windows and terms of concessional lending, revealing fossil fuel finance, and diversifying to give priority to LDCs as well as SIDS would enable MDBs to transition from quantity to quality, which will be more equitable and effective climate finance.



CHAPTER 05

Trend of Climate Finance in Vulnerable Nations

5.1 Overview of Climate Finance Across Selected Countries

From 2002-2023, climate finance distribution among LDCs shows sharp disparities. Bangladesh, the Philippines, and Pakistan received the largest shares, mainly through loans, while smaller African and island nations relied on grants. Adaptation-focused funding dominated in highly vulnerable states like Somalia and Djibouti, whereas countries such as Bangladesh and Mozambique maintained a balanced approach. Despite total commitments of USD 33.7 billion, an average disbursement ratio of 0.57 highlights ongoing inefficiencies in fund utilization.

Table 5: Overview of Climate Finance across selected countries from 2002-2023

Country	Total Loan (in billion)	Total Grant (in billion)	Loan-Grant Ratio	Total Climate Adaptation	Total Climate Mitigation	Adaption Mitigation Ratio	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.42	0	0.21	0.3	0.72	0.42	0.97
Angola	0.04	0.16	0.29	0.16	0.09	1.75	0.2	0.18
Bangladesh	3.4	1.26	2.7	1.41	3.39	0.42	4.67	0.63
Benin	0.14	0.4	0.35	0.35	0.22	1.55	0.54	0.39
Bhutan	0.03	0.16	0.19	0.12	0.08	1.56	0.19	0.56
Botswana	0	0.04	0	0	0.03	0.15	0.04	0.73
Burkina Faso	0.44	0.49	0.89	0.61	0.36	1.67	0.94	0.4
Burundi	0	0.2	0	0.1	0.1	0.96	0.2	0.34
Cabo Verde	0.28	0.12	2.37	0.26	0.16	1.66	0.4	0.52
Cambodia	0.85	0.49	1.74	0.99	0.48	2.07	1.35	0.62
Central African Republic	0	0.05	0	0.03	0.03	1.02	0.05	0.23
Chad	0.01	0.26	0.05	0.21	0.09	2.45	0.28	0.5
Comoros	0	0.08	0.02	0.05	0.03	1.56	0.08	0.25
Congo, Dem. Rep.	0	0.77	0	0.34	0.57	0.6	0.77	0.62
Djibouti	0	0.27	0.01	0.25	0.04	6.38	0.28	0.4
Equatorial Guinea	0	0.01	0	0	0.01	0.01	0.01	0.18

Country	Total Loan (in billion)	Total Grant (in billion)	Loan-Grant Ratio	Total Climate Adaptation	Total Climate Mitigation	Adaption Mitigation Ratio	Total CF (in billion)	Disbursement -Commitment
Eritrea	0	0.06	0	0.03	0.03	1.32	0.06	0.53
Ethiopia	0.28	1.53	0.18	1.16	0.9	1.29	1.86	0.68
Gambia	0	0.11	0	0.05	0.07	0.7	0.11	0.2
Guinea	0.09	0.12	0.76	0.1	0.11	0.88	0.2	0.29
Guinea-Bissau	0	0.05	0	0.04	0.02	2.21	0.05	0.48
Haiti	0.02	0.56	0.03	0.42	0.22	1.89	0.59	0.56
Kiribati	0	0.09	0	0.07	0.03	2.47	0.09	0.28
Lao PDR	0.06	0.29	0.2	0.18	0.19	0.91	0.35	0.65
Lesotho	0	0.18	0	0.15	0.03	4.86	0.18	0.29
Liberia	0.01	0.33	0.04	0.1	0.26	0.39	0.34	0.71
Madagascar	0.23	0.35	0.66	0.34	0.31	1.12	0.59	0.48
Malawi	0.03	0.88	0.03	0.44	0.56	0.79	0.92	0.44
Maldives	0.01	0.09	0.07	0.04	0.07	0.56	0.1	0.69
Mali	0.29	0.79	0.37	0.75	0.38	1.99	1.09	0.44
Mauritania	0.03	0.3	0.09	0.21	0.11	1.87	0.33	0.42
Mozambique	0.37	1.07	0.34	0.6	0.98	0.62	1.45	0.59
Myanmar	0.27	0.22	1.21	0.22	0.31	0.69	0.5	0.6
Nepal	0.06	0.63	0.1	0.32	0.48	0.68	0.71	0.81
Niger	0.24	0.35	0.69	0.49	0.1	4.7	0.59	0.38
Pakistan	1.23	0.58	2.1	0.42	1.45	0.29	1.84	0.6
Philippines	2.04	0.7	2.92	1.57	1.28	1.23	2.79	0.66
Rwanda	0.14	0.4	0.36	0.33	0.25	1.31	0.56	0.55
Samoa	0	0.15	0	0.1	0.06	1.6	0.15	0.52

Country	Total Loan (in billion)	Total Grant (in billion)	Loan-Grant Ratio	Total Climate Adaptation	Total Climate Mitigation	Adaption Mitigation Ratio	Total CF (in billion)	Disbursement -Commitment
Sao Tome and Principe	0	0.05	0	0.02	0.03	0.96	0.05	0.16
Senegal	0.73	0.68	1.07	0.76	0.69	1.1	1.42	0.62
Sierra Leone	0.01	0.1	0.08	0.05	0.07	0.83	0.12	1.17
Solomon Islands	0.03	0.16	0.19	0.07	0.12	0.59	0.19	0.33
Somalia	0	0.31	0	0.3	0.02	12.62	0.31	0.55
South Sudan	0	0.14	0	0.13	0.03	3.71	0.14	1.2
Sri Lanka	1.33	0.11	12.13	0.36	1.15	0.31	1.44	0.5
Sudan	0	0.17	0	0.13	0.05	2.64	0.17	0.44
Tanzania	0.42	0.66	0.64	0.38	0.79	0.48	1.11	0.64
Timor-Leste	0	0.22	0	0.13	0.11	1.18	0.22	0.68
Togo	0.1	0.15	0.64	0.14	0.15	0.97	0.24	0.2
Tuvalu	0	0.06	0	0.03	0.04	0.93	0.06	0.59
Uganda	0.25	0.83	0.3	0.6	0.98	0.61	1.37	0.71
Vanuatu	0	0.1	0	0.05	0.05	0.86	0.1	0.43
Yemen, Rep.	0.05	0.16	0.3	0.14	0.07	1.96	0.21	0.13
Zambia	0.12	0.6	0.21	0.26	0.51	0.51	0.72	0.4
TOTAL	**13.64**	**19.5**	**0.7**	**16.76**	**19.04**	**0.88**	**33.74**	**0.57**

5.2 Disbursement-Commitment Ratio

Every year, vulnerable nations develop climate plans based on commitment announced at international levels; however, the actual protection of societies depends on the release of funds. The disbursement-to-commitment ratio measures the share of pledged climate finance that is successfully delivered to receiving nations. Some exceptions, for example, Sierra Leone (1.17) and South Sudan (1.20), are above a ratio of 1, often due to blending climate funds with emergency or stabilization aid. However, for most of the Least Developed Countries (LDCs), disbursements are always behind pledges, consequently highlighting a major gap in delivery that hampers the advancement of building resilience.

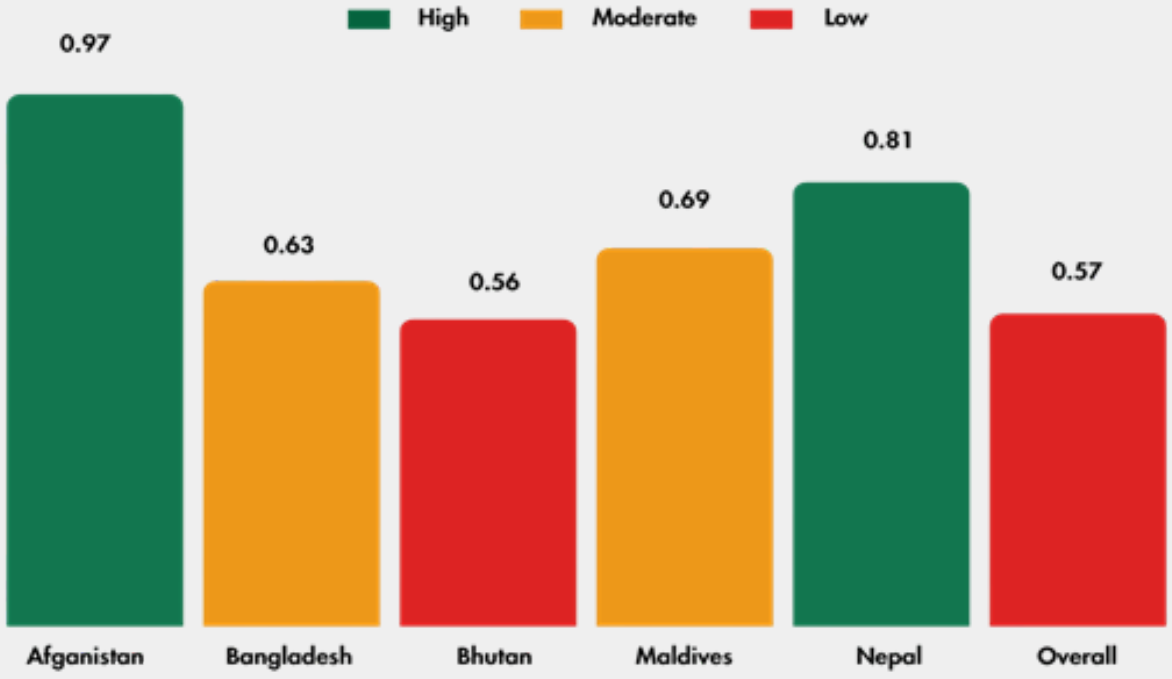


Figure 9:Disbursement-Commitment Ratio of South Asia

In South Asia (Figure 9), the way climate finance is given out is different, but it usually does not meet the needs. Afghanistan (0.97) and Nepal (0.81) show that full delivery is possible when there are urgency and the ability to carry out plans. However, Bangladesh (0.63) and Bhutan (0.56) have a steady gap between planning and delivery. They create big climate programs but only get some of the promised funds, causing delays and dependence on short-term solutions.

In Sub-Saharan Africa (Figure 9), the disbursement-to-commitment ratio for climate finance reveals systemic challenges. Countries such as Angola (0.18), São Tomé & Príncipe (0.16), Burundi (0.34), Niger (0.38), Benin (0.39), Burkina Faso (0.40), and Zambia (0.40) experience exceptionally low delivery rates (OECD, 2023). Donor caution, limited implementation capacity, and slow administrative processes delay funding, causing critical projects like drought defenses, drainage systems, and early-warning upgrades to fall behind schedule.

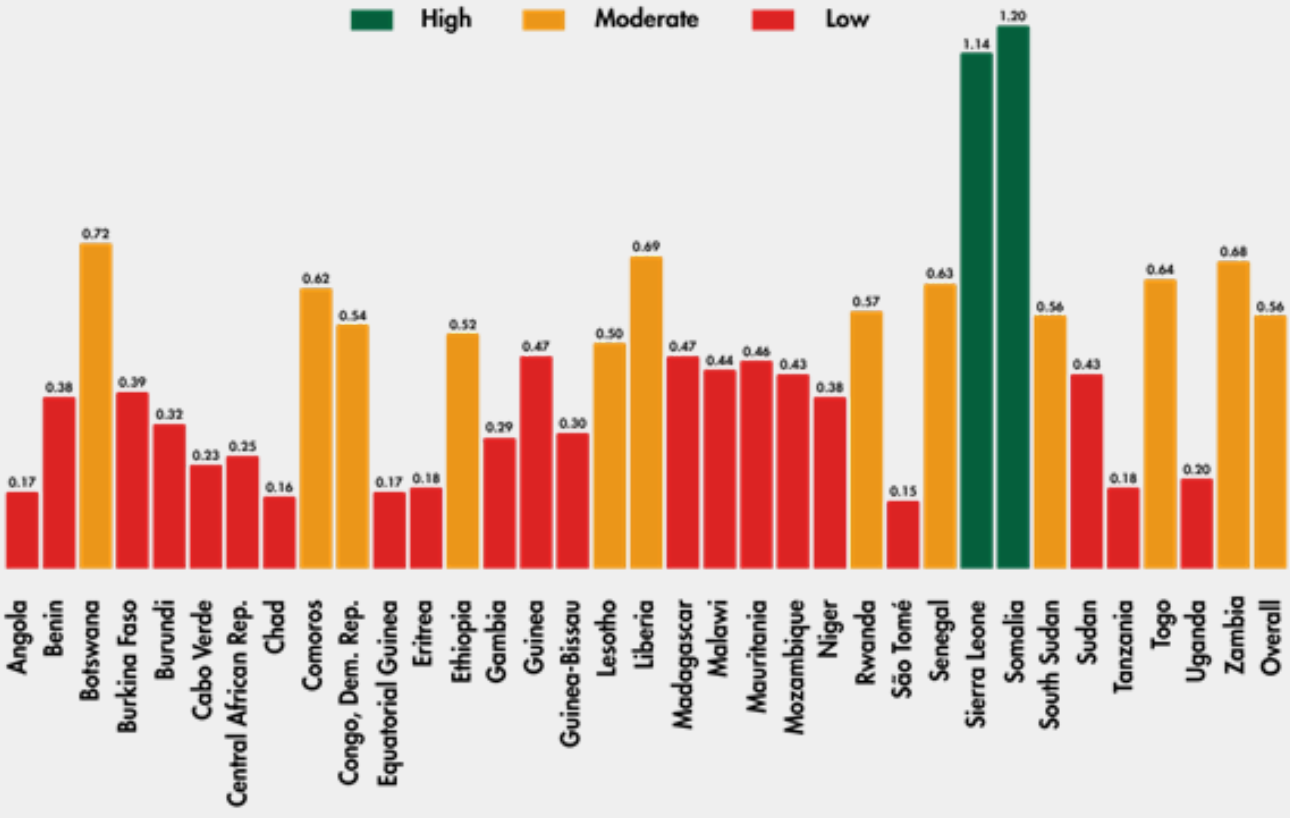


Figure 10: Disbursement-Commitment Ratio of Sub-Saharan Africa

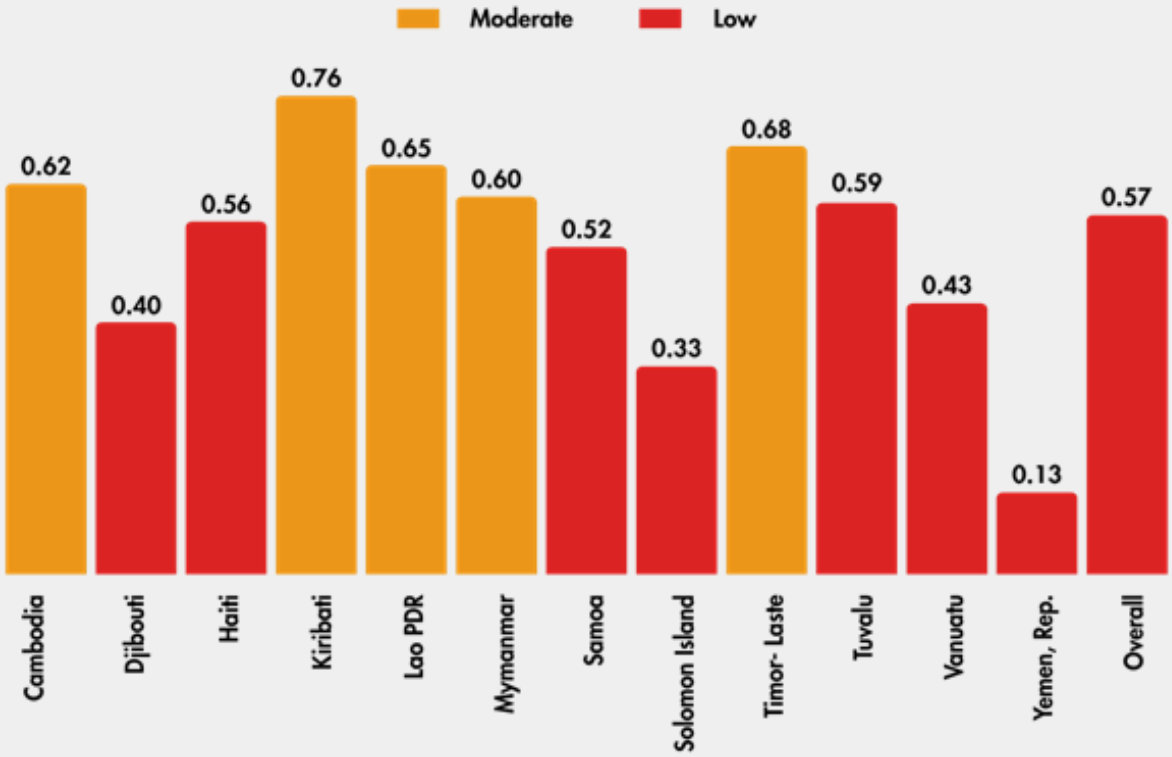


Figure 11: Disbursement-Commitment Ratio of other countries

Pacific Small Island Developing States (SIDS)

Small Island Developing States (SIDS) in the Pacific usually face delays in the delivery of climate finance even though they are facing existential climate risks. Kiribati (0.76) and Tuvalu (0.59) have relatively higher disbursement to commitment ratios (Figure 11), Samoa (0.52) and Solomon Islands (0.33) have delays most especially when dealing with complex coastal and water management projects, even though the necessity of the project is very strong and cannot be disputed.

Fragile and Conflict-Affected Regions (MENA)

Yemen (0.13) is an extreme scenario in the Middle East and North Africa because acute climate needs are fulfilled with little delivery because of the factors of conflict which do not allow funds to reach communities.

Gaps and Implications of systemic delivery

Most vulnerable countries are within a range of disbursement/commitment ratio that ranges between 0.40-0.70, which means that commitments are always made faster than actual protection. In the case of Climate and Debt Risk Index (CDRI'25), the low ratios amplify the risk (debts) since the interest accruals continue when the projects are unproductive. This is a violation of the very concept on which Natural Rights Led Governance (NRLG) is based, that of safeguarding life and property. The answer can be found in the re-design of finance mechanisms to focus on grant-based financing, fast-track windows, and direct access to national and subnational actors, so that commitments can be the mechanisms to guarantee effective and timely protection.

5.3 Debt-Grant Ratio

The Debt-to-Grant Ratio is an important indicator of the quality of climate finance, with values above 1 indicating loan-heavy support, and values below 1 indicating grant-heavy flows. Analysis of the 55 CDRI'25 countries shows that there are three archetypes: (i) heavy borrowers, with debt to grant ratios, for example, for Bangladesh (2.70), Cabo Verde (2.37), Cambodia (1.74), Myanmar (1.21), and Senegal (1.07), where loans are predominant; (ii) mixed, with debt to grant ratios between 0.40 and 1.00; and (iii) grant-dependent nations, with debt to grant below 0.40, with some at 0.00. The pattern reveals an important misalignment: the high need nations receive finance that is heavy with loans, whereas the weakest nations rely on grants, often small and irregular in number, further increasing vulnerabilities.

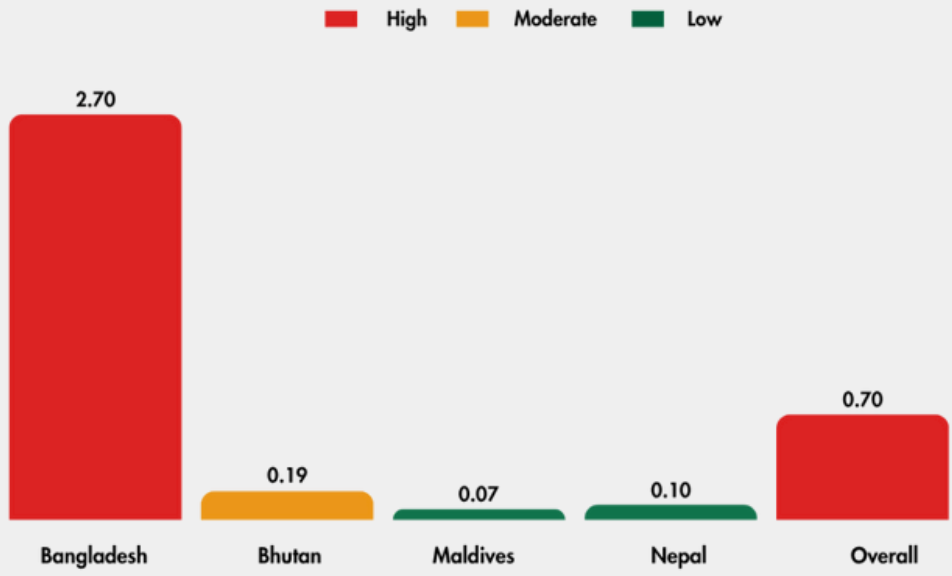


Figure 12: Debt-Grant Ratio of South Asia

In South Asia (Figure 12), the climate finance patterns are highly divergent. The region with a very high Debt-to-Grant Ratio is that of Bangladesh at 2.70, making it an anomaly for the region, with it meeting all its major climate needs through loans, hence increasing fiscal exposure to adaptation. Its counterpart, Nepal, with 0.10, highly relies on grants. The variance here points to a concerning trend: the region's largest climate program, located in Bangladesh, is facing the maximum exposure to debt, hence increasing financial vulnerabilities.

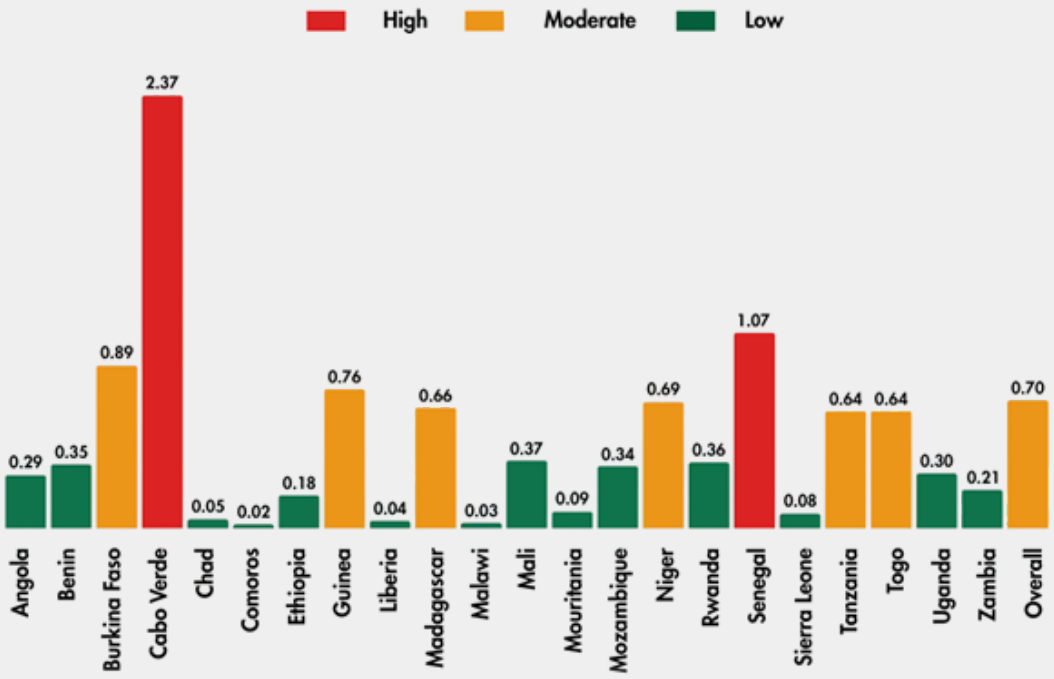


Figure 13: Debt-Grant Ratio of Sub-Saharan Africa

In Sub-Sahara Africa (Figure 13), most nations depend primarily on grant-based climate finance, but the lending percentage is rising among nations such as Guinea (0.76), Burkina Faso (0.89), Madagascar (0.66), Niger (0.69), Mali (0.37), and Mozambique (0.34). The trend, if coupled with narrow revenue bases, raises the risk of debt-service pressures with rising climate hazards, consequently threatening fiscal stability and resilience for the highly vulnerable nations.

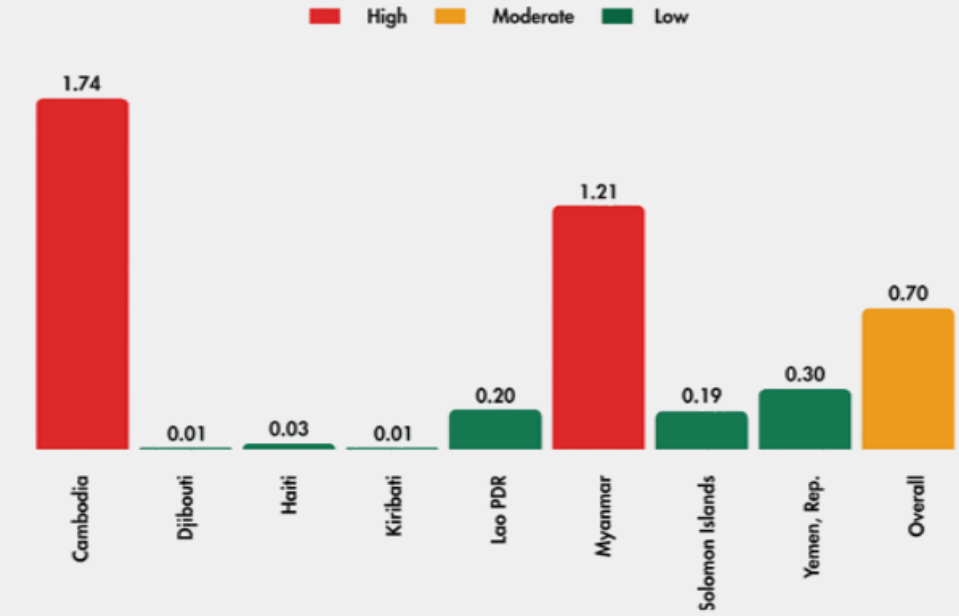


Figure 14: Debt-Grant Ratio of Other Countries

Among the Small Island Developing States (SIDS), countries like Tuvalu, Vanuatu, Kiribati, and Samoa, with a Debt-to-Grant Ratio of around 0.00, are highly reliant on grant-based climate finance (Figure 14). Such dependency is due to the limited credit access and the minimal size of the pipeline projects; support is often provided on a project-by-project rather than predictable, large-scale pipeline funding envelope basis, thus mitigating their space to step up climate action.
In fragile and unpredictable countries, including Afghanistan, Burundi, Central African Republic (CAR), Democratic Republic of Congo (DRC), Somalia, Gambia, and Guinea-Bissau, the climate finance is 100 percent grant-based, with 0.00 Debt-to-Grant Ratios. However, amounts are very small and patchy, with the absence of debt not resulting in adequate financial coverage for the climate needs.

To answer these challenges, personalized approaches are needed:

Heavy Borrowers Countries: Heavily debt-dependent countries, including Bangladesh and Senegal, need grant-first instruments, especially for adaptation and loss and damage, and strong debt-sustainability initiatives to avoid further fiscal stress.

Africa's Mixed Band: Countries experiencing rising shares in loans, such as Burkina Faso and Guinea, must establish thresholds for shares in loans and concessional arrangements that are aligned with limited capacities for revenues to build fiscal resilience.

SIDS and Fragile States: Smaller Island Developing States (SIDS) and vulnerable States require broader and more predictable grant windows, together with direct access to finances, to achieve scalable and efficient climate action without reliance on debt.

Closing the quality gap for climate finance through the grant-based, predictable, and accessible flow of funds is also equally vital to closing the quantity gap. The transition is imperative to align climate finance with fiscal resilience and the principles of climate justice, thereby enabling vulnerable nations to fight the climate challenges without further exacerbating fiscal vulnerabilities.

5.4 Adaptation-Mitigation Ratio

The Ratio of Adaptation to Mitigation tracks the distribution of climate finance between adaptation (responding to current climate vulnerabilities) and mitigation (lowering emissions of greenhouse gases). When the ratio exceeds 1, it suggests an orientation to adaptation, commonly appropriate for Least Developed Countries (LDCs) with recurring climate shocks. When the ratio is below 1, it suggests a focus on mitigation, serving energy transition but underinvestment in pressing needs for resilience. The ratio reveals where the climate finance is aligned with the nation's current exposure to hazard and where it is not, highlighting important gaps for reducing lived vulnerabilities.

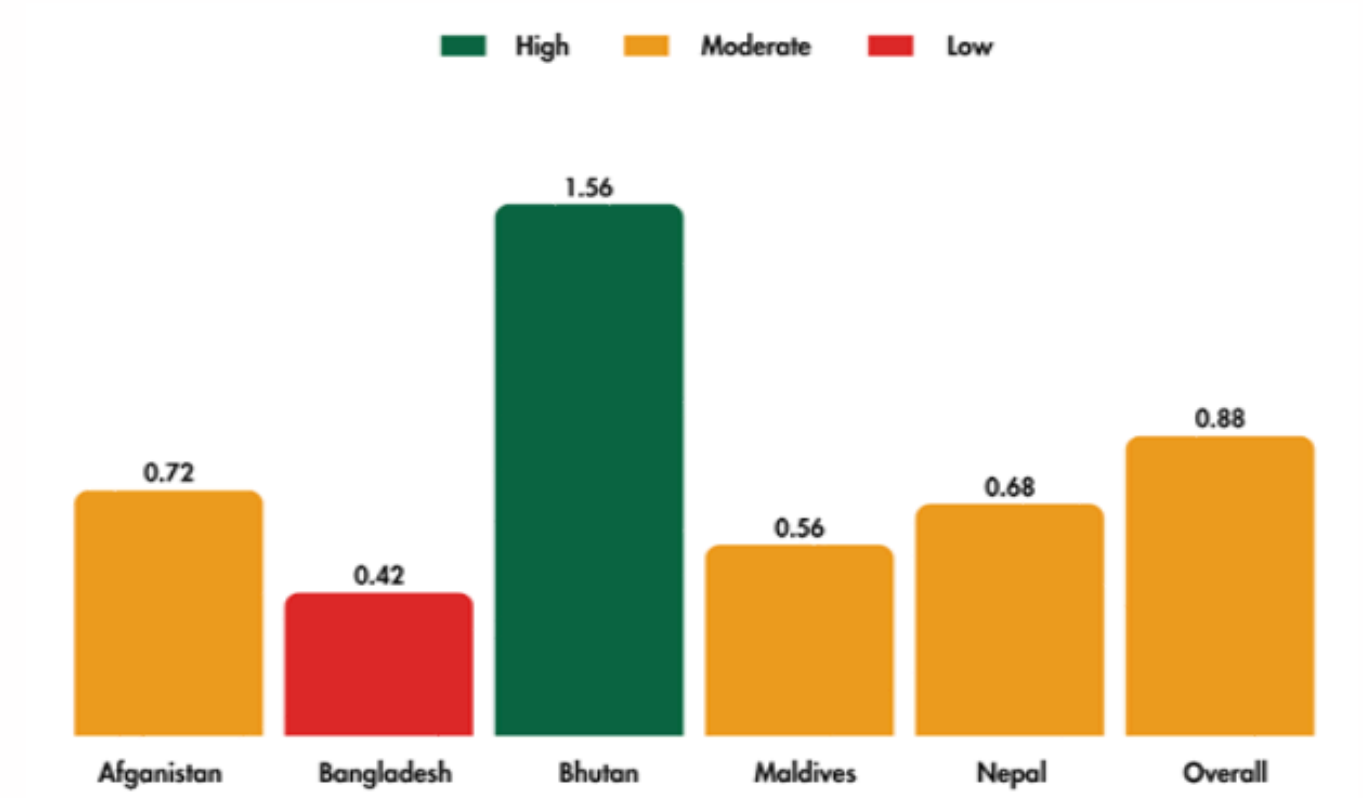


Figure 15: Adaptation-Mitigation Ratio of South Asia

In South Asia, the distribution of climate finance is more prone to mitigation as opposed to adaptation despite the region being susceptible to climate risks. (Figure 15) The profile of most countries is that of mitigation, with Adaptation-to-Mitigation Ratios of less than 1: the closer to a balanced distribution is Nepal (0.68) and the further away is the practice of Bangladesh (0.42), Maldives (0.56), and Afghanistan (0.72). Another example is Bhutan (1.56) and its focus on ecosystem-based adaptation, which is provided to fit its small and mountainous economy. This local pattern suggests that renewal energy projects are being funded more easily in comparison to community-level resilience projects, which makes the adaptation needs underfunded in comparison with the region's vulnerabilities.

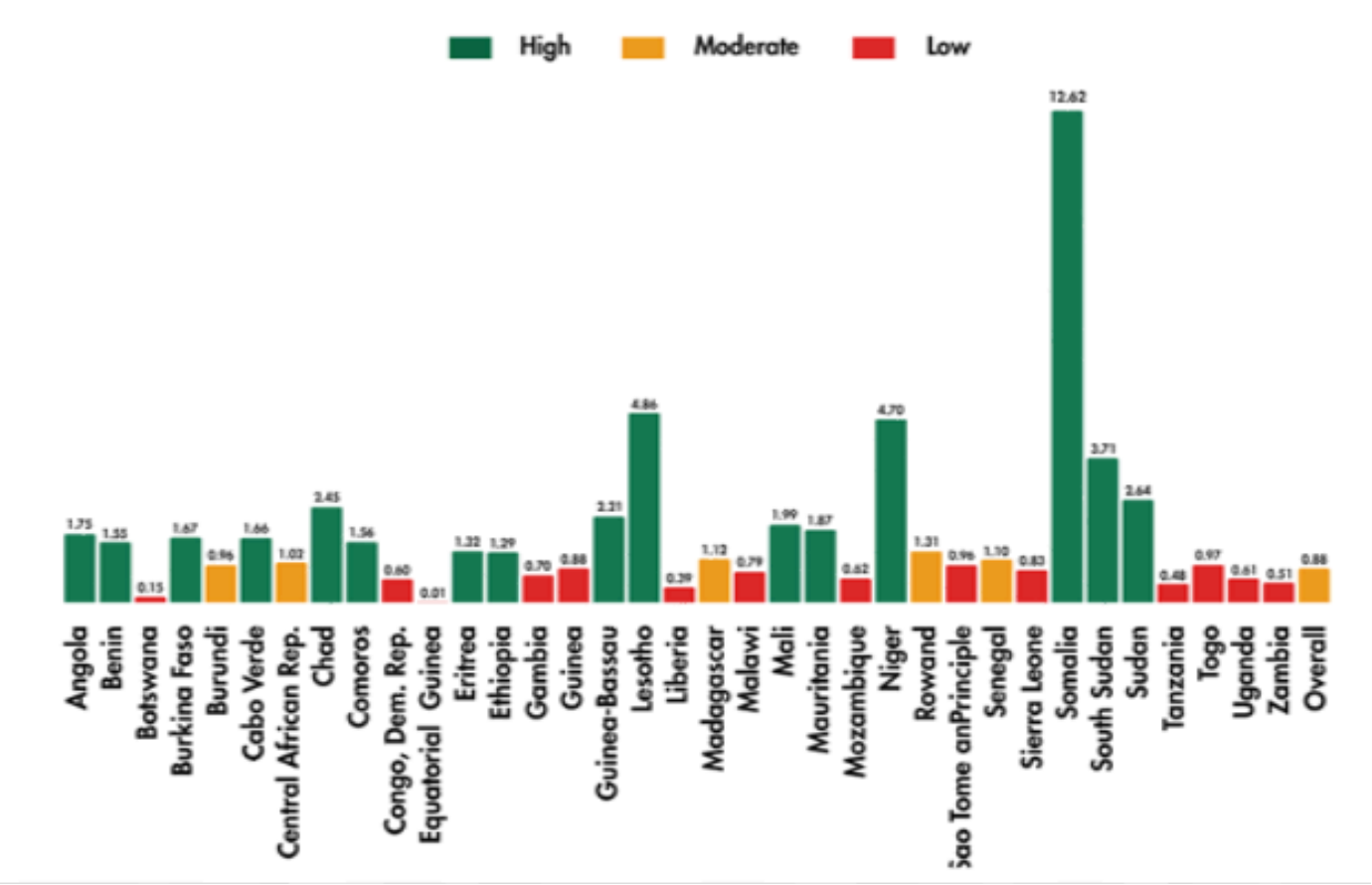


Figure 16: Adaptation-Mitigation of Sub-Saharan Africa

In Sub-Saharan Africa, adaptation expenditures account for many climate finance expenditures, with some exceptions. The Higher Adaptation-to-Mitigation Ratios for Somalia (12.62), Lesotho (4.86), Niger (4.70), and Chad (2.45) imply the need for considerable investment to address issues related to drought, desertification, and flood risk. Botswana (0.15), however, with Liberia (0.39) and Equatorial Guinea (0.01) reveals a pattern toward externally driven or mitigation-focused portfolio mixes, frequently with an energy or carbon focus, at the potential expense of the need to meet domestic needs for resilience.

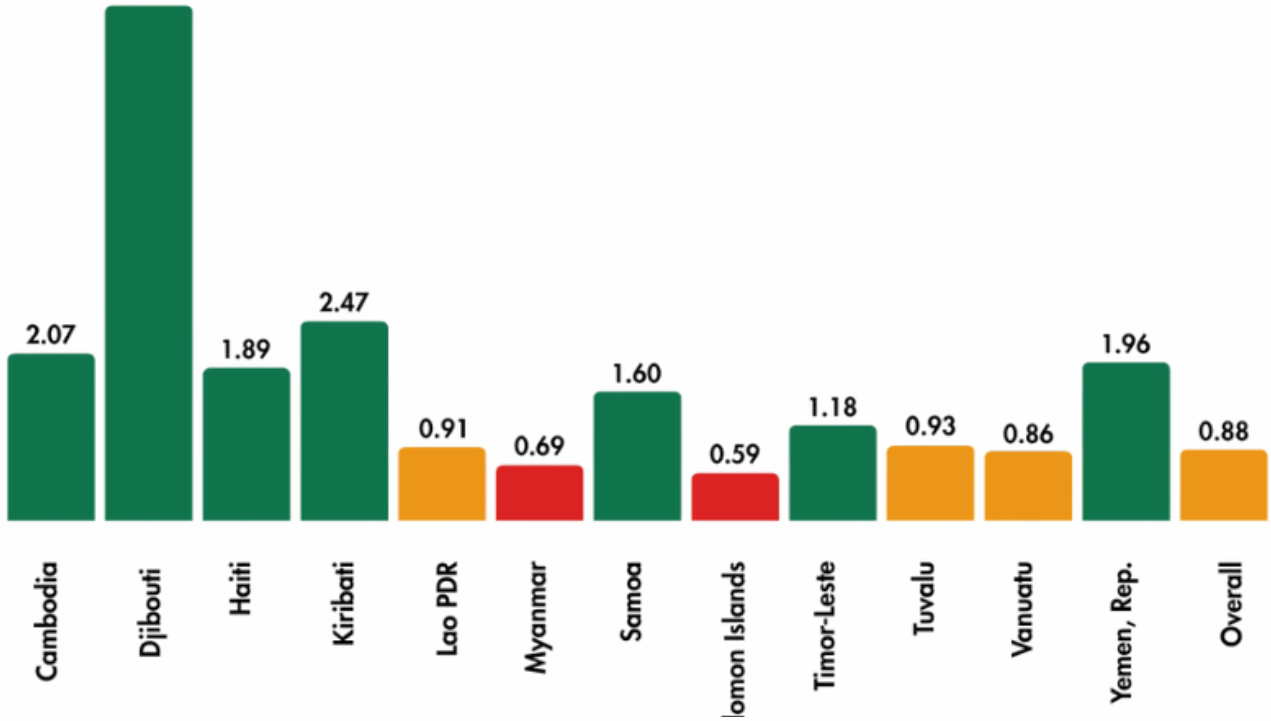


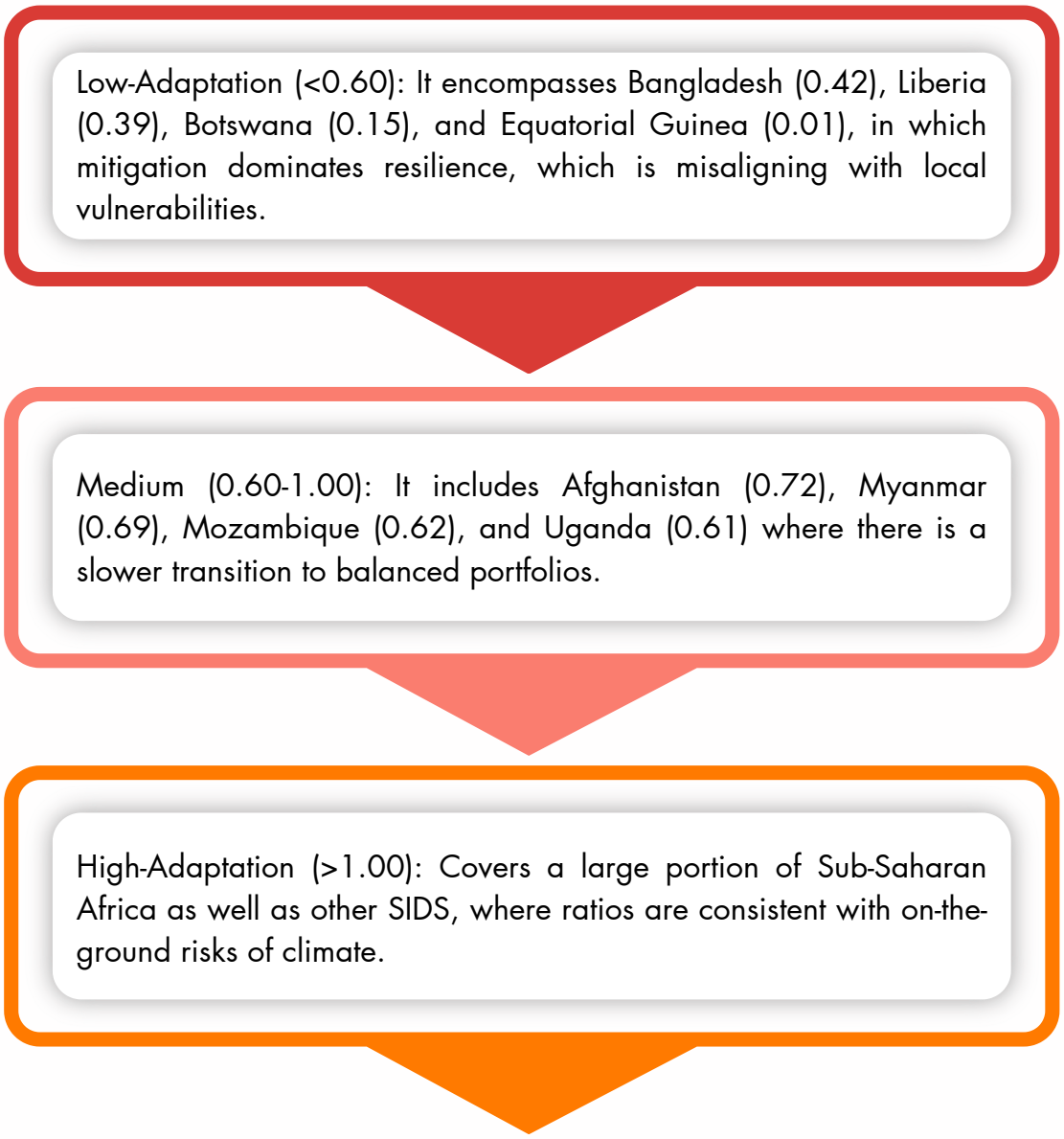
Figure 17:Adaptation-Mitigation Ratio of Other Countries

Small Island Developing States (SIDS)

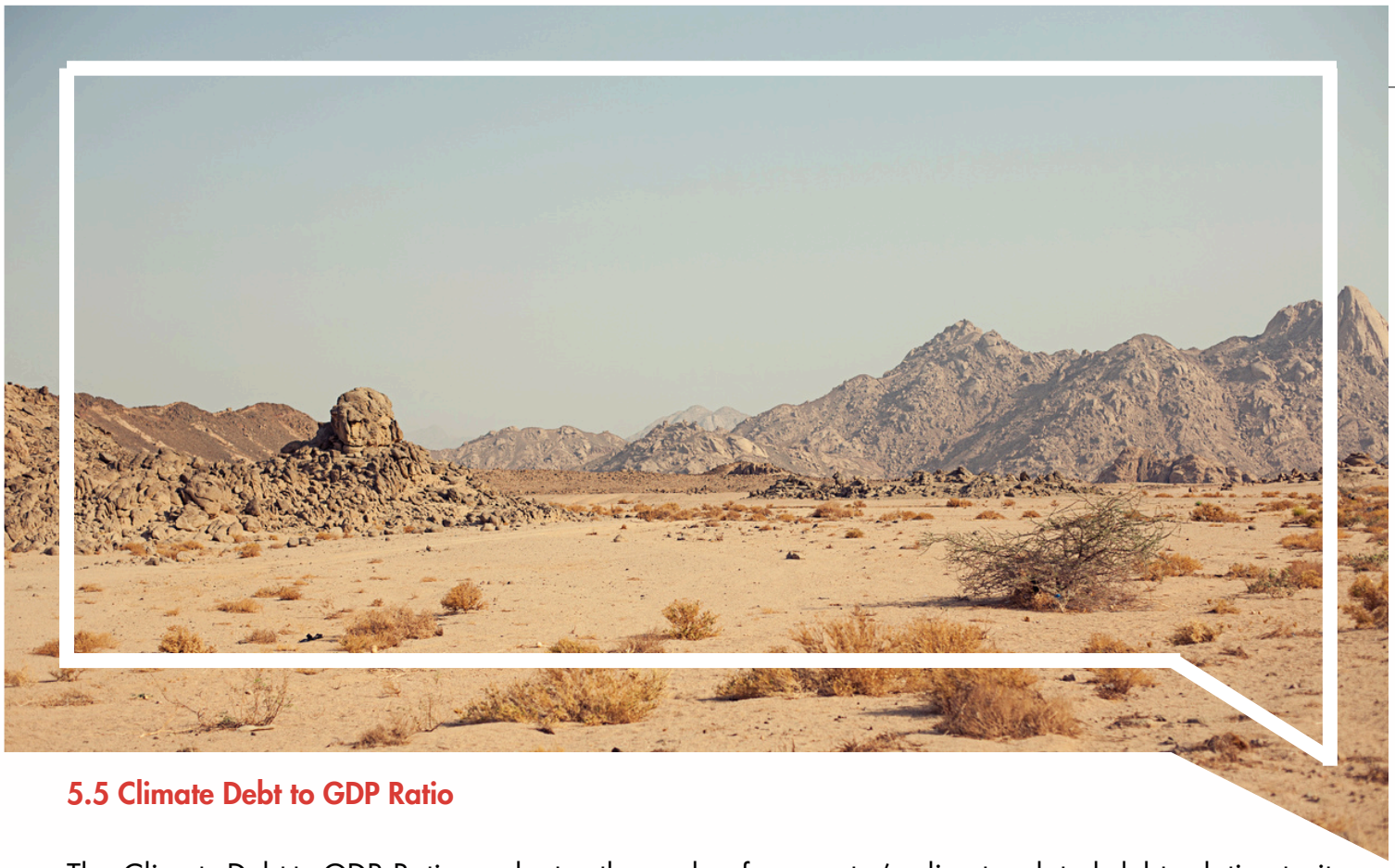
Adaptation is central to the needs of Small Island Developing States (SIDS) because of existential climate threats, but there is unequal allocation of funds. The emphasis of coastal protection and water security is identified in Kiribati (2.47), Guinea-Bissau (2.21), Samoa (1.60), and Tuvalu (0.93); the high Adaptation-to-Mitigation Ratios in these countries signify the necessity of something urgent. Solomon Islands (0.59) and Maldives (0.56) however exhibit a mitigation tilt, which is motivated by the preference of the financiers towards bankable renewable energy projects, even though adaptation is necessary to survive.

Fragile and Conflict-Affected States

Adaptation prevails in weak and conflict-ridden states because of short-term weathering hazards. South Sudan (3.71), Sudan (2.64), and Yemen (1.96) have high ratios, and Somalia (12.62) has an extreme value, meaning that climate finance is being used to fund immediate demands such as water and food security and not long-term reductions in emissions.



In the case of high exposure to hazards with a ratio lower than 1, climate finance does not serve short-term requirements. According to the views of CDRI'25 and Natural Rights Led Governance (NRLG), the donors are advised to focus on grant-based adaptation financing on critical sectors such as water, food systems, early warning, and social protection especially in high-vulnerability situations. At the same time, countries should employ concessional mitigation finance in cases when revenue streams meet it so that countries can solve urgent survival challenges as they work towards decarbonization in the future.



5.5 Climate Debt to GDP Ratio

The Climate-Debt-to-GDP Ratio evaluates the scale of a country's climate-related debt relative to its economic size. Higher ratios indicate that climate finance, often in the form of loans, places a heavier burden on a country's fiscal capacity, limiting resources available for social spending and critical adaptation efforts.

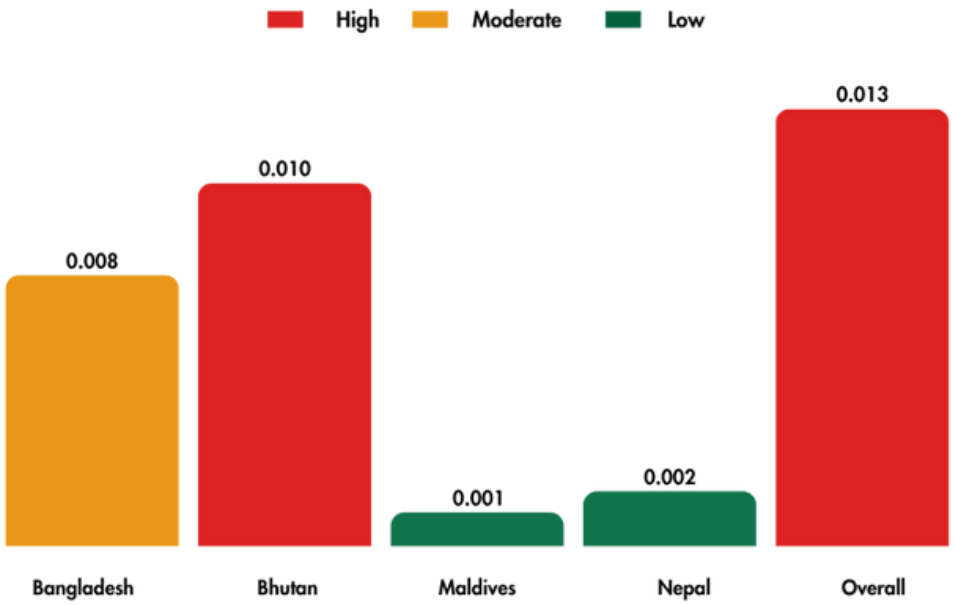


Figure 18: Climate Debt to GDP Ratio of South Asia

In South Asia, the ratio levels are generally low, with 0.0077 for Bangladesh, 0.0104 for Bhutan, and 0.0009 for the Maldives. For Bangladesh, this indicator underestimates the growing number of climate loans, which will grow more apparent with time. With 0.004 ratio, for Myanmar, the virtual zero is more indicative of political and institutional shocks rather than resilience. The regional pattern suggests that even though the ratio levels are currently not very large, it has the potential to grow more if the share of loans grows.

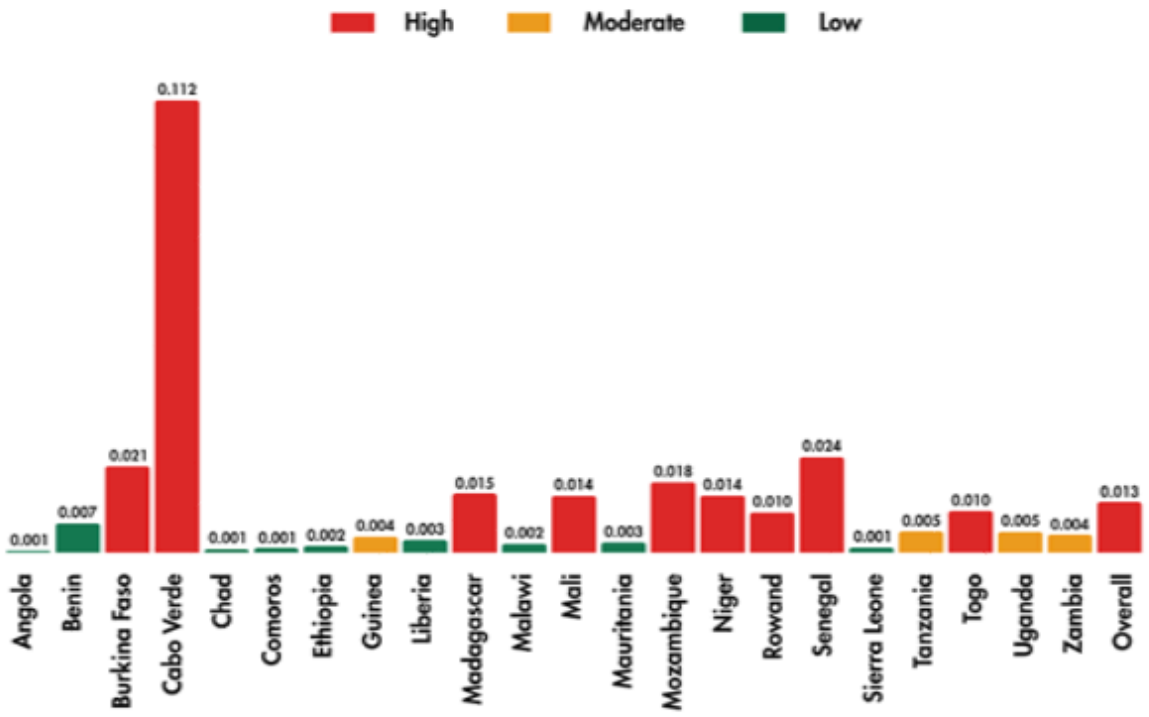


Figure 19:Climate Debt to GDP ratio of Sub-Saharan Africa

In Sub-Saharan Africa, the great majority of countries exhibit low Climate-Debt-to-GDP Ratios, ranging from 0.00 to 0.01; these include Ethiopia (0.0017), Madagascar (0.0146), Mali (0.0141), Niger (0.0142), Rwanda (0.01), Tanzania (0.005), Togo (0.01), and Uganda (0.005) (OECD, 2023). Even if these are seemingly small, the limited fiscal space means that even small climate loans are quick to place budgetary constraints, thus diverting funds away from social provisions and necessary adaptation efforts. Increasing pressures are seen among countries like Mozambique (0.0175) and Senegal (0.0237), where concessional borrowing is the norm and financial cushions are minimal. In the case of the Small Island Developing States, the exception is found for Cabo Verde (0.1121), with the feature of a narrow revenue base and highly loan-intensive climate finance portfolios, leading to a structurally meaningful level of climate debt.

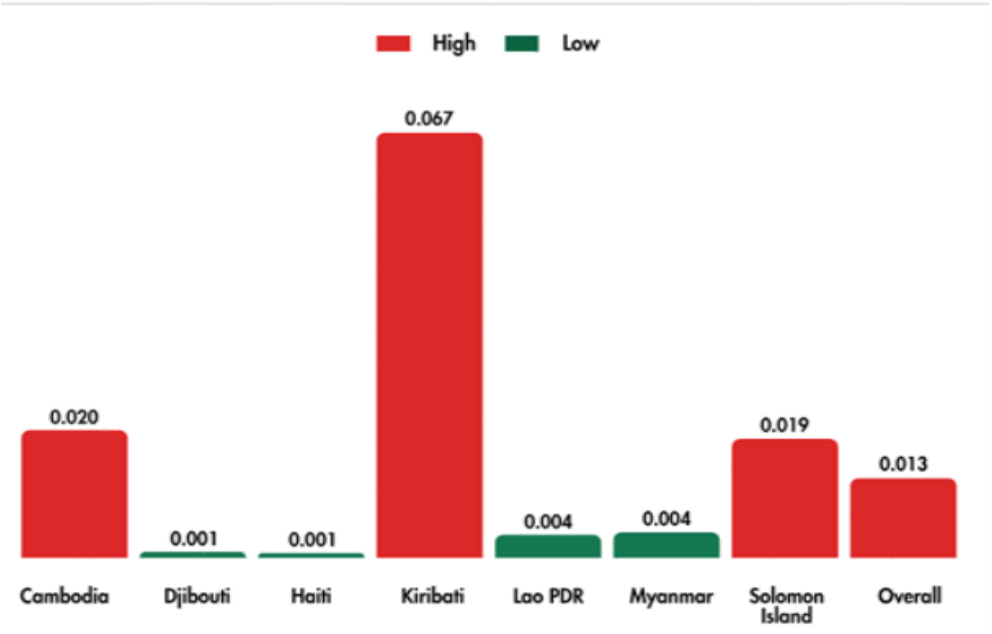


Figure 20: Climate Debt to GDP ratio of Other Countries

Small Island Developing States (SIDS): The climate debt ratios for the SIDS are equivalent to excessively large burdens, with respect to the small Gross Domestic Products (GDPs) and the immense exposure to climate risk. Kiribati (0.066) and the Solomon Islands (0.018) represent how even moderately sized figures can have significant macroeconomic effects. The higher end is represented by Cabo Verde (0.1121) where loans represent the main form of finance. In these regions, the lack of grants quickly takes the form of a fiscal issue.

Fragile and Conflict-Affected States (MENA/HoA): In countries like Yemen, Eritrea, and South Sudan, near-zero ratios often reflect data gaps or limited borrowing, rather than indicating financial stability. These nations face high climate adaptation and mitigation needs, but limitations in financial structures and access to climate financing often keep debt off the book's recovery phases trigger a surge in borrowing.

For countries where climate debt ratios are rising or already high, particularly in Cabo Verde and small Pacific islands, the focus should be on converting loans to grants, pursuing debt-for-climate swaps, and implementing strict limits on loan components for adaptation and loss and damage (L&D). For regions like Africa and South Asia, which are in the "low but latent" category, prioritizing adaptation grants is essential to avoid future solvency risks. By cross-checking the Debt–Grant Ratio, it is possible to identify instances where rising loan dependence, combined with growing GDP ratios, necessitates immediate access to grants and relief measures.

5.6 Per-Capita Climate Debt to Per-Capita Income

This ratio compares climate-related debt to average income, reflecting the proportion of an individual's earnings devoted to servicing climate loans. Higher values indicate greater household exposure, as it implies a heavier financial burden through taxes, reduced public services, or increased utility costs.

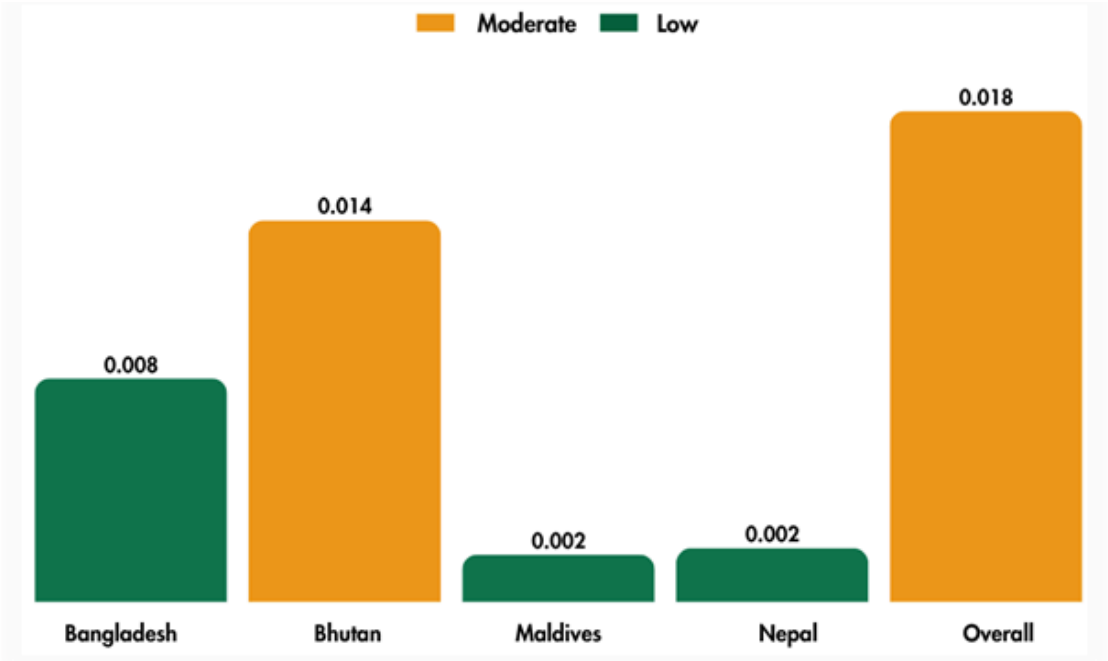


Figure 21:Per Capita Climate Debt to Per Capita Income Ratio of South Asia

In South Asia (Figure 21), climate debt ratios are generally low (≤0.01), with Afghanistan (0.00), Bangladesh (0.01), Myanmar (0.01), and Bhutan (0.01) exhibiting such figures. This is either due to the modest size of their climate loan portfolios or limited access to borrowing. However, the trend is "low but latent": if loan-financed climate projects grow faster than incomes, the financial burden on households will increase rapidly.

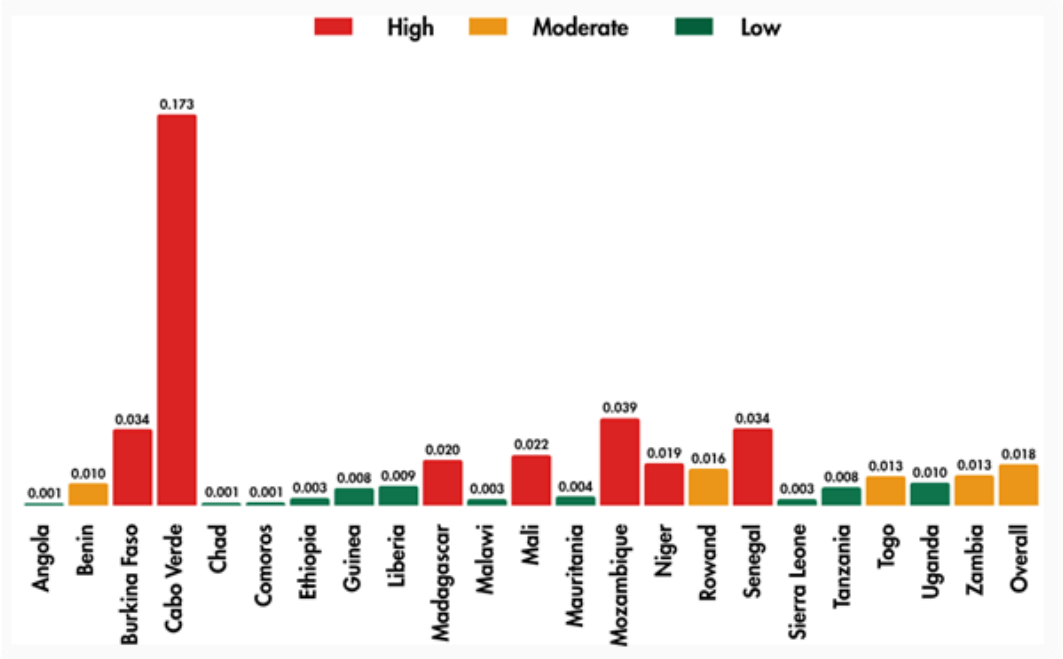


Figure 22:Per-Capita Climate Debt to Per-Capita Income Ratio of Sub-Saharan Africa

In Sub-Saharan Africa (Figure 22), many nations have climate debt ratios below or equal to 0.01, including Ethiopia (0.00), Malawi (0.00), Sudan (0.00), Tanzania (0.01), and Uganda (0.01). The finding indicates weak absorption of climate loans alongside already weak fiscal space. On the other hand, countries within 0.02 to 0.04 ratio, for example, Burkina Faso (0.03), Senegal (0.03), Madagascar (0.02), Rwanda (0.02), Niger (0.02), and Mozambique (0.04), face more significant burdens. In these nations, even-low per-capita debts gain central significance at the time of economic shocks, since both incomes and budgets are already under great stress.

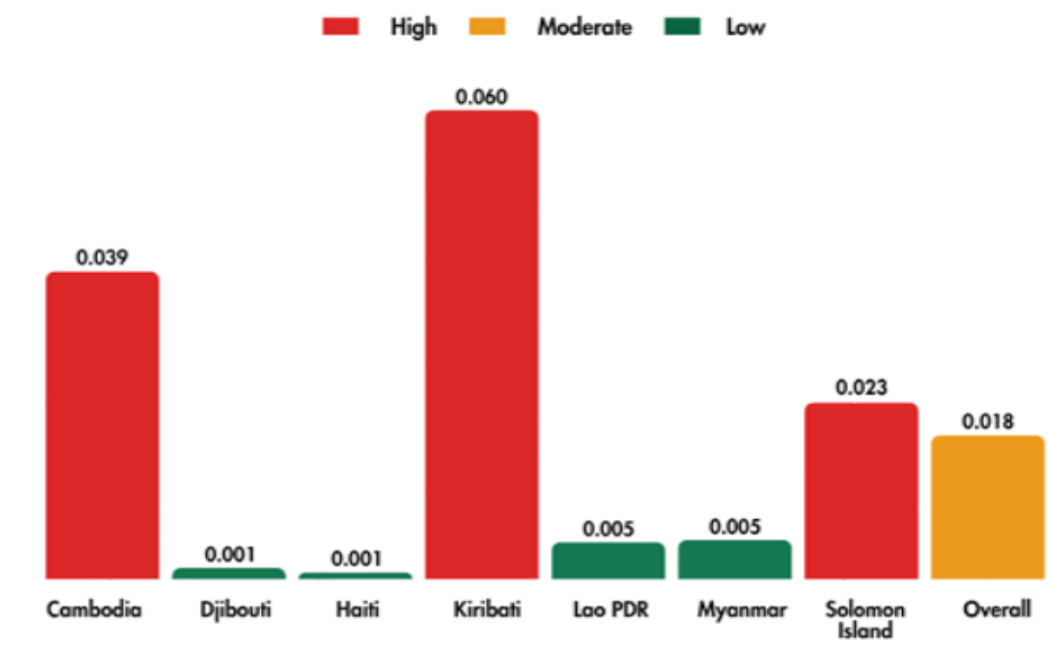


Figure 23:Per Capita Climate Debt to Per Capita Income Ratio of Other Countries

Small Island Developing States (SIDS): The per-capita burdens are disproportionately high in the SIDS because of their small populations and thin economies. As seen in the Figure 23, the ratio of Cabo Verde (0.17) and Kiribati (0.06) is the highest as well as the Solomon Islands (0.02) is highly affected by the per-capita debt. Even in these areas, moderate amounts of loans lead to huge individual liabilities.

Fragile and Conflict-Affected States: Low ratios, in the case of Yemen, Eritrea, or South Sudan, are often indicative of little borrowing, or a lack of data, and not financial protection. But in cases where the recovery stages require loans, household exposure may rise dramatically.

According to the view of Nature-Justice, high per-capita burdens contravene the Right to Development. The citizens of the low-emitting countries are in effect paying a price to a crisis that they have not created. Climate Debt-to-GDP and Debt to Grant Ratio are used to cross-check cases of priority loan conversion to grants or relief. It is important to note that the situation in Cabo Verde and Liberia is particularly notable, as both macroeconomic and household vulnerabilities overlap each other, which is why the two countries are important candidates to receive specific help.

5.7 Per Capita Climate Debt to Per Capita CO_2 Emissions

This indicator normalizes a country's per-capita climate debt (USD per person) by its per-capita CO_2 emissions (tonnes of CO_2 per person). Conceptually, it approximates the debt liability per tonne of emissions borne by an average resident. Very low emissions can artificially inflate the ratio, and near-zero emissions can make it undefined (due to division by nearly zero). As a justice metric, high values highlight a misalignment with the principles of "polluter-pay" and "capacity-to-pay," complementing macroeconomic indicators like debt-to-GDP.

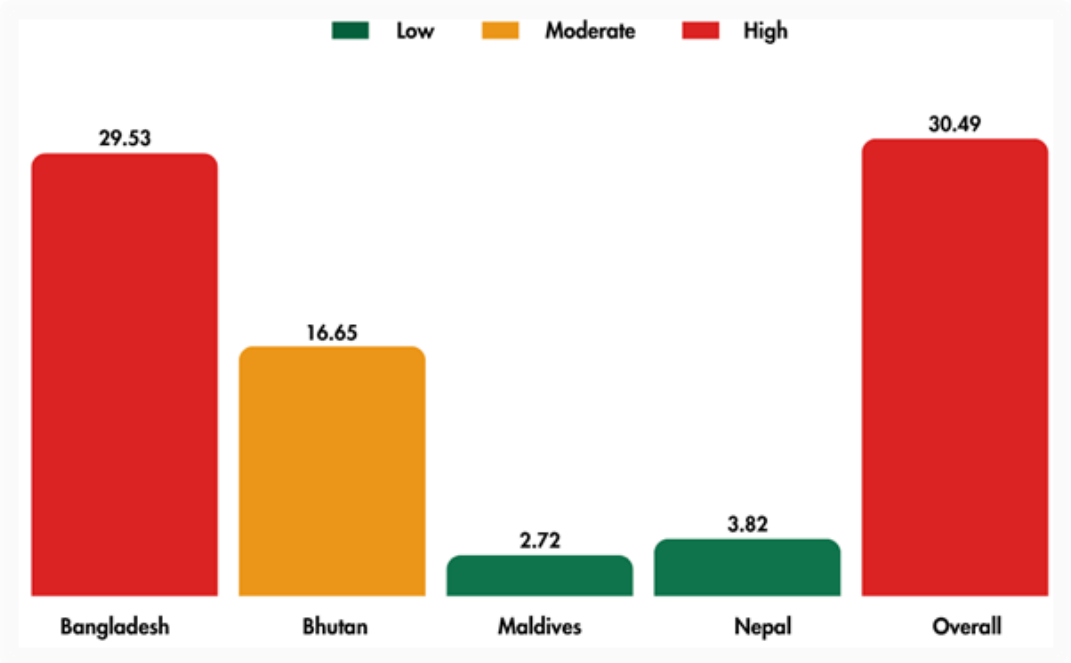


Figure 24:Per Capita Climate Debt to Per Capita CO2 Emission of South Asia

In South Asia (Figure 24), the ratio for several low emitters is exceedingly high: Bangladesh (29.53), Bhutan (16.65), the Maldives (2.72), Myanmar (8.55), and Afghanistan (0.00). The above points to highly loan-financed portfolios compared to their low carbon footprint levels, with the Maldives (2.72) featuring an exposure of the SIDS type for the sub-region.

In Sub-Saharan Africa, we observed a chain of extreme ratios, including Niger (103.23), Rwanda (93.11), Burkina Faso (87.19), Senegal (70.87), Madagascar (64.95), Mauritania (8.09), Uganda (44.90), Mozambique (49.44), Togo (40.53), Gambia (21.02), Djibouti (6.18), Chad (4.98), and Comoros (5.59). Some nations exhibit levels of zero (e.g., Eritrea 0.00 and South Sudan 0.00) that signify negligible borrowing for the climate or absence of records, not absence of climate requirements. The example of Cambodia (51.20) is revealing, demonstrating that even nations with very low emissions host monumental debt-per-ton liabilities.

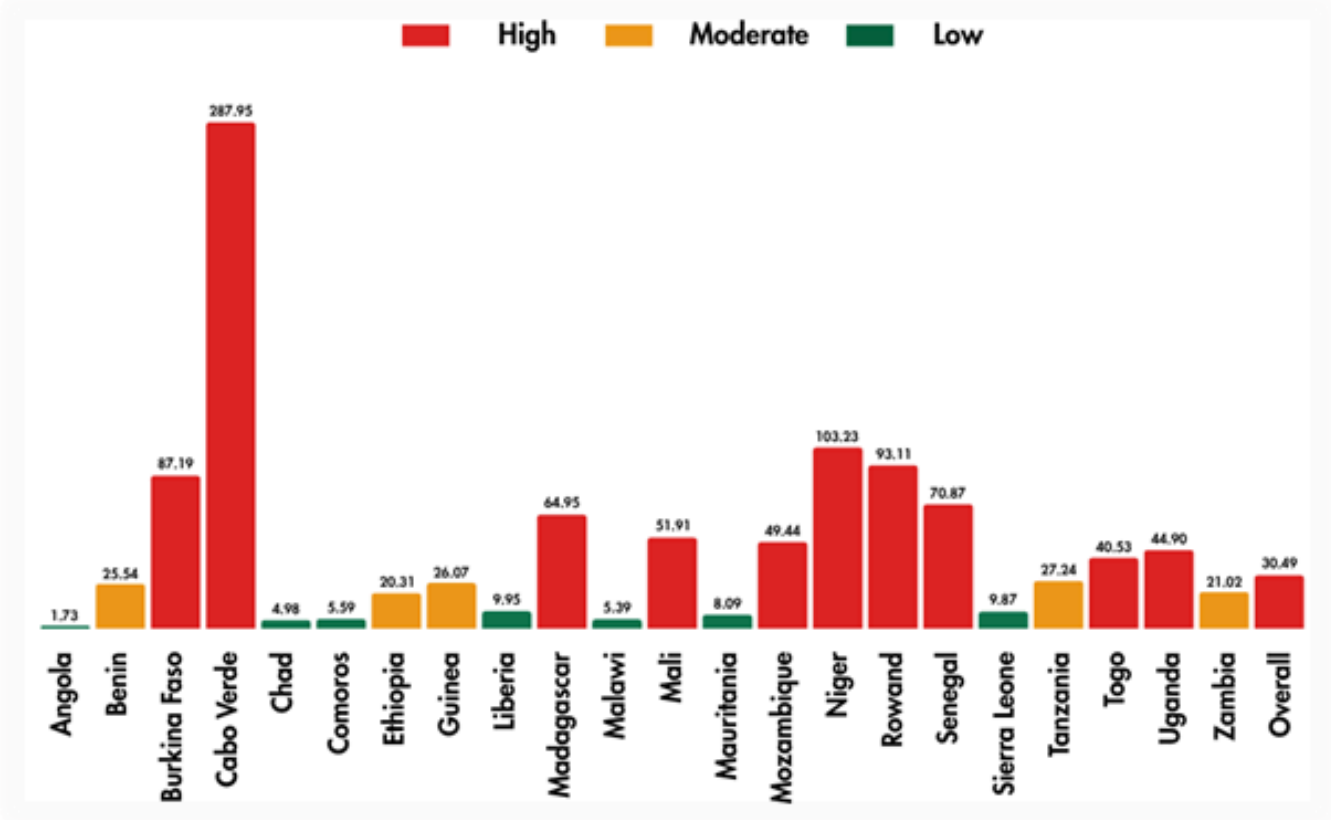


Figure 25:Per Capita Climate Debt to Per Capita CO2 Emission of Sub-Saharan Africa

As (Figure 25) reveals, there is a natural elevated value of per capita climate debt to per capita CO2 values due to the low level of emission and a high level of exposure to climate-related risks among Small Island Developing States (SIDS). For example, Cabo Verde (287.95), Kiribati (228.49), and the Solomon Islands (85.14) illustrates how modest loan volumes can create disproportionately heavy justice burdens for smaller economies. Additionally, Mali (51.91) further exemplifies this phenomenon, whereby limited borrowing can nonetheless precipitate considerable challenges regarding equity and the capacity to repay.

The values among Small Island Developing States (SIDS) are structurally high as there are insignificant emissions and existential risks to climatic exposure. As an example, the cases of Cabo Verde (287.95), Kiribati (228.49) and the Solomon Islands (85.14) would illustrate how even small amounts of lending will impose out of proportion justice costs on small economies. This dynamic is also depicted by Mali (51.91) since even limited borrowing may cause considerable problems in the context of equity and the ability to repay.

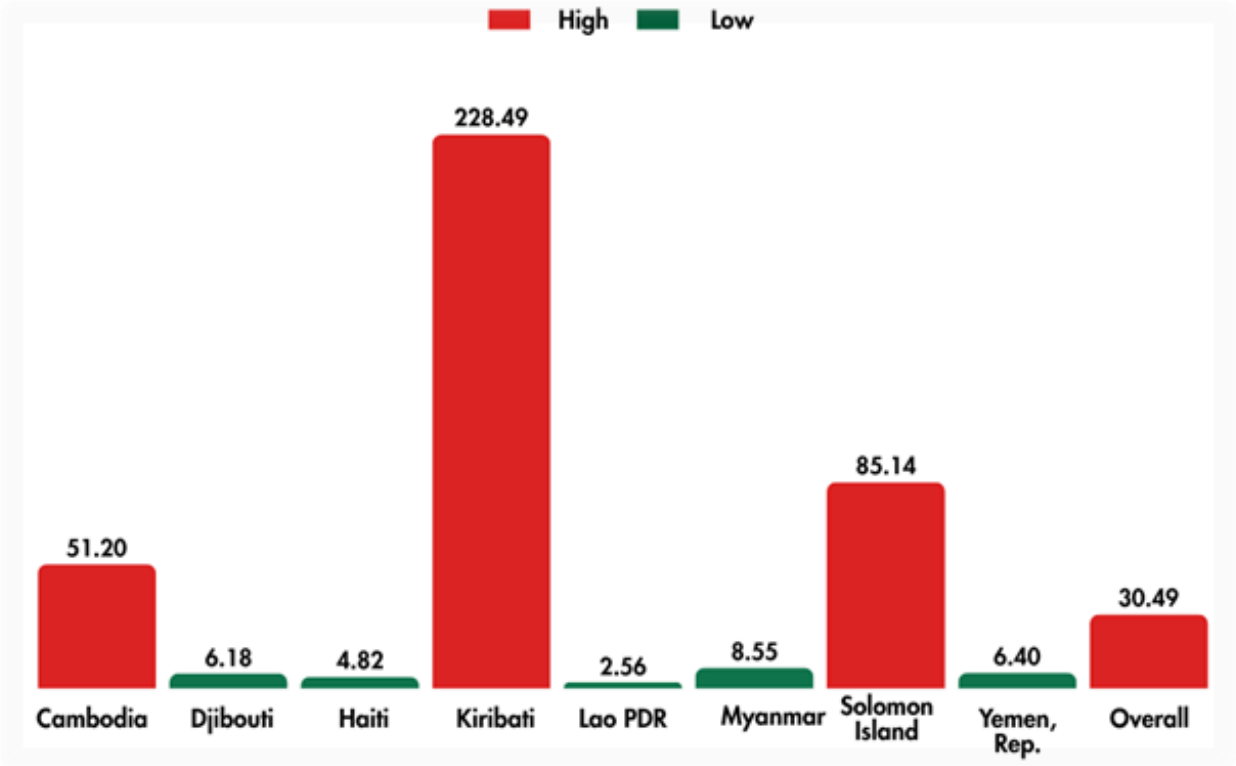


Figure 26:Per Capita Climate Debt to Per Capita CO2 Emission of Other Countries

As (Figure 26) shows, Yemen (21.02) is classified under the mid-high category, where the current war and the insufficient fiscal space raise the risk that debt repayment can jeopardize essential public services. In countries with higher debt per ton, namely Cabo Verde (287.95), Kiribati (228.49), Niger (103.23), Rwanda (93.11), Burkina Faso (87.19), and the Solomon Islands (85.14), grant-first support for adaptation and loss and damage (L&D) is needed, along with the conversion of loans to grants and debt-for-climate swaps. Cross-referencing per-capita debt/income with climate debt-to-GDP ratios enables the identification of the cases where both household and macroeconomic charges are most significant (such as Cabo Verde, Niger, and Rwanda). This enables financial support to be aligned with the individual responsibility and capacity each state, thus avoiding the exacerbation of the debt injustice related to climate.

5.8 Per Capita Climate Debt in Relation to the Natural Capital Index (2024)

We compare per-capita climate debt (US$/person) with the Natural Capital Index (0–100) to examine whether a country's ecological assets such as forests, water, biodiversity, fisheries, and minerals correlate with lower debt exposure. If nature functions as a fiscal buffer, countries with a high NCI should exhibit lower climate debt. However, if this is not the case, we observe what can be termed an "ecological wealth paradox," where countries rich in natural resources still face significant climate debt burdens.

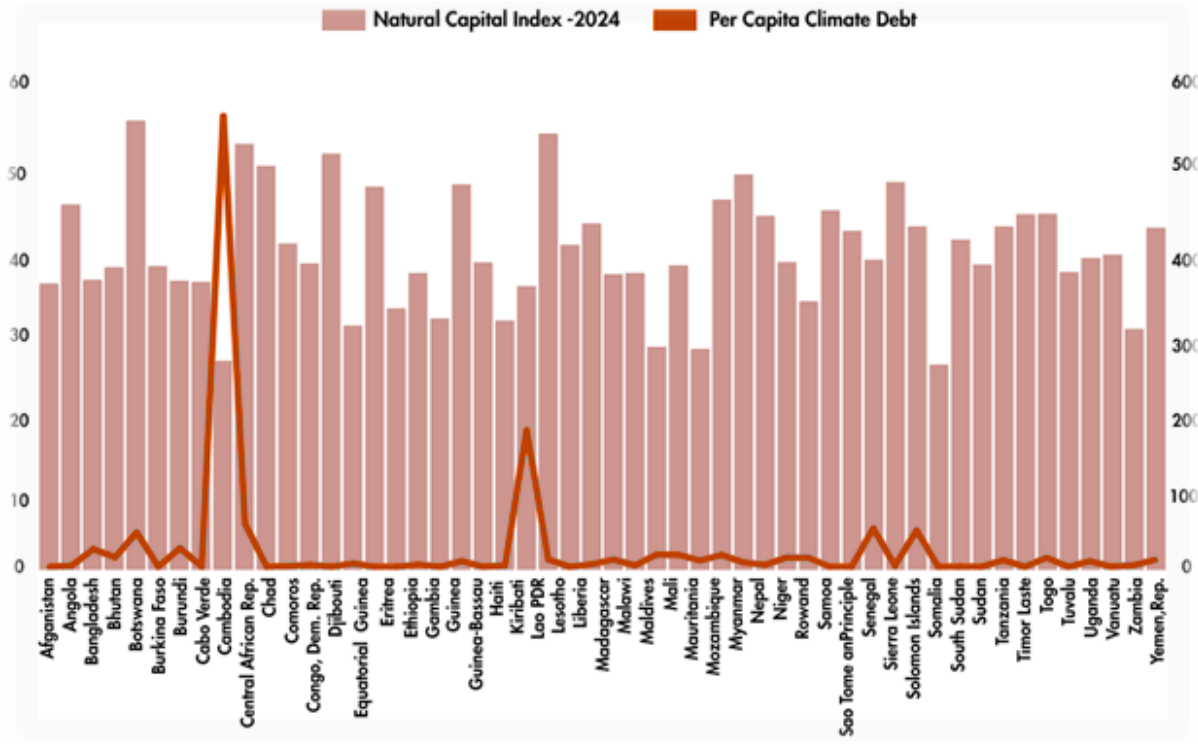


Figure 27:Per Capita Climate Debt Over Natural Capital Index Score

Sub-Saharan Africa - High Nature, Low Recorded Debt (with Exceptions)

Forest-rich countries like the Democratic Republic of Congo (DRC), Central African Republic, and Guinea-Bissau point to near-zero per-capita climate debt with above 50 Natural Capital Index (NCI) scores. Such is not a sign of fiscal robustness but suggests minimal borrowing and under-leveraged nature-based finance. Senegal (US$47.13), an exception, shows moderate NCI with increasing loans to guard coastlines. In African Small Island Developing States (SIDS), with a thin revenue base, exposure to climate risk, and loan-dependent climate portfolios, the structurally important climate debt is observed for Cabo Verde (US$554.75, 27.89 NCI). Mozambique and Mali, with teen-dollar per-capita debt levels and moderate NCI, are exhibiting early indicator risk for fiscal constraints.

South Asia - Modest Nature, Mixed Debt

Nepal and Afghanistan, with low NCI and near-zero debt; practically all due to restricted access to borrowing stand apart from Bangladesh (US$21.49, 38.66 NCI), Burkina Faso, and Benin, whose territories exhibit medium levels of debt between approximately US$10–25, with corresponding NCI rankings around 38-41. Here, where natural buffers are relatively weak, medium-level climate debt is a significant concern. The case of Bhutan (59.86 NCI, 42.07 US$) is an intriguing anomaly: with strong natural capital and carbon-negative status, it is subject to large debt, thus revealing the debt-based climate finance dependency.

SIDS: Nature Won't Make Up for Scale and Exposure

In the Small Island Developing States, the per capita climate debts are remarkably high. The Solomon Islands (US$44.57), Kiribati (US$167.93), and the Maldives (US$14.89, NCI 29.73) all carry heavy debt levels weighted against ecological endowment. The Cabo Verde example, with the startling value of US$554.75 (NCI 27.89), demonstrates how underdeveloped natural resources and minimal economies make each dollar borrowed more significant.

Three archetypes emerge:

High Nature/Low Debt but Under-financed (e.g., Central African Republic, Guinea-Bissau, DRC): Such countries are well-endowed with natural resources, but weak on climate finance.

Mid Nature/Moderate Debt (e.g., Benin, Burkina Faso, Mozambique, Mali, Cambodia - NCI 56.78, US$52.81, Bangladesh): These nations are at medium debt with a balanced yet remaining fragile ecological base.

Low Nature/High Debt (e.g., Cabo Verde (NCI 27.89), Maldives (NCI 29.73)): Countries with weak natural endowments and a high debt load where nature-based solution strategies cannot compensate for financial exposure.

Policy Priorities

Policy Prioritization is needed for grant-first adaptation and loss and damage (L&D) strategies, debt-for-nature swaps, and predictable, direct-access finance mechanisms that fund ecosystem services without the issuance of new sovereign debt. It enables natural capital to become an asset base, rather than collateral.

5.9 Total Climate Debt (2002–2023) to Total Debt Service (2023)

The ratio compares the climate-labeled debt accumulation of a nation for the period 2002 to 2023 with the nation's 2023 total debt service. Higher values suggest that the climate debt is a sizeable percentage of the nation's latest yearly repayments, suggesting extended payoff periods and the potential for structural climate loan dependency.

The ratio looks at a country's 2002 to 2023 climate-labeled debt stock relative to its 2023 total debt service. Higher levels indicate that climate debt is a significant share of the country's yearly repayments for the latest year, thus suggesting extended repayment years and potential reliance on structural climate loans.

According to our research, the poorest countries of the world, which face the most adverse impacts of climate change, continue to cough up more money on debt repayments than receive funding climate efforts. Specifically, of the total of 55 countries assessed, US$47.17 billion was paid in debt repayment in 2023 alone, while only US$33.74 billion was received on climate funding. This plays an important role in creating a cycle whereby governments continue to borrow money to fund climate costs which in essence do not contribute much unless they undermine key sectors such as health or education.

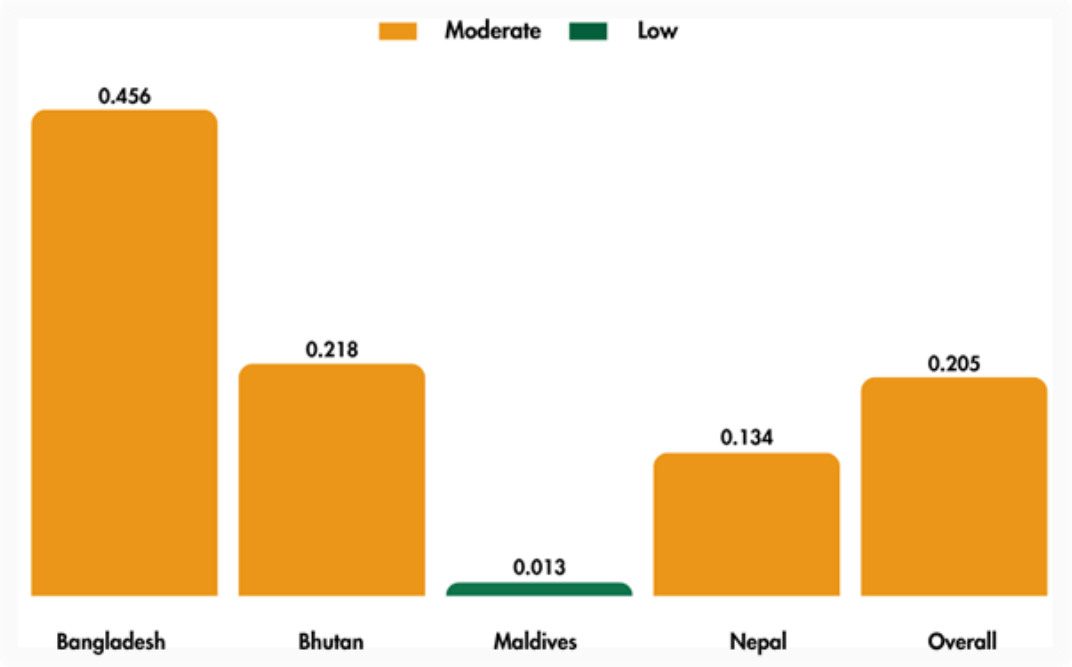


Figure 28:Total Climate Debt to Total Debt Service Ratio of South Asia

In South Asia (Figure 28), most countries have moderate to low ratios: Bangladesh (0.46), Myanmar (0.30), Pakistan (0.26), Nepal (0.13), Sri Lanka (0.19), Maldives (0.01), with Afghanistan (0.00) and Bhutan at (0.22). While climate borrowing is not yet the primary driver of annual debt service, it already represents a significant share in Bangladesh (0.46).

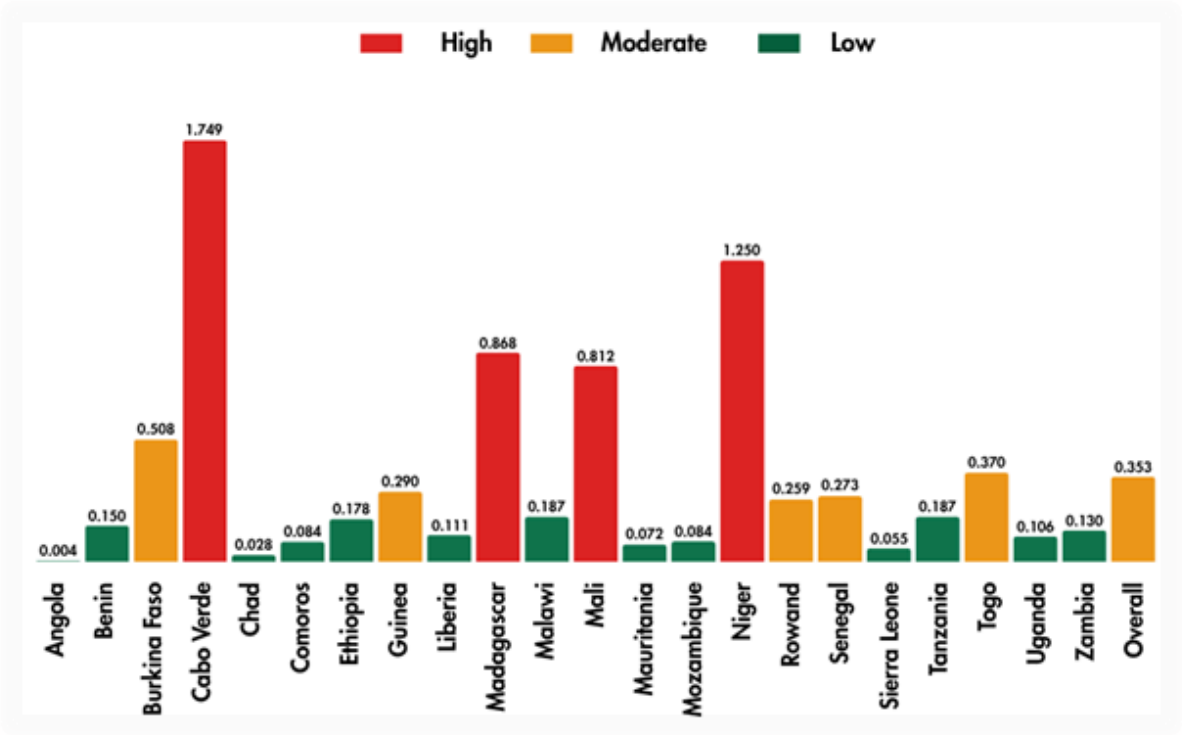


Figure 29:Total Climate Debt to Total Debt Service Ratio of Sub-Saharan Africa

In Sub-Saharan Africa (Figure 29), most of the countries are classified under the category of the low-burden category (<0.20) countries, and these include Chad (0.03), Djibouti (0.04), Mozambique (0.08), Sierra Leone (0.06), Ethiopia (0.18), Uganda (0.11), and Zambia (0.13). Some countries, however, were reporting 0.00 ratio, namely, DRC, Somalia, South Sudan, Sudan, Lesotho, Guinea-Bissau. The climate debt is, therefore, a minor share of the repayment for these countries, notwithstanding the heavy.

Moderate range (0.20–1.00) shows a rising share of climate debt in the annual debt service, with countries like Rwanda (0.26), Senegal (0.27), Guinea (0.29), Myanmar (0.30), Togo (0.37), Mali (0.81).

High-burden cases (≥1.00) encompass Niger (1.25) and the island nation of the Solomon Islands (1.02), both of which experience already constrained sovereign fiscal space. Among Small Island Developing States (SIDS), Cabo Verde (1.75) is particularly notable as an extreme case, where climate debt has come to significantly dominate the repayment landscape.

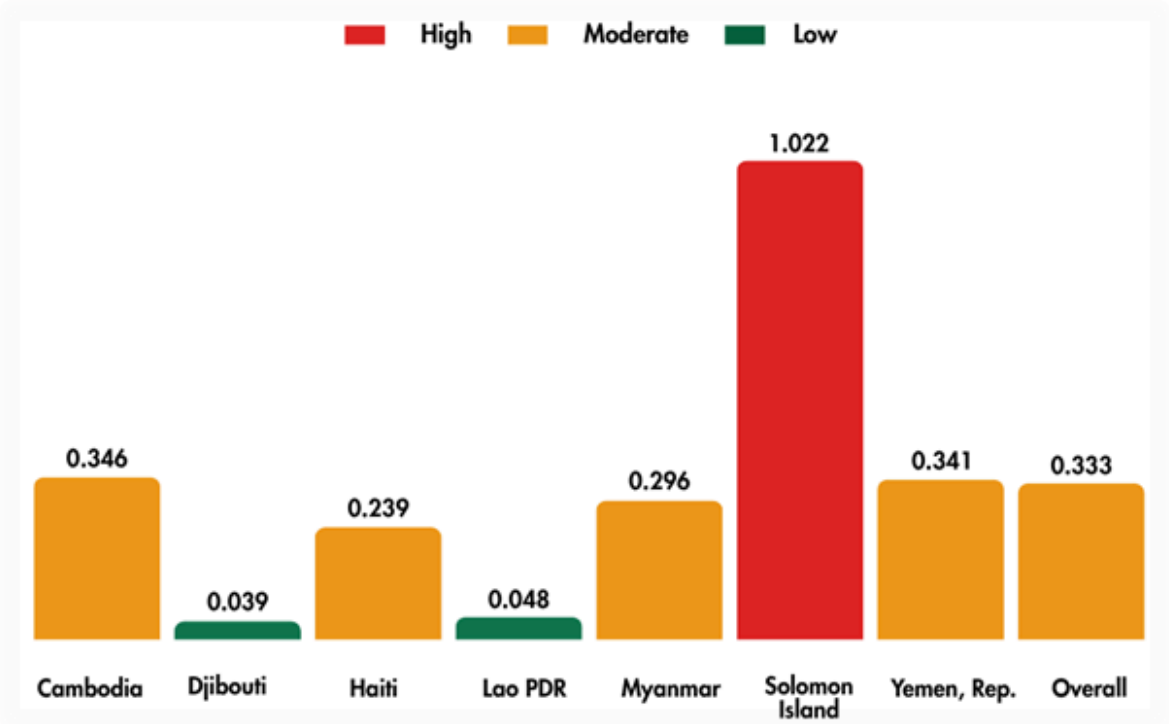


Figure 30:Total Climate Debt to Total Debt Service Ratio of Other Countries

In the case of Small Island Developing States (SIDS), the per-capita exposure is equivalent to the repayment pressure, illustrated here by Cabo Verde (1.75), the Solomon Islands (1.02), Haiti (0.24), and Comoros (0.08). Several other SIDS, including Samoa, São Tomé & Príncipe, and Vanuatu, currently have ratios of (0.00); however, with very narrow fiscal bases, they are vulnerable to taking on new loans.

In the North Africa & Middle East (Figure 29), Yemen (0.34) reveals medium exposure due to war-related budgetary limitations, whereas Djibouti (0.04) is at the lower end.

5.10 Per-Capita Cumulative Climate Debt (2002–2022)

The per-capita cumulative climate debt represents total climate-labelled borrowing from 2002 to 2022 divided by population, serving as an indicator of the average individual's share of climate-related public debt. Higher per-capita values imply heavier fiscal strain per citizen, while near-zero values often reflect limited access to climate finance rather than economic strength.

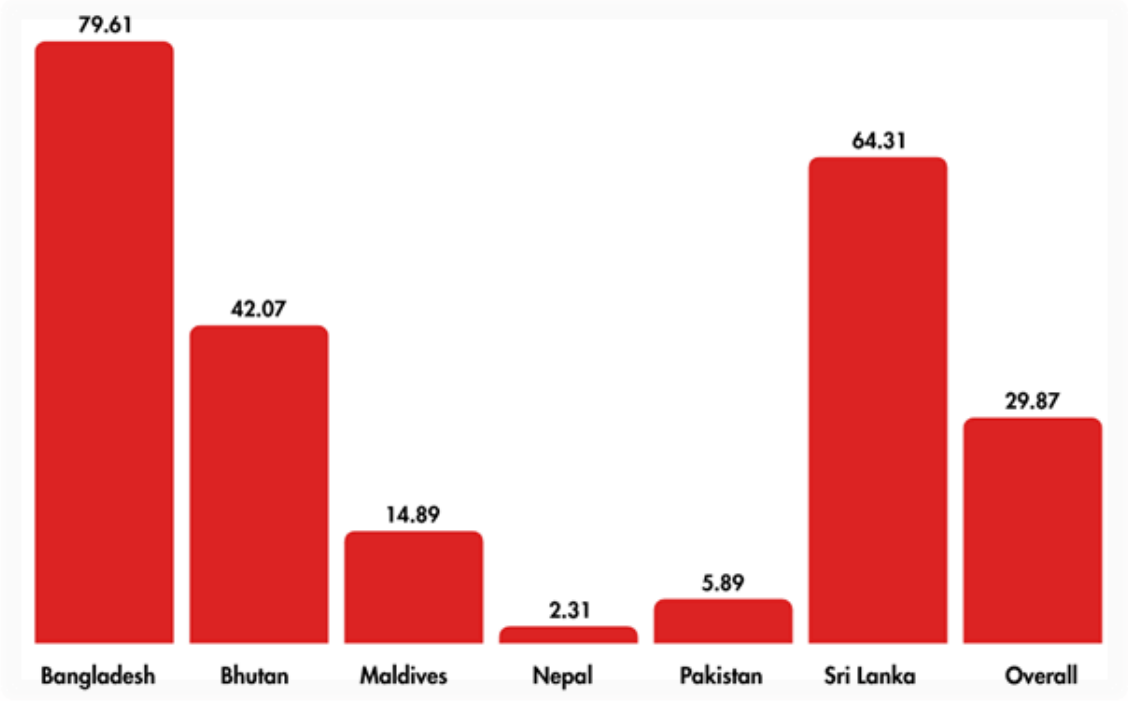


Figure 31: Per Capita Overall Cumulative Climate Debt of South Asia (2002-2022)

In South Asia, the level of per capita climate debt differs considerably among economies. Bangladesh (US$ 79.61), with the highest global rank, reflecting extensive borrowing flood protection, climate resilience, and adaptation measures. Sri Lanka (US$ 64.31) and Bhutan (US$ 42.07) follow suit, signifying an ever-increasing trend of debt-financed climate interventions. Maldives (US$ 14.89), Nepal (US$ 2.31), and Pakistan (US$ 5.89) fall in the medium level, though the latter two indicate minimum levels of debt. The regional average (US$ 29.87) illustrates the dual challenge of excessive exposure for some nations and inadequate access for others.

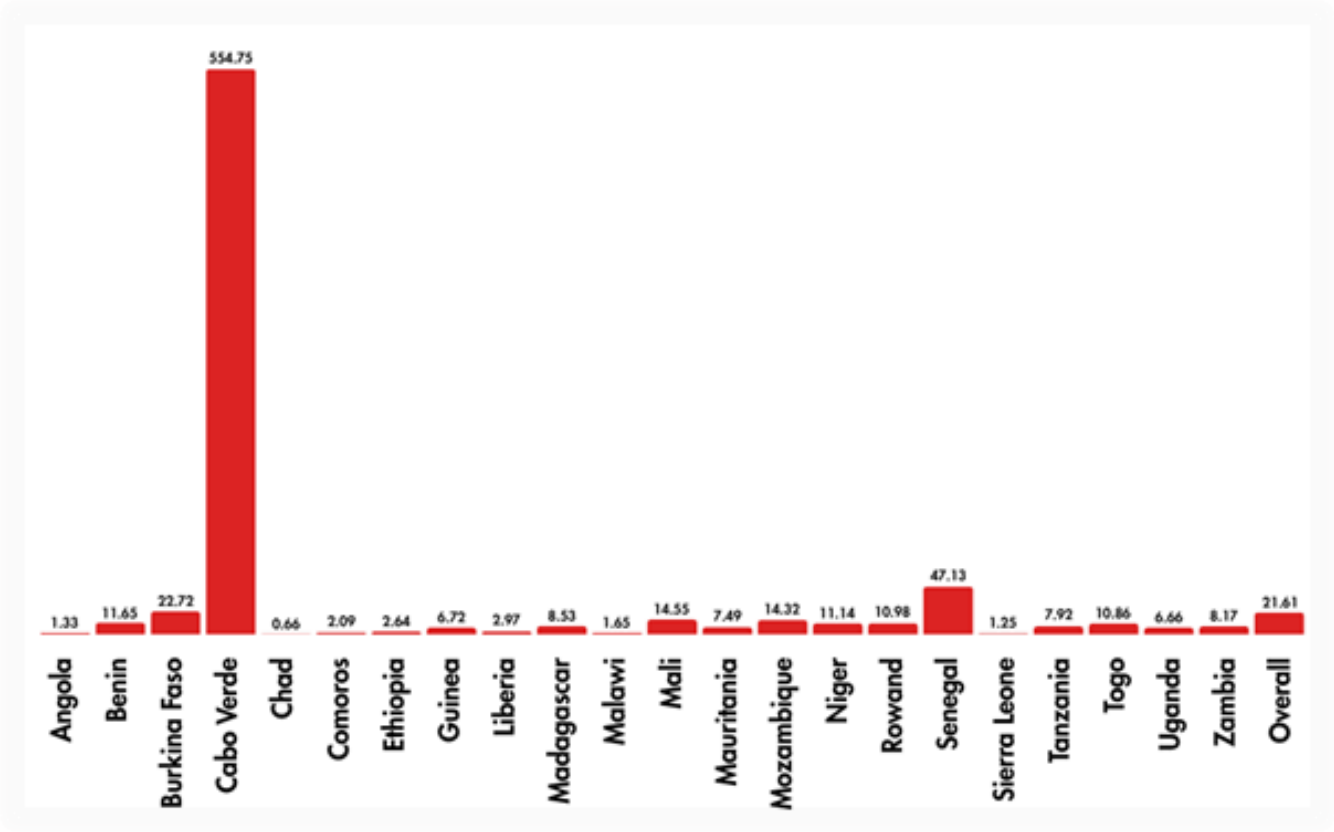


Figure 32: Per Capita Overall Cumulative Climate Debt of Sub-Saharan Africa (2002-2022)

For Sub Saharan Africa, the levels of climate debts also diverge. Cabo Verde has the largest debt per capita (US$554.75), where a small amount of borrowing signifies an unmanageably large debt share on a small population base. This is followed by Senegal (US$47.13), Burkina Faso (US$22.72), Mozambique (US$14.32), Mali (US$14.55), and then comes Mauritania (US$7.49), which falls in the medium debt category. However, countries with large forests as well as low production of greenhouse gases like Botswana, Equatorial Guinea, Eritrea, and Guinea-Bissau reflect almost negligible debts.

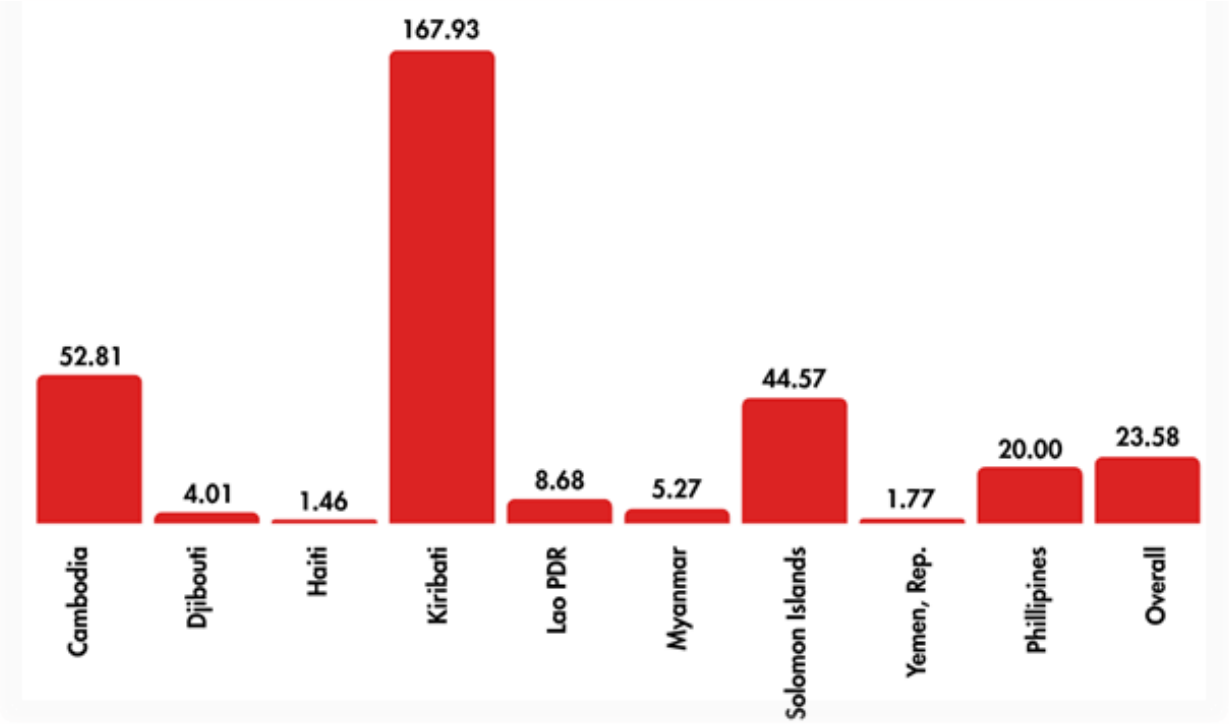
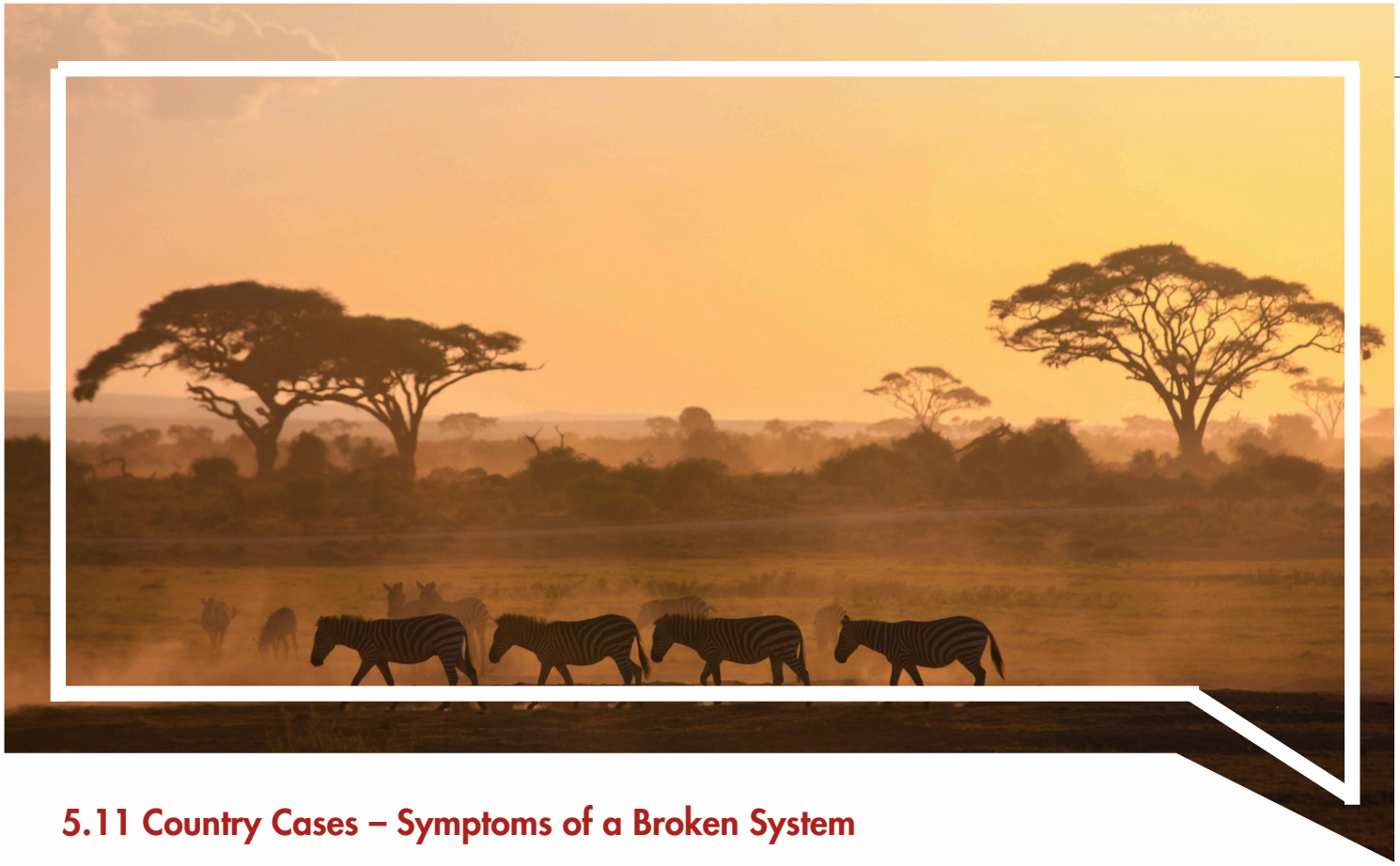


Figure 33: Per Capita Overall Cumulative Climate Burden of other countries (2002-22)

Small Island Developing States (SIDS)

Regarding Per Capita Climate Debt, Small Islands experience a higher level of debt exposure owing to fewer citizens exposed to natural disasters. Kiribati (US$167.93), Cabo Verde (US$554.75), and Solomon Islands (US$44.57) show how limited creditworthiness worsens Per Capita Debt. Maldives (US$14.89) continues with moderate debt levels, with Samoa, São Tomé & Principle, Tuvalu, and Vanuatu registering negligible amounts owing to their grant-driven economies. The degree of sensitivity is highest among Small Islands, where a single additional loan can increase Per Capita Debt.

Yemen (0.34) & Djibouti (0.04) shows moderate & minimal burdens. Other countries like Afghanistan, Somalia, & South Sudan show near-zero values. The countries in the Latin region & the Middle East show values of climate debt per capita, which indicate relatively small flows of climate finance. The values of climate debt as a percentage of GDP stay below the global average.



5.11 Country Cases – Symptoms of a Broken System

5.11.1 Bangladesh

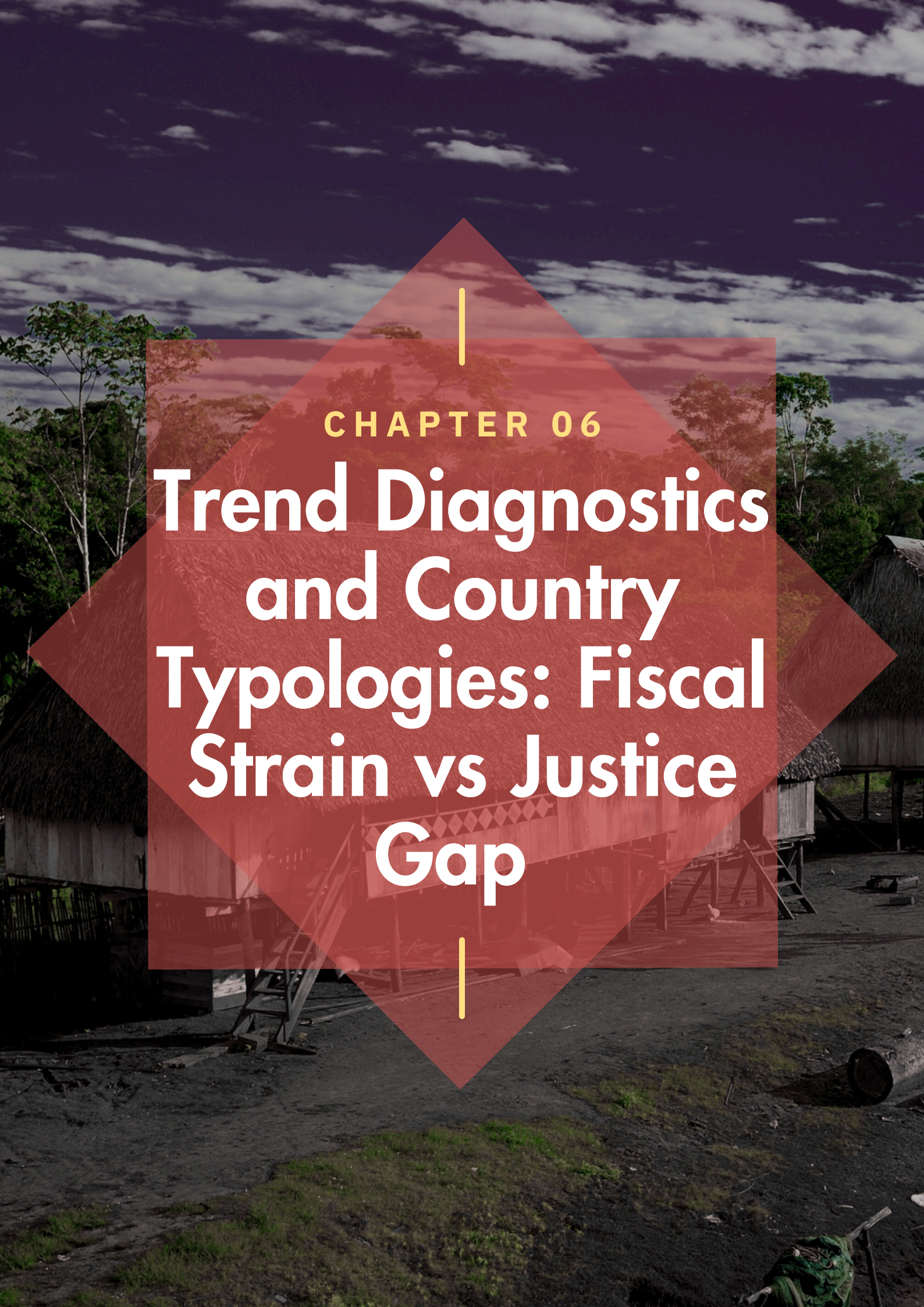
The abstract questions of climate finance become rather concrete when we consider climate-vulnerable countries on the frontlines. Bangladesh is sometimes presented as a test case: highly exposed to cyclones, floods, and sea-level rise, it has good climate plans in place but needs international support to make them happen. In the existing paradigm, Bangladesh has access to lots of climate funding but largely as loans. Its debt-to-grant ratio for multilateral climate funding is up near 0.94, so almost a dollar of debt for every dollar of grant. This high loan dependence "potentially stifles its climate resilience efforts" through future debt service burdens on the country. In fact, Bangladesh's climate-related debt increased; its per-capita climate debt from multilateral funds was up to roughly $2.04 as of 2023. Although that per-capita is lower than a few peers (Rwanda, Sri Lanka, etc.), Bangladesh paradoxically struggles more with paying off that debt, likely due to its massive climate needs for 170 million people combined with its already large overall debt stock. As another red flag is its disbursement-to-commitment ratio: through 2023, it had one of the lowest actual receipts/promised climate funds, only 30.5% of assumed funds disbursed. In short, almost two-thirds of climate finance ostensibly earmarked for Bangladesh never materialized evincing bureaucratic delays as well as donor implementation issues. This loan-dominated finance combined with sluggish disbursement places Bangladesh on thin ground, scrambling to adapt to increasingly bad floods as well as storms without access to steady-enough grant support. It reveals that the inadequacy of a system that requires a climate-risk country to wait for funds while paying for much of its resilience builds out through debt.

5.11.2 Zambia

Zambia offers a different lens. As an African LDC, Zambia emits virtually nothing but is exposed to climate impacts such as droughts. It has also long suffered from a deep-seated external debt crisis. Climate finance to Zambia to date is no different than the global pattern – massive loans and tiny grants. Zambia's per-capita climate loan impact (from multilateral resources) is roughly $4–8 (depending on method of calculation), above that of many of its LDC peers. More revealing is the proportion of climate debt as a share of its income: analysis reveals that Zambia's per-capita climate debt is roughly 0.31 times its per-capita income, one of the highest such ratios among vulnerable nations. It means that climate-related lending is taking up a significant proportion of Zambia's economic capacity, which is worrisome for a country already in debt distress. In fact, Zambia was one of the earliest countries to roll over on its sovereign debt during the pandemic era (2020), and it entered long-drawn negotiations under the G20's Common Framework for debt relief. As of 2024, Zambia asked for relief including cancellation of some of its obligations, but the process has been halting. In the middle of this, any new loans – even for climate initiatives – fan the flames. The Zambian example illustrates a vicious cycle: under-debt distress countries receive climate finance largely as loans (since grants are few), which then exacerbate their debt sustainability even further, so it becomes that much more difficult to invest in climate resilience. It illustrates the extent to which existing finance architecture can inadvertently push vulnerable nations from a climate emergency to a debt emergency.

5.11. 3 Mozambique

Mozambique offers yet another sobering example. It is among the most climate-vulnerable countries in the world, regularly hit by cyclones and extreme weather (Cyclones Idai and Kenneth in 2019 were especially devastating). Climate financing for Mozambique shows significant borrowing as well. Its climate per capita debt is about $14, significantly above that of Bangladesh's and even Zambia's. In relation to income, Mozambique's climate debt is roughly 27% of its per-capita GDP, which is a heavy burden for a poor nation. The real-world impact of this dynamic became apparent after Cyclone Idai: Mozambique had to take an IMF emergency loan of $118 million to rebuild after the storm, because grant aid was insufficient. Campaigners decried this as "a shocking indictment of the international community" forcing one of the world's poorest, least responsible countries to borrow money to cope with a climate disaster. As Jubilee Debt Campaign and others noted, this is a moral failure of the system: "The people who didn't cause the problem are those facing the worst impacts, and to ask them to take a loan for loss and damage is an outrageous doubling down of the injustice". Mozambique's experience suffering billions in loss and damage, then being offered loans (and a trickle of grants) to recover starkly illustrates the perversity of a climate finance paradigm that can compound climate injustice with debt injustice. It is little surprise that observers warned of a "climate debt trap spiraling out of control" if such patterns continue. Whether it's delayed project disbursements for Bangladesh, debt-loaded climate funds for Zambia, or post-disaster loans for Mozambique, these country cases drive home a clear message: the current system is not adequately protecting the vulnerable. Instead, it often puts them in a position of financial precarity, undermining the very resilience and adaptation that climate finance is supposed to support.



CHAPTER 06

Trend Diagnostics and Country Typologies: Fiscal Strain vs Justice Gap

We consolidate eight indicators into two sub-indices. The Fiscal Strain sub-index averages the following: loan intensity (Debt–Grant ratio), inverted delivery (1–Disbursement/Commitment), Debt-to-GDP ratio, and per-capita climate debt relative to income. The Justice Gap sub-index averages per-capita climate debt per tonne of CO_2 and climate debt per unit of natural capital. The final composite is a 50/50 mean of these two sub-indices, with medians used to define four distinct quadrants.

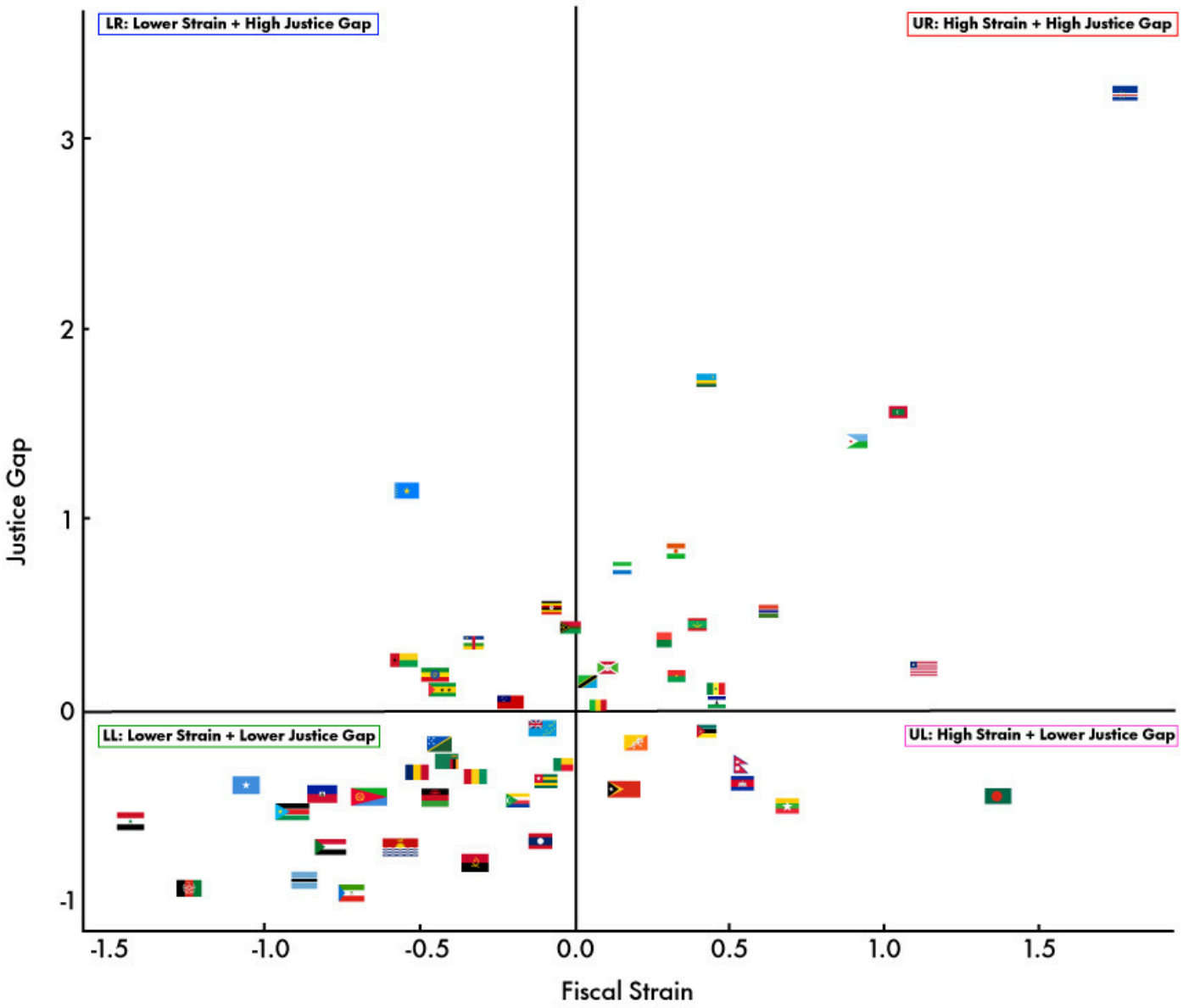
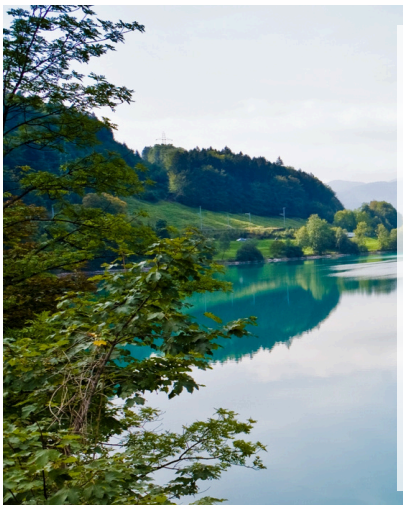


Figure 34: Fiscal Strain vs Justice Gap by Country Quadrant

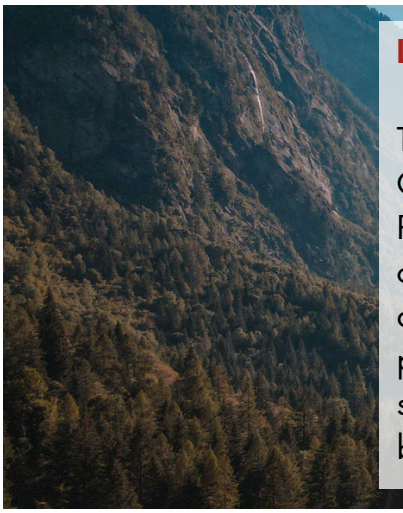


UR (High Strain, High Justice Gap)

Countries such as Cabo Verde, the Maldives, Djibouti, Rwanda, Niger, Gambia, Sierra Leone, Mauritania, Madagascar, Senegal, Liberia, and Lesotho are clustered under this category. The countries are loan-dominated with high per-tonne climate debt and/or significant debt compared to natural capital. Prioritized action includes grant-first lending, swaps of debt-for-climate or nature, putting in place strict limits on loan shares, and programmatic approval certainly to boost disbursements realized.

UL (High Strain, Lower Justice Gap)

Bangladesh, Myanmar, Cambodia, Nepal, Bhutan, Benin, and Togo are those with significant fiscal pressure but lower gaps in justice. Here risks are mainly associated with the financing arrangement as well as disbursement mechanisms, whereas extreme problems of justice are not significant. High-priority actions are deleveraged (retaining Debt/Grant ratio ≤1 on new approvals), acceleration of disbursement (targeting ≥0.9 through phased tranches), as well as greater adaptation over mitigation (targeting ≥1.2× mitigation).



LR (Lower Strain, High Justice Gap)

This is made up of Democratic Republic of Congo (DRC), Uganda, Central African Republic, Guinea-Bissau, Ethiopia, São Tomé and Príncipe, and Samoa. The countries are hardly responsible for climate change while having immense ecological importance and are increasingly faced with mounting justice burdens. Key measures privilege grant-based funding as a regular approach, disapprove of sovereign loans for adaptation purposes, and create a linkage between funding support and natural resources protection.

LL (Lower Strain, Lower Justice Gap)

Countries such as Afghanistan, Equatorial Guinea, and Botswana. Although these countries are not highly exposed to climate debt at present, risks are increasingly emerging. Key things to do are keeping adaptation as grant-based support, piloting small-scale debt-for-nature swaps, and tracking delivery with a view to efficient mobilization of resources.

CHAPTER 07

Sectoral Climate Finance Trends and Gaps

This report is an analysis of climate finance flows within ten priority sectors under National Adaptation Plans (NAPs) as well as Nationally Determined Contributions (NDCs): Agriculture, Disaster Prevention, Energy, Environmental Protection, Health, Industry/Construction/Mining, Multi-Sectoral, Population & Reproductive Health, Transport, as well as Water & Sanitation. The sectors are core to climate vulnerability reduction as well as attaining just transition pathways. The report shows remarkable inequities in climate finance as embodied by continued over-reliance on loans, uneven disbursement patterns over time, as well as non-convergence with national priorities.

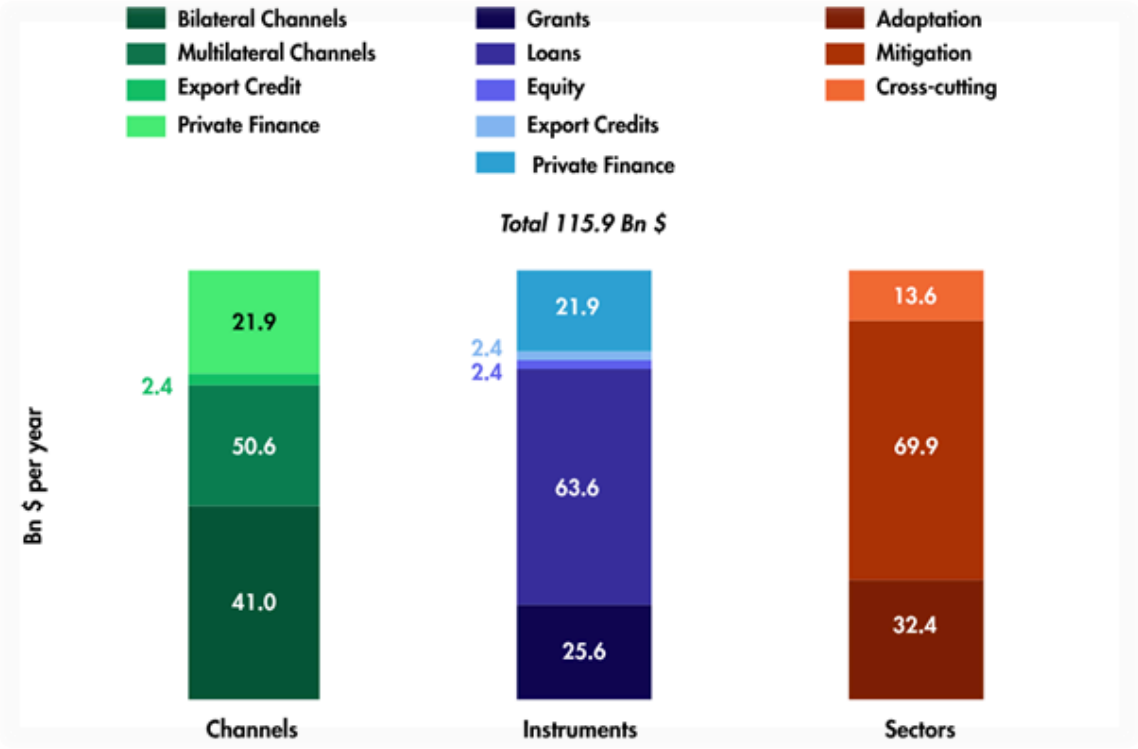


Figure 35: Climate Finance Provided to Developing Countries (2022) by Channel, Instrument, and Purpose

1 Agriculture, Forestry, and Fishing

This sector mobilized $5.43 billion with 82.64% being grants. The loan-to-grant ratio is 0.21 that is relatively low to ensure that rural resilience is not funded from borrowed resources. Adaptation is a priority with 2.44 as a ratio since countries such as Niger with 25.1% and Chad with 10.7% are exposed to drought risks that can be life-threatening. However, it is complex in post-conflict Sudan with 11% disbursement as well as 18% disbursement in Yemen due to fragility. The overall disbursement-commitment ratio is 0.57. South Asia with Bangladesh $129m; Nepal $81m is under allocated funding even with high exposure levels. The main gap is underinvestment in smallholder resilience as well as increased loan dependency in food security sectors.

2 Disaster Prevention and Preparedness

Total aid in this sector is $0.6 billion with nearly all of it grant-based, reflecting donor understanding of the non-revenue source of disaster preparedness. But volumes are drastically minimal regarding the increasingly repeated disasters. The adaptation-to-mitigation ratio is 3.03 with a focus on resilience measures (such as cyclone shelters as well as early warning systems). The largest beneficiaries are Bangladesh ($106m) as well as the Philippines ($124m), with numerous African countries receiving small amounts. Efficiency on disbursement is weak (0.75 overall) with nations such as Yemen (0.02) as well as Mali (0.21) finding it hard to access funds that are pledged. The gaps are inadequate funding as well as delay that leads directly to lost lives.

3 Energy

This sector was allocated $10.88 billion, with loans predominating (loan-to-grant ratio 1.53). Nations such as Bangladesh (12), Sri Lanka (42.77), and Burkina Faso (3.67) demonstrate extreme dependency on debt. The adaptation component is minimal (0.30b), with a near-exclusivity on mitigation. Disbursement is weak (0.56 overall). SIDS such as the Maldives (0.06b) and Kiribati (0.02b) are minimally funded despite life-threatening circumstances. The main gap is that whereas energy finance is plentiful, it is exclusively debt-based, centered on mitigation, and inaccessible for adaptation purposes.

4 Environment Protection

The environmental sector mobilized $4.44 billion, mostly as grants. Main beneficiaries are Bangladesh ($0.62b), Mozambique ($0.16b), and Ethiopia ($0.35b). The balance between adaptation and mitigation is even (2.44b compared to 2.75b, with a 0.89 ratio), but total flows are still significantly short of ecological protection needs. Most vulnerable states (CAR, Chad, Djibouti) are not even allocation recipients. The disbursement-commitment ratio is on average 0.61. Despite good words on biodiversity and nature, environment protection is still underplayed, with loans sneaking into ecosystems finance in least-capable countries for repayments.

5 Health

The healthcare sector is severely underbudgeted with a mere $0.26 billion in overall budgetary allocation. Virtually this is grant-based funding, but it is low compared to the climate-related health challenges created by climate change. The cases of Bangladesh ($0.002b) and Nepal ($0.002b) illustrate the disparity of needs with allocation. Some nations are highly efficient with disbursement ratios over 1, such as those of Burkina Faso, Burundi, and Ethiopia. But total flows are too low to create resilient healthcare systems. The cold conclusion is that climate-related risks to human health such as shifts in diseases, heatwaves, as well as malnutrition are hardly catered to with climate finance.

6 Industry, Construction, and Mining

This sector, critical to the low-carbon transition, shows a near absence of climate finance. Commitments are essentially zero across many countries, with only scattered micro-allocations. Bangladesh and Cambodia report disbursement-to-commitment anomalies (12.46 and 1.08, respectively), which reflect reporting irregularities rather than substantial flows. The sector is being neglected, despite its crucial role in emissions and the vulnerability of industrial workers. The gap is a complete financing vacuum in industry transformation.

7 Multi-Sector and Crosscutting

This category, designed for integrated adaptation-mitigation projects, mobilized $3.17 billion. Grants dominate, and disbursement ratios are generally higher than single-sector allocations. However, the sector's scatter across various themes (from community-based resilience to infrastructure) makes effectiveness hard to measure. The sector risks becoming a "catch-all," leading to weak accountability. The gap is the lack of clear tracking for integrated resilience projects.

8 Population and Reproductive Health

This sector was sparsely funded ($0.13 billion), but it is essential to address demographic risks of fragility as well as gender-related impacts. The loan to grant ratio is zero, whereas disbursement is fairly high (1.22). Minor percentages to countries like Ethiopia, Bangladesh, and Mozambique indicate that donors are reluctant to finance social resilience with climate finance. The gap is that connecting population pressure with women's health as well as climate fragility is lacking within current financing frameworks.

9 Transport and Storage

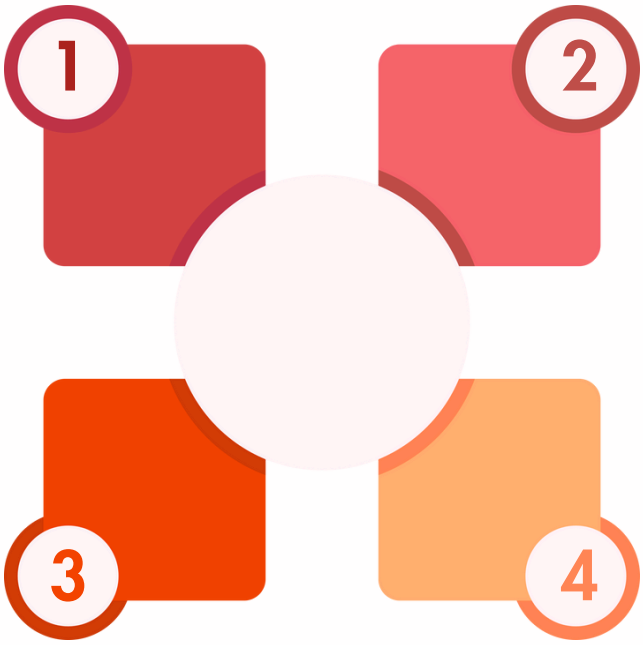
Transport was allocated $2 billion, while loans are predominant. Key beneficiaries like Philippines ($0.67b), Senegal ($0.27b), and Bangladesh ($0.43b) bear heaviest burdens. Adaptation projects are virtually absent while projects on mitigation (electric transit, port infrastructure) prevail. SIDS are hardly beneficiaries even with their high sea's vulnerability. Disbursement percentages are reasonable (0.53). The gap is in transport finance's loan-dominated, mitigation-biased composition that ignores essential needs on adaptation like resilient logistics for food as well as emergency purposes.

10 Water Supply and Sanitation

Water and sanitation were provided with $4.15 billion funding with a loan-to-grant ratio of 0.97. Adaptation leads (ratio 5.59), which is due to high priority for safe water as well as flood resilience. Strong recipients are Cambodia, Bangladesh, and Ethiopia. Fragile countries like South Sudan, Yemen, and CAR are underfunded with uneven disbursement (0.48). The gap is that water as a flagship NAP priority is still underfunded, while governance bottlenecks hinder implementation.

Cross-Sectoral Patterns

Loans vs Grants: Although water and agricultural sectors depend on grants, energy and transport are still debt-intensive with a risk of climate debt entrapment.



Adaptation vs Mitigation: Adaptation is emphasized over mitigation in agriculture, disasters, water, and health. The imbalance is an expression of donor demand over recipient needs.

Disbursement Gap: For all sectors combined, on average, the disbursement is 25–50% behind schedule, threatening immediate climate action.

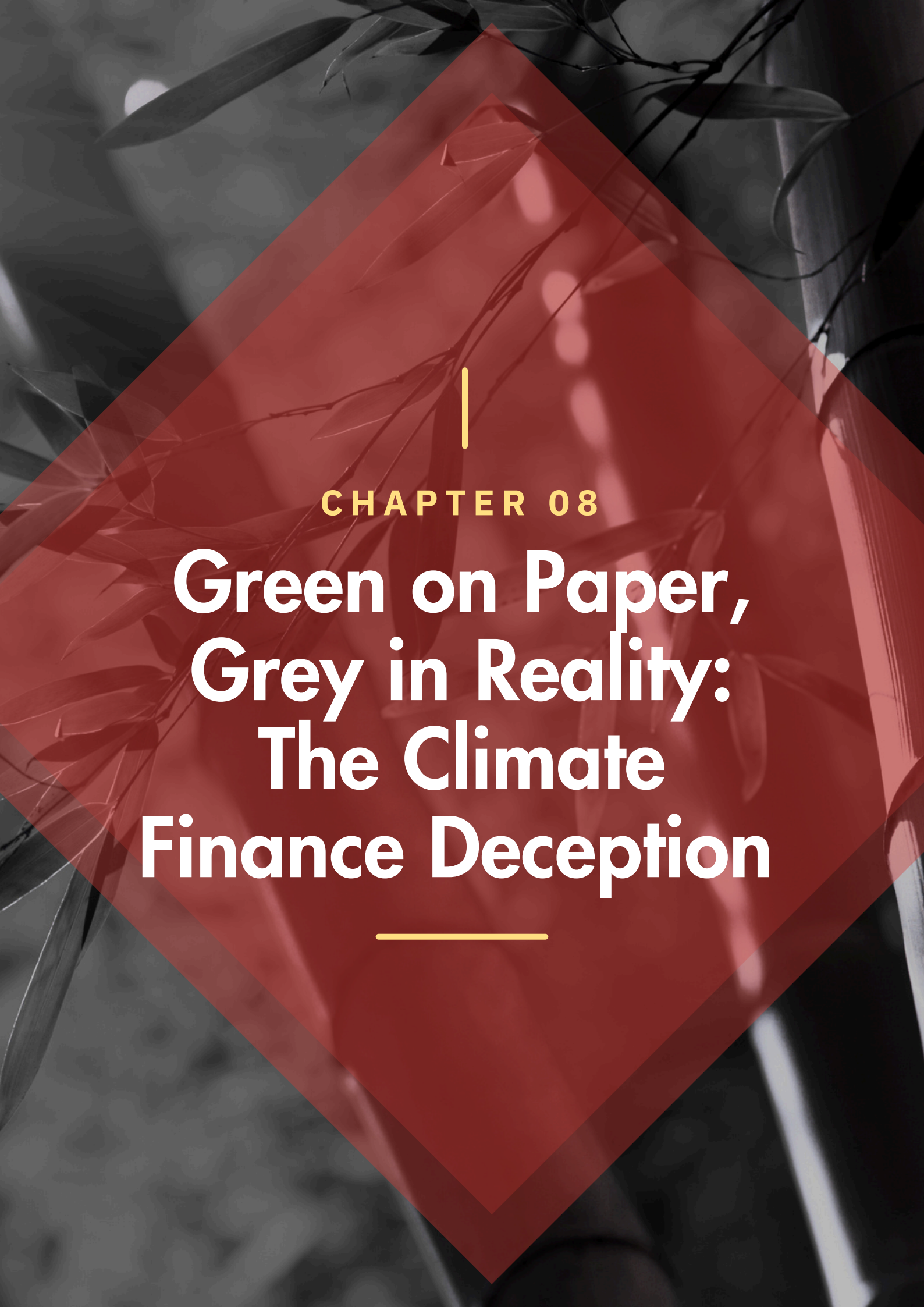
Neglected Sectors: Sectors of Population, Industry, and Health are under-funded significantly.

For detailed sectoral transactions, see Annex

Key Gaps

- Excessive loan dependence on energy and transport sectors, financing fiscal risks.
- Health, industry, and population sectors are drastically underinvested despite their core role in promoting resilience.
- Adaptation finance gap continues in sectors essential for survival such as agriculture, water supply, and disaster preparedness.
- Undue delay in disbursement in nearly all sectors.
- Absence of fragile states and SIDS with minimal commitments as well as weak delivery

Overall, Climate finance is on the rise, but it is unjustly concentrated on loans when grants are required. It is mitigation-focused rather than addressing adaptation needs and is not well-coordinated. In the absence of significant adjustments, vulnerable countries will continue to endure more climate risks as well as unsustainable debt.



CHAPTER 08

Green on Paper, Grey in Reality: The Climate Finance Deception

In international climate policy, climate finance refers to funding provided to help countries mitigate or adapt to climate change. Developed nations collectively pledged to mobilize $100 billion per year by 2020 for climate finance under the Paris Agreement. In practice, however, tracking what truly counts as climate finance has become contentious. There is no universally accepted definition of "climate finance," leading to inconsistent and sometimes misleading reporting. Over the past decade (2015–2025), evidence shows that some funding for fossil fuel projects has been mischaracterized as climate finance, undermining trust in climate finance pledges.

Between 2015 and 2025, rich countries claimed progress toward the USD 100 billion-a-year climate finance pledge. OECD data reports USD 83.3 billion in 2020, yet Oxfam's reassessment suggests only about USD 21–24.5 billion genuinely targeted climate action once inflated loan values and weak links are removed. Part of the distortion comes from a deeper failure: fossil-related and commercial projects counted as climate finance. Three practices drive this. Broad tagging tools such as Rio markers allow entire multi-purpose projects to be booked when climate is a minor objective. Donors often record the full-face value of loans and guarantee, including non-concessional loans; around two-thirds of public climate-labelled flows now arrive as debt, overstating support and straining vulnerable budgets. Loose eligibility then lets fossil schemes appear as mitigation or adaptation when they involve marginal efficiency gains or resilience features.

Japan's reporting is a central example. From 2015–2020 it declared about USD 59 billion in climate finance, more than any other developed country. At least USD 9 billion backed fossil-dependent projects, including the 1,200 MW Matarbari coal project in Bangladesh and units in Vietnam and Indonesia. These plants were branded "high efficiency", yet Matarbari alone is expected to emit around 6.8 million tonnes of CO_2 annually, only about 400,000 tonnes below a typical plant of similar size. Japan reported roughly USD 3 billion for gas infrastructure and loans for airport expansions with solar panels and efficient lighting. Headline totals rose, but recipient countries inherited long-lived fossil assets.

Multilateral development banks applied similar logic. In Morocco, the EBRD counted about EUR 18 million: 9% of its EUR 200 million loan for the Nador West Med port as climate adaptation, citing resilience measures, even as the port is built to handle around 7 million tonnes of coal and 25 million tonnes of hydrocarbons per year. In Azerbaijan, support for offshore gas development gained a climate label based on relative emissions gains. Civil society tracking shows that in 2016 the major MDBs still approved at least USD 5 billion for fossil projects. Reviews of World Bank reporting indicate possible overstatement of several billion dollars a year linked to opaque methodologies and generous climate components.

Other cases highlight how elastic the label has become. Italy reported a USD 4.7 million equity stake for Venchi chocolate boutiques in Asian markets as climate finance, loosely justified through deforestation messaging. The United States booked a USD 19.5 million loan for a Marriott hotel in Haiti as adaptation finance after adding stormwater and hurricane-resistant design measures. A Reuters review flagged at least USD 3 billion in projects with negligible climate benefit, including coal plants, airport expansions, and crime prevention, plus around USD 65 billion where documentation was too vague to verify climate relevance. ONE Campaign analysis in 2024 reinforced that a large share of reported commitments either never arrived or carried weak climate content.

The table below summarizes some of the findings of primary overview of fossil-related projects that were misclassified as climate finance:

Table 6: Examples of Misclassified Climate Finance

Institution / Actor	Project (Location, Year)	Reported as Climate Finance	Actual Project Details (Fossil Investment)
Japan (JICA/JBIC)	Matarbari Coal Plant – 1200 MW coal power station (Bangladesh, financing agreed ~2014)	$2.4 billion loan, counted toward Japan's climate finance pledge (Reuters)	New coal-fired power plant (expected 6.8 Mt CO_2 emissions annually); justified as "mitigation" due to high-efficiency tech (400k tons CO_2/year less than a conventional coal plant). (Reuters)
Japan	Other Overseas Coal Plants – e.g. projects in Vietnam and Indonesia (2015–2020)	$3.6 billion (loans) reported as climate finance. (Reuters)	Financing for additional coal-fired power capacity (e.g. new units in Vietnam and two in Indonesia); counted based on "clean coal" technology rationale. These investments prolong coal use, contrary to Paris Agreement goals. (NRDC)

Institution / Actor	Project (Location, Year)	Reported as Climate Finance	Actual Project Details (Fossil Investment)
Japan	Natural Gas Projects - various (2015-2020)	$3.0 billion (loans) reported as climate finance. (Reuters)	Investments in gas-fired power plants and LNG infrastructure, labeled as supporting energy transition. Japan argued gas is a "transitional fuel" needed by partner countries, although it is still a fossil fuel. (Reuters)
European Bank for Reconstruction and Development (EBRD)	Nador West Med Port – coal terminal project (Morocco, 2015)	~€18 million (9% of €200 m loan) counted as climate finance. (Oil change)	Construction of a deep-water port to handle 7 Mt/year of coal and 25 Mt of oil. A small component was aimed at climate adaptation (resilient infrastructure), which the EBRD counted under climate finance. The primary purpose was to expand fossil fuel import capacity. (Oil change)
EBRD	Shah Deniz Gas Field Expansion? – offshore gas development (Azerbaijan, ~2016)	"Millions of dollars" of EBRD funding counted as climate finance. (The Guardian)	Exploration and development of natural gas reserves in the Caspian Sea. Classified partly as climate finance on grounds that it "reduced emissions compared to baseline" – essentially counting efficiency gains in a fossil fuel extraction project. (The Guardian)
United States (USAID/DFC)	Habitation Jouissant Hotel – Marriott resort (Haiti, 2019)	$19.5 million concessional loan reported as climate finance. (Reuters)	Commercial hotel renovation/expansion (tourism infrastructure). Justified by including climate-resilient design (stormwater drainage, hurricane protection) and counted under adaptation finance. No direct emissions reductions – core project aimed at economic development in hospitality sector.

Institution / Actor	Project (Location, Year)	Reported as Climate Finance	Actual Project Details (Fossil Investment)
Italy (Ministry of Environment / SIMEST)	Venchi Chocolate Asia Expansion – Retail store roll-out (Japan, China, Indonesia; 2017)	$4.7 million equity investment labeled as climate finance. (Reuters)	Opening boutique chocolate shops abroad. Claimed to have a climate "component" (the project tangentially referenced deforestation via a related film), but in substance a private business expansion with negligible climate impact. Included in Italy's climate finance reports due to broad interpretation of climate relevance.

For climate-vulnerable states, this is not an accounting footnote. Mislabeled flows mean fewer grants for renewables, resilient agriculture, and loss-and-damage response, and more debt tied to fossil infrastructure. Trust erodes when climate finance doubles as export promotion or fossil support.

Reform demands are clear: exclude coal, oil, and gas value chains; report only grant-equivalent figures; count only documented climate components of mixed projects; publish project-level data for scrutiny; and align development and export finance with pledges to end support for unabated fossil projects. With a post-2025 finance goal expected to reach far beyond USD 100 billion, credibility depends on closing the loopholes that allowed fossil money to pass as green in the past decade.

CHAPTER 09

Discussion

9.1 The Neo-Colonialism of Climate Debt

Climate change isn't just about carbon, melting glaciers, and rising seas; it's also about unfair impacts and rising debts. New research shows that 31% of low-income regions have seen drought-heatwave events double because of human-caused warming, compared with only about 4.7% in high-income regions (Boen Zhang, 2024). When disasters strike, poorer countries that contributed least to emissions often must borrow billions to rebuild and to fund basics like early warning systems, resilient crops, and flood defenses. High interest costs and tight budgets then push them into a climate debt trap, where growing repayments crowd out health, education, and future adaptation, leaving them more exposed to the next shock. What they deserve is more financial assistance, lower finance, and automatic debt relief when disasters happen, meaning they won't be in debt to be protected. The irony is patent: a framework that is meant to create capacity is eroding it.

Between 2009 and 2022, climate-related debt in twenty vulnerable Least Developed Countries (LDCs) grew from under $1 billion to over $21 billion. These loans finance Bangladeshi flood barriers, drought relief in Malawi, and renewable energy projects in Sri Lanka. But these loans are accompanied by hefty interest repayments that siphon money from public treasuries, taking it from somewhere else in core sectors like healthcare, education, and jobs. The very projects that are meant to shield people from storms, floods, and droughts are pushing these countries further into bankruptcy. This is neo-colonialism without armies or banners, but with pressure that is silent as well as insidious – namely, pressure through debt.

Climate Debt Risk Index (CDRI) brings this trap into clear view. It reveals how ecological vulnerability and financial fragility overlap, particularly in South Asia, East Africa, and small island states. Countries like Madagascar and Mozambique have some of the highest CDRI scores in the world. In Vanuatu, a single cyclone doubled the nation's debt-to-GDP ratio in just a few years. Sri Lanka,

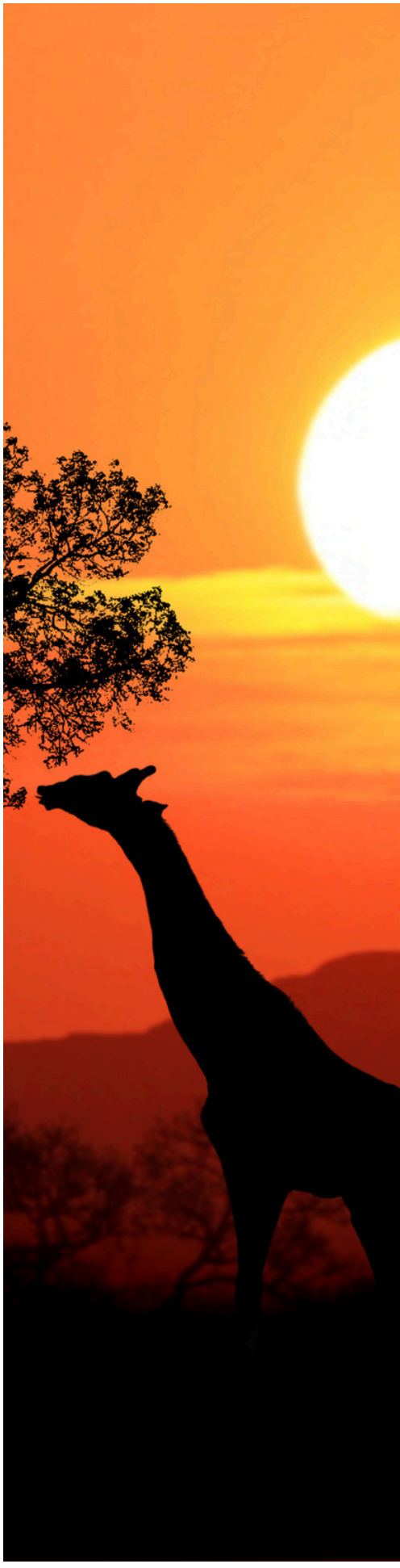
already struggling with debt distress, is projected to have a CDRI of 68.34 by 2031. These figures are not abstract. They represent real-world consequences of every new storm pushing nations closer to bankruptcy before they can recover from the last one.

The injustice is made even more glaring by global inequality. The wealthiest 10% of people are responsible for half of all emissions, while the poorest 50%, who live in the very nation's most vulnerable to climate impacts, produce just 12%. Yet when disaster strikes, it is these communities that pay the highest price not only in lost lives and livelihoods but also in the debt their governments must take on to rebuild. Within these countries, the poor bear brunt once more. Climate hazards widen inequality, as the wealthy have insurance and savings, while the poor lose their homes and their means of income.

What the CDRI reveals is not just a financial risk, but a profound moral failure. Over 70% of public climate finance is still provided as loans. Bangladesh, for instance, faces a loan-to-grant ratio of more than 2.74:1. To adapt to climate change, it must repay the very nations whose emissions made adaptation necessary. This is climate injustice in its starkest form; the poor paying the rich to survive.

There is, however, an alternative. Climate finance can be reorganized based on grants, debt relief, and climate debt swaps initiatives that cancel obligations in return for investments in resilience. It is not aid, it is reparations, grounded in the priority of rich countries and corporations whose profits were made from fossil fuels. The former owes a climate debt that cannot be waived. If these reforms are not made, we can expect to continue a pattern in which each cyclone, drought, or flood brings vulnerable nations further into poverty and penury.

The climate debt trap is a potent alarm sign. If we continue to view resilience as a commodity purchased on credit, we will continue to reinforce colonial forms of extraction and dependency deep into the next century. But if we learn from the lessons of the CDRI, we are presented with an opportunity to construct a system on the principles of justice; one where resilience is acquired rather than through debt, but through reparations and unity. Anything else will be another neo-colonialism inked into accounting ledgers but repaid with human life.



9.2 Math of Justice: A Global Levy Architecture for Climate and Nature Finance

As the Climate Debt Risk Index 2025 lays bare, we are living with a grotesque imbalance: in 2024 the world found $2.7 trillion for weapons but still debates a $1.3 trillion annual demand for climate survival in vulnerable countries. At the same time, arms production, bases, and warfare pour greenhouse gases into the atmosphere with zero accountability. This is morally and mathematically indefensible. (UN, 2025)

Debates on climate finance frequently focus on scarcity, yet aggregate figures on emissions and military expenditure indicate an opposite picture. The binding constraint is not the absence of resources, but the lack of normative and fiscal rules that redirect existing rents from carbon-intensive and militarised activities toward climate justice and ecological restoration. A rule-based levy architecture can translate this insight into a quantifiable "math of justice".

9.2.1 Revenue potential from global carbon and arms levies

A globally coordinated carbon price of US$100 per tonne of CO_2-equivalent, applied to approximately 65 $GtCO_2e$ of annual emissions, would yield around US$6.5 trillion each year. This tax level lies within ranges discussed in the literature on the social cost of carbon and is consistent with Paris-aligned pathways. The revenue stream arises from activities already generating profound externalities; the levy simply internalises part of those costs and earmarks the proceeds for climate and nature objectives.

An additional fiscal instrument concerns the international arms industry. Estimated global arms revenues of about US$630 billion per year could be subject to a surcharge of 10–20 per cent. Such a levy would raise roughly US$0.06–0.12 trillion annually. The normative justification links two forms of systemic risk: greenhouse gas emissions and militarisation. Both erode human security, crowd out social expenditure, and rely heavily on public subsidies and procurement. A targeted levy recognises this shared responsibility.

Not short of money, short of rules and commitment

Source	Assumption	Annual Revenue
Carbon Price (Article 6.0, Paris Aligned)	$100/$tCO_2e$ × 65 $GtCO_2e$ (global total emissions)	US$6.5 trillion
Arms Levy (included in total)	10–20% on $630B arms revenues	$0.06–$0.12 trillion
Total potential		≈ US$6.0–6.6 trillion

Combined, the carbon and arms levies generate a steady annual revenue in the range of US$6.0–6.6 trillion. This volume far exceeds current flows reported as international climate finance and supports the argument that the climate justice gap is institutional rather than fiscal. A minimum fixed share of this revenue, US$1.3 trillion per year, can be normatively assigned to Least Developed Countries (LDCs) as part of a climate justice entitlement, reflecting historical responsibility, capacity to pay, and differentiated vulnerability.

9.2.2 Structuring the Earth Solidarity Fund

To translate these revenues into coherent action, an Earth Solidarity Fund can be conceptualised with five dedicated funding windows. Each window corresponds to a distinct set of justice claims and policy functions, while together they reflect the principles of Nature-Rights-Led Governance (NRLG).

1

LDC Climate Justice Window (32%; ≈ US$1.92 trillion/year)

This window serves as the primary vehicle for redistributive justice. It targets LDCs that have contributed least to cumulative emissions yet face intense exposure to climate impacts and debt distress. Resources would flow largely as grants and highly concessional instruments, with automatic allocation rules linked to indicators such as adaptation gaps, climate debt ratios, and multidimensional poverty. Programmes under this window would prioritise adaptation, loss and damage responses, basic service resilience, and low-carbon development consistent with NRLG pillars on protection of life and property, equity, and nature justice.

2

Global South Transition Window (25%; ≈ US$1.5 trillion/year)

A second window supports structural transformation across the wider Global South. Many lower- and middle-income countries carry growing mitigation obligations but confront high financing costs and technology barriers. This window finances renewable energy expansion, grid integration, industrial decarbonisation, and resilient infrastructure, while embedding safeguards against new unsustainable debt. Country access would be tied to long-term transition plans, including coal and fossil fuel phase-down schedules and social protection for affected communities.

3 **Domestic Just Transition Window (20%; ≈ US$1.2 trillion/year)**

High-emitting economies require explicit support for just transition processes in fossil fuel-dependent regions. This window directs resources toward worker retraining, income support, regional economic diversification, and rehabilitation of degraded landscapes in coal, oil, and gas areas. Funding is conditional on binding phase-out commitments, strong labour standards, and participatory planning with workers, local authorities, and civil society. In this way, the architecture aims to minimise social resistance to ambitious mitigation while upholding NRLG principles of shared rights and social harmony.

4 **Nature and Biodiversity Window – NRLG Aligned (15%; ≈ US$0.9 trillion/year)**

The fourth window operationalises the recognition of nature as a subject of rights. It finances protection, restoration, and regenerative management of forests, wetlands, mangroves, peatlands, rivers, coastal ecosystems, and other critical biomes. Allocation rules would give precedence to territories with high ecological value and to governance arrangements where Indigenous peoples and local communities act as primary custodians. Instruments under this window would strengthen customary tenure, community-based conservation, and co-management regimes, ensuring that biodiversity finance does not reproduce dispossession or "fortress conservation" models.

5 **Governance, MRV and Innovation Window (8%; ≈ US$0.48 trillion/year)**

A final window is dedicated to institutional quality, transparency, and experimentation. It funds monitoring, reporting and verification (MRV) systems; open data infrastructure tracking contributions, allocations, and impacts; citizen-led and community-based climate and nature audits; and legal reforms that incorporate nature's rights into constitutional or statutory law. In addition, it supports innovative financial and legal instruments compatible with NRLG—such as climate-debt cancellation frameworks, nature-linked securities without new net debt, and community-owned renewable energy models.

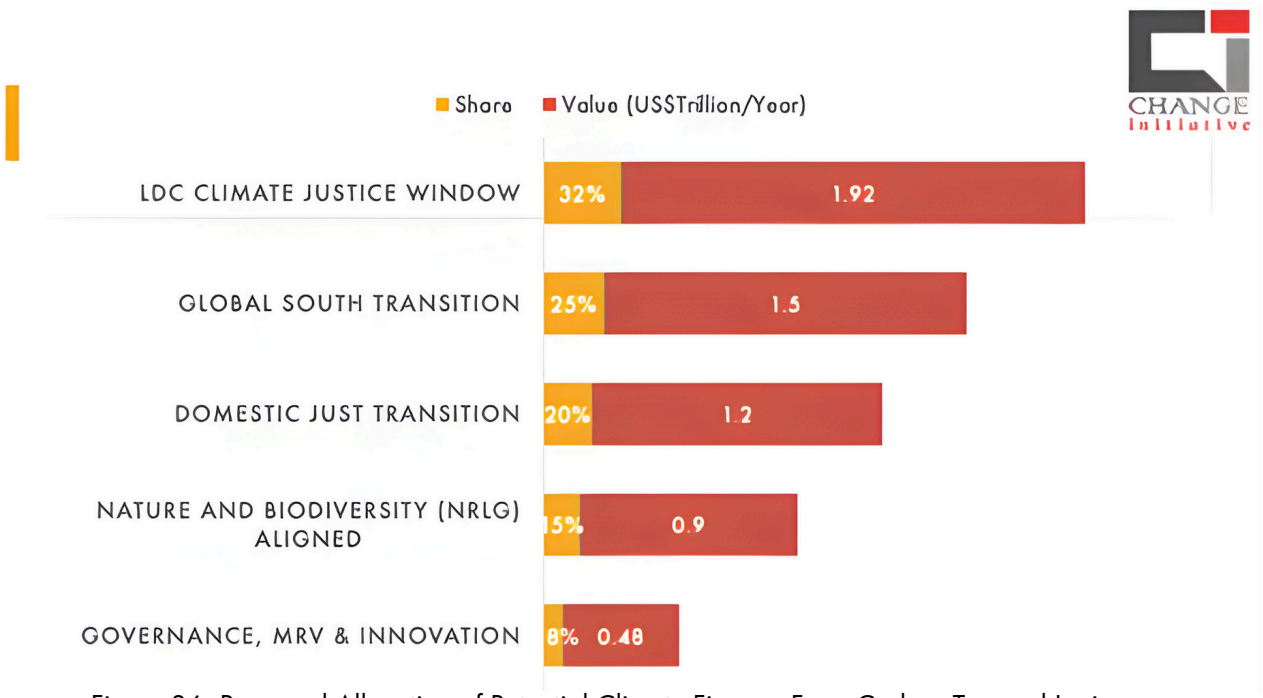


Figure 36: Proposed Allocation of Potential Climate Finance From Carbon Tax and Levies

9.2.3 Implications for climate and nature justice

The levy-and-window framework described above reframes climate finance as a long-term, rule-governed redistribution mechanism. Revenues originate from activities that generate ecological harm, fossil fuel combustion and militarisation, and are channelled toward those who bear disproportionate impacts, toward ecosystems endowed with intrinsic rights, and toward institutions capable of enforcing accountability. By setting explicit percentage shares for different windows, the model addresses recurrent problems of fragmentation, ad hoc bargaining, and opaque reporting.

Such an architecture aligns normative principles, polluter pays, common but differentiated responsibilities, and NRLG's emphasis on nature justice and community stewardship, with concrete fiscal parameters. It demonstrates that aligning global taxation with ecological and social priorities can generate resources at a scale commensurate with climate and biodiversity emergencies, while simultaneously reducing incentives for carbon-intensive production and military expansion.

9.3 NO MORE CLIMATE DEBTS: Toward a Fair and Equitable Climate Finance Framework

The climate-debt trap is becoming increasingly binding as successive climate disasters force vulnerable nations to take on increased borrowing; at the same time, increased servicing costs constrain needed spending on resilience and thus deepen their vulnerability. Evidence from CDRI'25 reveals that climate debt in 55 very exposed nations has increased 24 times over, jumping from a mere US$0.88 billion in 2009 to a staggering US$21.25 billion in 2022, with 47 countries now amongst high or very high-risk categories. The country-specific alarm is especially worrying as Madagascar's future CDRI is forecast to reach 76.59 in 2031, with Mozambique, Myanmar, and Sri Lanka remaining top-risk nations. The increase experienced in Bangladesh is especially significant as it vaults from nearly zero in 2009 to estimated levels of up to US$80 per capita in climate-debt. The main factor behind this trajectory is that in terms of composition of finance: over 70% of public climate finance is delivered as loans rather than grants; funding support for adaptation lags well behind that of mitigation efforts; and a significant proportion of such loans are non-concessional. The gap is significant; Sri Lanka's loan/grant ratio exceeds 12.13:1 while Bangladesh is treated to roughly about US$2.70 in loans for every US$1 in grants. In contrast, Afghanistan is alone amongst sample nations receiving only grants exclusively. Guided through the principles of Natural Rights-Led Governance (NRLG), this position is absolute: protect rights of people and planet, enforce the polluters-pay-principle, and eliminate financing that creates debts for resilience. This message is encapsulated in the call to action: "NO MORE CLIMATE DEBTS."

Multilateral Development Bank (MDB) Reforms

MDBs like the World Bank and Asian Development Bank are essential for scaling up climate finance but are in desperate need of deep reforms to place equity and resilience above scale. MDBs can triple total finance to US$390 billion annually by 2030 with a possible US$195 billion going to climate action should half be climate centered. Mainstreaming includes:

- Expand concessional and grant-based financing windows.
- Rebalance spending on mitigation and adaptation.
- Reveal fossil fuel finance transparently.
- Scale up country-platform approaches, co-financing, and technical support for systemic, long-term transformations.
- Integrate Climate-Resilient Debt Clauses (CRDCs) which would enable automatic suspension of repayments following extreme events.
- Reform capital adequacy requirements and introduce hybrid capital approaches to mobilize increased amounts of climate finance without contributing to sovereign risk of debt.
- Decentralized Framework in both supply and demand
- Adopt Natural Rights Led Governance Framework for reformation

Debt-Exit Strategies

To reduce the climate debt trap within high-risk countries identified within CDRI'25 such as Madagascar, Mozambique, and Sri Lanka, it is critical to implement immediate debt-exit strategies:

- Cancel climate-induced debts for hard-hit countries; where not feasible immediately, restructure and convert debt service into domestic climate investment.
- Implement Climate-Resilient Debt Clauses (CRDCs): automatic suspension of repayments in cases of extreme events, mainstreamed with credit enhancements/guarantees.
- Scale up debt-for-climate/nature swaps from 2021 Belize; Seychelles; Ecuador prototypes with savings going to mangroves; sea walls; drought-proofing and renewables.
- Re-direct IMF Special Drawing Rights (SDRs): honor and increase the US$100 billion commitment to capitalize non-debt support windows.

Finance to Vulnerable Countries

At-risk countries, especially high-CDRI countries, entail a need for special, fair finance that meets climate requirements without deepening a country's debt burden:

Reach ≥70% of adaptation finance and 100% of loss and damage (L&D) finance as grants with a special consideration for high-vulnerability countries like Chad, Niger, and Somalia.

Create pre-funded, rapid-disbursement facilities for grants within days of disasters based on CDRI risk tiers.

Create pre-funded, rapid-disbursement facilities for grants within days of disasters based on CDRI risk tiers.

Assure just-transition funding for workers, small businesses, and municipalities to prevent popular outrage during coal/gas phase-outs in countries like Zambia and Bangladesh.

Establishing the Earth Solidarity Fund (ESF)

Proposed Earth Solidarity Fund (ESF) would be a planet-wide climate justice fund based on NRLG principles:

- **Mandate and Governance:** Run as a standalone fund with broad-based governance (frontline states, Indigenous nations, environmental specialists), with links to World Bank, IMF, and UN funds for implementation capacity. Mandate reparative finance for damaged/or deferred-development countries for international climate objectives with a rule of no-debt for resilience.
- **Funding Sources:** Resource through mandatory/voluntary contributions (ability-to-pay and historical-emissions-linked), carbon/windfall levies, financial-transaction taxes, and philanthropy.
- **Allocation Logic:** Allocate according to vulnerability and requirements with ≥70% adaptation and 100% L&D finance as grants; no loan for core adaptation/L&D.
- **Structure:** Include a Global Fund for large-scale grants, National Climate Justice Trusts co-governed by government–civil society–community, and Community Climate Resilience Mechanisms allocating 10–20% to locally-run initiatives (e.g., women's groups, municipalities, Indigenous organizations).
- **Immediate Rapid Response Facility:** Provide pre-funded, day-scale grant disbursement post-disasters, tiered by CDRI risk.

Strengthening Local Governance

Local government is critical to deliver climate finance to communities promptly, complying with NRLG principles:

- Enforce transparency, integrity, and community-based allocations as non-negotiable principles.
- Establish "NRLG certification" with Do No Harm principles, Free, Prior and Informed Consent (FPIC), as well as community ownership; local committees/youth/Indigenous people co-design and monitor projects.
- Strive for ecosystem-based evaluation, balancing 'Nature's Contribution' (biodiversity, carbon, flood control, soils, water) and favoring nature-based solutions.
- Built-in intergenerational impact scoring through youth panels and future-generation statements.
- Apply ethical finance through a Public ESF portal with certification of local projects for faith-based/philanthropy funds (e.g., pooled Zakat, CSR).

Political Strategy for Implementation

To advance these recommendations:

- Leverage CDRI in UNFCCC talks (COP29–COP31) to advocate for ≥70% adaptation grants and 100% L&D grant in the (NCQG).
- Promote ESF through G20/SDG processes and the Bridgetown Initiative; seek World Bank/IMF buy-in via feasibility studies, SDR rechanneling, and expanded grant operations.
- Use inside–outside tactics: state coalitions ("Friends of ESF") and civil-society campaigns, with transparency dashboards tracking grant/loan shares for accountability.
- Secure new revenues through global carbon/aviation–shipping levies, fossil windfall taxes, and climate-damage judgments channeled to solidarity funds.
- Guard against dilution of parallel initiatives (e.g., COP29 CFAF), insisting on debt-free, adaptation-first design consistent with NRLG.

Figure 37: NRLG Implementation Roadmap

The action plan includes:

- **Establish and Fund the ESF:** Capitalize through repurposed SDRs, carbon revenues, and levies.
- **MDB Transformation:** Achieve ≥50% grants and concessional finance for adaptation/L&D, with CRDCs integration.
- **SCALE Climate Finance:** Should mobilize ≥US$300 billion/year by 2030 for developing countries with grant-dominant mix and tens of billions of grant-only L&D finances.
- **Debt Justice Mechanisms:** Introduce cancellations, swaps, and moratoria triggers to eliminate debt for resilience.
- **Accountability Mechanisms:** Develop independent review panels with recipient and community involvement that are complemented with open public-data platforms for tracking finance terms, timing, and local impacts

Building on the action plan, the timeline (Table-7) sets a phased approach to reform climate finance in LDCs. Immediate priorities include shifting to grant-based and concessional funding, cancelling climate-related debt, launching the ESF and Climate Action Fund, and ending fossil fuel finance. These steps lay the groundwork for scaling community-led systems, operationalizing national funds, and institutionalizing equitable, long-term financing aligned with resilience and natural-rights principles.

Table 7: Roadmap of Climate Finance Actions Across Timelines and Priorities

Timeline	Priority	Action Focus (Supply + Demand, merged)
Immediate (0–1 year)	High	Shift to grant-based and highly concessional finance for adaptation and loss & damage for Bangladesh and other LDCs.
	High	Announce and start implementing 100% cancellation of climate-tagged debt where debt traps exist.
	High	Public commitment to stop new fossil fuel and unproven "false solution" finance; redirect to resilience and renewables.
	High	Launch design of Earth Solidarity Fund (ESF) and Climate Action Fund with clear natural-rights based mandate.
	High	Agree grant-first approach for bilateral/MDB/IFIs and balance mitigation–adaptation allocations.
	High	Start debt-for-nature and debt-for-climate swaps linked to resilience and ecosystem protection.
	Medium	Establish community-led MRV and fiduciary systems; adopt strict transparency and criteria to prevent misattribution.
	Medium	Kick-off NRF design in selected LDCs and set up youth/community stewardship pilots for monitoring climate and nature action.
Short Term (1–3 years)	High	Scale grant-first deployment for adaptation and loss & damage; raise shares of grants via CIF-Nature, Climate and People Fund and similar windows.
	High	Operationalize ESF and Climate Action Fund; channel finance to national and local funds for direct community grants.

Timeline	Priority	Action Focus (Supply + Demand, merged)
	High	Implement first large-scale debt swaps and relief tied to resilience, renewable transition, and nature protection.
	Medium	Roll out national and subnational community-led MRV systems across LDCs.
	Medium	Establish initial NRFs in multiple LDCs using reoriented fossil-fuel subsidies, carbon/pollution taxes and philanthropy.
Medium Term (3–7 years)	High	Complete zero-fossil lending shift across MDBs and bilaterals; integrate natural-rights benchmarks in all finance decisions.
	High	Deliver full debt relief for highly exposed, low-emitting countries; align new instruments with resilience and nature goals.
	Medium	Expand regional funds (e.g., SARF-type) linked to CIF/AF/GCF flows for coordinated resilience and nature finance.
	Medium	Consolidate innovative financing (carbon pricing, pollution taxes, bio-finance, private philanthropy) ringfenced for community climate and nature actions.
	Medium	Institutionalize youth-led and community stewardship mechanisms in national climate and budget frameworks.
Long Term (7+ years)	High	Make ESF and country-level NRFs the primary channels for unconditional, needs-based grants to vulnerable communities.

Timeline	Priority	Action Focus (Supply + Demand, merged)
	High	Lock in natural-rights-based norms across global North commitments, MDB mandates, and national policies; no relapse to fossil-heavy paths.
	Medium	Sustain predictable grant flows and reformed PFM systems that keep LDCs out of climate-debt dependence and support continuous resilience and nature protection.

Conclusion:

The evidence presented through CDRI'25 shows a system drifting further away from the promise it was built upon. Countries that contributed almost nothing to the destabilization of the climate are carrying the heaviest financial burdens, borrowing year after year just to repair destroyed homes, shore up coastlines, and recover from storms that were never of their making. The data reveals a pattern of slow delivery, rising loan shares, and widening justice gaps across Africa, South Asia, and the small island nations. Behind every ratio or fiscal indicator sit communities forced to choose between rebuilding after a cyclone and funding schools, health services, or food security. Climate finance, intended as a lifeline, has become a source of strain that erodes trust and squeezes already narrow fiscal space.

Yet the same analysis offers a path that is both rational and humane. When climate support comes as grants rather than loans, when disbursement is timely, when allocation follows vulnerability instead of profit logic, the cycle of debt-driven adaptation can be broken. The ICJ opinion strengthens this possibility by affirming that climate cooperation is not benevolence but a legal responsibility. And the Natural Rights Led Governance lens clarifies what is at stake: people and ecosystems have an inherent claim to safety, recovery, and the means to endure future shocks without sinking deeper into debt. CDRI'25 stands as evidence, warning, and invitation,showing how finance can shift from burden to justice if the global community chooses accountability over delay.

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Annex

The below tables present the total sector-wise distribution of climate finance received by the 55 countries covered in CDRI'25. It groups all recorded flows across the sample to show how much finance is concentrating in mitigation-focused sectors such as energy and transport, and how much is reaching adaptation-oriented areas like agriculture, water, coastal protection, health, and social protection. By placing these sectors side by side, the graphic makes it easy to see which areas absorb the largest share of resources and which remain chronically underfunded despite high vulnerability. This aggregate breakdown serves as a reference point for the country-level results that follow and for CDRI'25's discussion on rebalancing climate finance toward justice-driven, needs-based allocation.

Table A1: Agriculture, Forestry, and Fishing

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement-Commitment
Afghanistan	0	0.01	0.01	0	0.01	3.02
Angola	0.04	0.02	0.06	0.05	0.06	0.16
Bangladesh	0	0.13	0.06	0.09	0.13	0.8
Benin	0.03	0.12	0.15	0.02	0.15	0.63
Bhutan	0.01	0.02	0.03	0	0.03	0.47
Botswana	0	0.01	0	0.01	0.01	0.97
Burkina Faso	0	0.24	0.22	0.04	0.25	0.65
Burundi	0	0.07	0.06	0.01	0.07	0.22
Cabo Verde	0	0.02	0.02	0.02	0.02	0.52
Cambodia	0.14	0.11	0.23	0.06	0.25	0.53
Central African Republic	0	0.01	0	0.01	0.01	0.33
Chad	0	0.1	0.09	0.01	0.1	0.46
Comoros	0	0.01	0.01	0.01	0.02	0.12
Congo, Dem. Rep.	0	0.18	0.1	0.11	0.18	0.67
Djibouti	0	0.01	0.01	0	0.01	0.45
Equatorial Guinea	0	0.01	0	0.01	0.01	0.18

Eritrea	0	0.01	0.01	0.01	0.01	1.08
Ethiopia	0.11	0.45	0.53	0.12	0.59	0.63
Gambia	0	0.01	0.01	0	0.01	0.11
Guinea	0	0.03	0.03	0	0.03	0.29
Guinea-Bissau	0	0.01	0.01	0	0.01	0.85
Haiti	0	0.11	0.09	0.04	0.11	0.73
Kiribati	0	0	0	0	0	23.83
Lao PDR	0	0.12	0.05	0.08	0.12	0.47
Lesotho	0	0.02	0.01	0	0.02	0.25
Liberia	0.01	0.06	0.07	0.01	0.07	0.51
Madagascar	0.03	0.13	0.13	0.05	0.17	0.48
Malawi	0.03	0.21	0.18	0.08	0.23	0.75
Maldives	0	0	0	0	0	0
Mali	0.03	0.43	0.36	0.13	0.46	0.55
Mauritania	0	0.07	0.06	0	0.07	0.23
Mozambique	0.04	0.16	0.16	0.09	0.2	0.65
Myanmar	0.03	0.07	0.06	0.05	0.1	0.5
Nepal	0	0.08	0.05	0.03	0.08	0.6
Niger	0.07	0.21	0.27	0.01	0.28	0.26
Pakistan	0	0.05	0.03	0.03	0.05	0.67
Phillipines	0.09	0.06	0.04	0.12	0.15	0.72
Rwanda	0.01	0.12	0.14	0.02	0.14	0.65
Samoa	0	0	0	0	0	1.23
Sao Tome and Principe	0	0.01	0	0.01	0.01	0.2
Senegal	0.11	0.23	0.28	0.07	0.33	0.67

Sierra Leone	0	0.02	0.01	0	0.02	0.38
Solomon Islands	0	0.01	0	0.01	0.01	0.48
Somalia	0	0.06	0.05	0	0.06	0.17
South Sudan	0	0.01	0.01	0	0.01	1.75
Sri Lanka	0	0	0	0	0	0.27
Sudan	0	0.06	0.04	0.01	0.06	0.11
Tanzania	0.07	0.09	0.12	0.07	0.17	0.35
Timor-Leste	0	0.08	0.03	0.05	0.08	0.69
Togo	0	0.01	0	0.01	0.01	0.56
Tuvalu	0	0	0	0	0	#DIV/0!
Uganda	0.04	0.25	0.25	0.1	0.3	0.66
Vanuatu	0	0	0	0	0	0.32
Yemen, Rep.	0	0.02	0.02	0	0.02	0.18
Zambia	0.01	0.12	0.09	0.06	0.13	0.67
TOTAL	0.91	4.43	4.28	1.75	5.43	0.57

Table A2: Disaster Prevention and Preparedness

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.02	0.02	0	0.02	0.99
Angola	0	0	0	0	0	1
Bangladesh	0	0.11	0.06	0.05	0.11	0.79
Benin	0	0	0	0	0	0.01
Bhutan	0	0.02	0.01	0.01	0.02	0.52
Botswana	0	0	0	0	0	0.8

Malawi	0	0.01	0.01	0	0.01	1.08
Burkina Faso	0	0	0	0	0	0.23
Burundi	0	0.01	0	0.01	0.01	0.24
Cabo Verde	0	0	0	0	0	0.13
Cambodia	0	0	0	0	0	1.42
Central African	0	0	0	0	0	1
Chad	0	0	0	0	0	1
Comoros						
Congo, Dem. Rep.	0	0	0	0	0	1
Djibouti						
Equatorial Guinea						
Eritrea						
Ethiopia	0	0	0	0	0	1.26
Gambia						
Guinea	0	0.01	0.01	0	0.01	0
Guinea-Bissau						
Haiti	0	0.02	0.02	0	0.02	0.83
Kiribati	0	0	0	0	0	0.12
Lao PDR	0	0.01	0.01	0	0.01	0.5
Lesotho	0	0	0	0	0	1
Liberia	0	0	0	0	0	0.97
Madagascar	0	0	0	0	0	0.93

Maldives	0	0	0	0	0	1.42
Mali	0	0.01	0.01	0	0.01	0.21
Mauritania	0	0	0	0	0	1
Mozambique	0	0.01	0.01	0	0.01	1.14
Myanmar	0	0.01	0.01	0	0.01	1.14
Nepal	0.01	0.02	0.03	0.01	0.04	0.37
Niger	0.01	0.01	0.02	0	0.02	0.39
Pakistan	0	0.07	0.06	0	0.07	0.8
Phillipines	0	0.12	0.08	0.05	0.12	0.98
Rwanda	0	0	0	0	0	1
Samoa	0	0.01	0.01	0	0.01	1
Sao Tome and Principe	0	0	0	0	0	0.13
Senegal	0	0	0	0	0	0.53
Sierra Leone	0	0	0	0	0	1
Solomon Islands	0	0.01	0.01	0	0.01	0.44
Somalia	0	0.01	0.01	0	0.01	0.74
South Sudan	0	0	0	0	0	1
Sri Lanka	0	0.01	0.01	0	0.01	1
Sudan	0	0	0	0	0	0.98
Tanzania	0	0	0	0	0	0.91
Timor-Leste	0	0	0	0	0	1.53
Togo	0	0	0	0	0	2.51

Tuvalu	0	0	0	0	0	0.7
Uganda	0	0.01	0.01	0	0.01	0.74
Vanuatu	0	0	0	0	0	1
Yemen, Rep.	0	0.02	0.02	0	0.02	0.02
Zambia	0	0	0	0	0	0.99
TOTAL	0.03	0.56	0.46	0.15	0.6	0.75

Table A3: Energy

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.21	0.04	0.21	0.21	1.01
Angola	0	0	0	0	0	1.9
Bangladesh	2.35	0.2	0	2.54	2.54	0.64
Benin	0.06	0.11	0.01	0.17	0.17	0.17
Bhutan	0.02	0.02	0	0.04	0.04	0.78
Botswana	0	0.02	0	0.02	0.02	0.74
Burkina Faso	0.19	0.05	0	0.24	0.24	0.23
Burundi	0	0.06	0.01	0.06	0.06	0.21
Cabo Verde	0.11	0.01	0	0.12	0.12	0.97
Cambodia	0.23	0.04	0.01	0.27	0.27	0.58
Central African Republic	0	0	0	0	0	53.33
Chad	0.01	0	0	0.02	0.02	0.46

Congo, Dem. Rep.	0	0.04	0	0.04	0.04	1.18
Djibouti	0	0.02	0	0.02	0.02	0.45
Equatorial Guinea	0	0	0	0	0	0.04
Eritrea	0	0.01	0	0.01	0.01	0.42
Ethiopia	0.01	0.22	0.01	0.24	0.24	0.72
Gambia	0	0.04	0	0.04	0.04	0.09
Guinea	0.09	0	0	0.09	0.09	0.08
Guinea-Bissau	0	0.01	0	0.01	0.01	0.18
Haiti	0.02	0.05	0	0.07	0.07	0.43
Kiribati	0	0.02	0	0.02	0.02	0.34
Lao PDR	0.04	0.03	0	0.08	0.08	0.88
Lesotho	0	0.02	0	0.02	0.02	0.24
Liberia	0	0.14	0	0.14	0.14	0.68
Madagascar	0.07	0.08	0	0.15	0.15	0.29
Malawi	0	0.34	0	0.35	0.35	0.09
Maldives	0.01	0.05	0.01	0.05	0.06	0.49
Comoros	0	0.01	0	0.01	0.01	0.12
Mali	0.1	0.05	0.08	0.07	0.15	0.25
Mauritania	0.03	0.05	0	0.08	0.08	0.54
Mozambique	0.32	0.38	0.01	0.7	0.71	0.56
Myanmar	0.18	0.05	0	0.24	0.24	0.52
Nepal	0.03	0.25	0	0.28	0.28	0.85

Niger	0.06	0.01	0	0.06	0.06	0.36
Pakistan	0.63	0.2	0.02	0.83	0.84	0.69
Phillipines	0.1	0.15	0	0.3	0.3	0.52
Rwanda	0.12	0.06	0.01	0.17	0.18	0.61
Samoa	0	0.02	0	0.02	0.02	0.85
Sao Tome and Principe	0	0.01	0	0.01	0.01	0.09
Senegal	0.03	0.17	0	0.19	0.2	0.82
Sierra Leone	0.01	0.02	0	0.03	0.03	1.95
Solomon Islands	0.03	0.04	0	0.07	0.07	0.26
Somalia	0	0	0	0	0	1.73
South Sudan	0	0	0	0	0	1.93
Sri Lanka	0.89	0.02	0	0.91	0.91	0.56
Sudan	0	0.01	0	0.01	0.01	0.19
Tanzania	0.26	0.18	0	0.45	0.45	0.44
Timor-Leste	0	0.01	0	0.01	0.01	0.8
Togo	0.05	0.02	0	0.07	0.07	0.17
Tuvalu	0	0.03	0.01	0.03	0.03	0.59
Uganda	0.18	0.24	0.04	0.66	0.69	0.68
Vanuatu	0	0.04	0	0.04	0.04	0.41
Yemen, Rep.	0.05	0.02	0.01	0.06	0.06	0.11
Zambia	0.09	0.27	0	0.36	0.36	0.15
TOTAL	6.34	4.13	0.3	10.7	10.88	0.56

Table A4: Environment Protection

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.09	0.06	0.08	0.09	0.17
Angola	0	0.04	0.01	0.03	0.04	0.19
Bangladesh	0.06	0.56	0.31	0.37	0.62	0.56
Benin	0	0.04	0.03	0.02	0.04	0.27
Bhutan	0	0.04	0.03	0.01	0.04	0.42
Botswana	0	0.01	0	0.01	0.01	0.27
Burkina Faso	0	0.04	0.02	0.03	0.04	0.32
Burundi	0	0.01	0	0.01	0.01	0.07
Cabo Verde	0	0.02	0.01	0.01	0.02	1.3
Cambodia	0	0.16	0.12	0.11	0.16	0.82
Central African Republic	0	0.02	0.01	0.01	0.02	0.28
Chad	0	0.04	0.02	0.03	0.04	0.28
Comoros	0	0.03	0.03	0.01	0.03	0.19
Congo, Dem. Rep.	0	0.31	0.02	0.29	0.31	0.28
Djibouti	0	0.03	0.02	0.01	0.03	0.15
Equatorial Guinea	0	0	0	0	0	0.54
Pakistan	0.11	0.03	0.02	0.12	0.14	0.26

Eritrea	0	0.01	0.01	0	0.01	0.07
Ethiopia	0	0.35	0.16	0.27	0.35	0.82
Gambia	0	0.04	0.02	0.02	0.04	0.23
Guinea	0	0.03	0.02	0.01	0.03	0.15
Guinea-Bissau	0	0.02	0.02	0.01	0.02	0.45
Haiti	0	0.09	0.06	0.04	0.09	0.8
Kiribati	0	0.03	0.02	0.01	0.03	0.42
Lao PDR	0	0.05	0.02	0.02	0.05	0.63
Lesotho	0	0.03	0.02	0.01	0.03	0.17
Liberia	0	0.1	0.01	0.1	0.1	0.86
Madagascar	0	0.1	0.07	0.06	0.11	0.67
Malawi	0	0.11	0.07	0.07	0.11	0.76
Maldives	0	0.03	0.02	0.02	0.03	0.9
Mali	0	0.08	0.04	0.04	0.08	1.05
Mauritania	0	0.08	0.05	0.03	0.08	0.58
Mozambique	0	0.16	0.14	0.09	0.16	0.89
Myanmar	0	0.05	0.04	0.02	0.05	0.41
Nepal	0.02	0.17	0.14	0.13	0.19	0.95
Niger	0.01	0.01	0.02	0	0.02	1.37
Phillipines	0	0.19	0.11	0.11	0.19	0.91

Rwanda	0	0.09	0.07	0.03	0.09	0.54
Samoa	0	0.05	0.04	0.02	0.05	0.71
Sao Tome and Principe	0	0.01	0	0.01	0.01	0.4
Senegal	0.01	0.08	0.05	0.05	0.09	0.52
Sierra Leone	0	0.03	0.01	0.02	0.03	0.21
Solomon Islands	0	0.01	0.01	0	0.01	0.82
Somalia	0	0.05	0.05	0.01	0.05	0.86
South Sudan	0	0.04	0.03	0.01	0.04	0.57
Sri Lanka	0	0.04	0.03	0.01	0.04	0.6
Sudan	0	0.04	0.03	0.02	0.04	0.4
Tanzania	0	0.17	0.07	0.13	0.17	0.95
Timor-Leste	0	0.05	0.04	0.02	0.05	0.35
Togo	0	0.07	0.06	0.06	0.07	0.09
Tuvalu	0	0.01	0	0	0.01	0.48
Uganda	0.02	0.1	0.07	0.08	0.12	0.74
Vanuatu	0	0.04	0.03	0.01	0.04	0.25
Yemen, Rep.	0	0.03	0.03	0	0.03	0.15
Zambia	0	0.1	0.06	0.06	0.1	0.55
TOTAL	0.24	4.19	2.44	2.75	4.44	0.61

Table A5: Health

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0	0	0	0	31.462
Angola						
Bangladesh	0	0.002	0.001	0.001	0.002	0.812
Benin	0	0	0	0	0	1.082
Bhutan						
Botswana						
Burkina Faso	0	0.001	0.001	0	0.001	1.241
Burundi	0	0.003	0.003	0	0.003	1.177
Cabo Verde						
Cambodia	0	0.012	0.008	0.008	0.012	0.817
Central African						
Chad	0	0	0	0	0	1.004
Comoros						
Congo, Dem. Rep.	0	0.037	0.035	0.032	0.037	1.063
Djibouti	0	0	0	0	0	1
Equatorial Guinea						
Eritrea						
Ethiopia	0	0.016	0.009	0.009	0.016	1.425
Gambia	0	0	0	0	0	1
Guinea	0	0	0	0	0	1.465
Guinea-Bissau	0	0	0	0	0	1
Haiti	0	0.012	0	0.012	0.012	0.317

Kiribati	0	0.01	0.01	0	0.01	0.167
Lao PDR	0	0.002	0.002	0	0.002	0.005
Lesotho	0	0	0	0	0	1
Liberia	0	0.001	0.001	0.001	0.001	0.994
Madagascar	0	0	0	0	0	1.064
Malawi	0	0.004	0.003	0.002	0.004	0.81
Maldives	0	0.031	0.03	0.001	0.031	0.188
Mali	0	0.031	0.03	0.001	0.031	0.188
Mauritania	0	0.001	0.001	0	0.001	0.968
Mozambique	0	0.022	0.021	0.002	0.022	0.309
Myanmar	0	0	0	0	0	0.998
Nepal	0	0.002	0.002	0	0.002	1.786
Niger	0.001	0.002	0.004	0	0.004	0.21
Pakistan						
Phillipines	0	0.007	0.005	0.002	0.007	0.373
Rwanda	0	0.001	0.001	0.001	0.001	0.991
Samoa						
Sao Tome and Principe	0	0	0	0	0	1
Senegal	0	0.01	0.009	0.002	0.01	1.108
Sierra Leone	0	0.003	0.003	0	0.003	0.988
Solomon Islands	0	0.008	0.008	0	0.008	0
Somalia	0	0	0	0	0	#DIV/0!
South Sudan	0	0.01	0.009	0.001	0.01	3.737
Sri Lanka	0	0.001	0.001	0	0.001	0
Sudan	0	0.003	0.001	0.002	0.003	0.337

Tanzania	0	0.002	0.001	0.002	0.002	3.332
Timor-Leste	0	0.001	0	0.001	0.001	0
Togo	0	0	0	0	0	1
Tuvalu	0	0.003	0.003	0	0.003	0
Uganda	0	0.009	0.008	0.008	0.009	1.674
Vanuatu	0	0.005	0.005	0	0.005	0.002
Yemen, Rep.						
Zambia	0	0.003	0.002	0.003	0.003	0.944
TOTAL	0.001	0.256	0.219	0.091	0.258	0.753

Table A6: Industry, Construction & Mining

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement-Commitment
Afghanistan	0	0	0	0	0	0.94
Angola						
Bangladesh	0	0	0	0	0	12.46
Benin	0	0	0	0	0	0.79
Bhutan	0	0	0	0	0	0.99
Botswana						
Burkina Faso	0	0	0	0	0	0.24
Burundi	0	0	0	0	0	0.02
Cabo Verde						
Cambodia	0	0	0	0	0	1.08
Central African Republic						
Chad	0	0	0	0	0	0.7
Comoros						
Congo, Dem. Rep.	0	0.01	0	0.01	0.01	0.22

Djibouti						
Equatorial Guinea						
Eritrea						
Ethiopia	0	0	0	0	0	1
Gambia	0	0	0	0	0	0
Guinea	0	0	0	0	0	23.92
Guinea-Bissau						
Haiti	0	0.01	0.01	0	0.01	0.09
Kiribati	0	0	0	0	0	0
Lao PDR	0	0	0	0	0	1.54
Lesotho	0	0	0	0	0	1
Liberia						
Madagascar	0.01	0	0.01	0	0.01	0.01
Malawi	0	0	0	0	0	1.03
Maldives						
Mali	0	0	0	0	0	0.24
Mauritania	0	0	0	0	0	0
Mozambique	0	0.01	0	0.01	0.01	1.06
Myanmar	0	0	0	0	0	1
Nepal	0	0	0	0.01	0.01	0.42
Niger	0	0	0	0	0	0
Pakistan	0	0	0	0	0	0.45
Phillipines	0.03	0	0	0.03	0.03	0.08
Rwanda						
Samoa						
Sao Tome and Principe						

Senegal	0	0	0	0	0	0.42
Sierra Leone	0	0	0	0	0	1
Solomon Islands	0	0.02	0.02	0	0.02	0
Somalia	0	0.01	0	0.01	0.01	0.67
South Sudan						
Sri Lanka	0	0.01	0	0.01	0.01	0.49
Sudan	0	0	0	0	0	0
Tanzania	0	0.02	0	0.03	0.03	0.2
Timor-Leste	0	0	0	0	0	1
Togo	0	0.01	0.01	0	0.01	0.43
Tuvalu						
Uganda	0	0	0	0	0	1.23
Vanuatu						
Yemen, Rep.	0	0	0	0	0	0
Zambia	0	0.01	0	0.01	0.01	0.38
TOTAL	0.04	0.14	0.09	0.12	0.2	0.33

Table A7: Population Policies & Reproductive Health

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0	0	0	0	1
Angola	0	0	0	0	0	0.97
Bangladesh	0	0	0	0	0	1.08
Benin	0	0	0	0	0	1.36
Bhutan						

Botswana	0	0	0	0	0	1.02
Burkina Faso	0	0	0	0	0	1.03
Burundi	0	0	0	0	0	#DIV/0!
Cabo Verde						
Cambodia	0	0	0	0	0	0.94
Central African Republic						
Chad						
Comoros						
Congo, Dem. Rep.	0	0.06	0.06	0.06	0.06	1.38
Djibouti						
Equatorial Guinea						
Eritrea						
Ethiopia	0	0.01	0.01	0.01	0.01	1.81
Gambia						
Guinea	0	0	0	0	0	2.01
Guinea-Bissau	0	0	0	0	0	1
Haiti	0	0	0	0	0	0.11
Kiribati						
Lao PDR						
Lesotho						
Liberia	0	0	0	0	0	3.26
Madagascar	0	0	0	0	0	0.99
Malawi	0	0	0	0	0	0.96
Maldives						

Botswana	0	0	0	0	0	1.02
Burkina Faso	0	0	0	0	0	1.03
Burundi	0	0	0	0	0	#DIV/0!
Cabo Verde						
Cambodia	0	0	0	0	0	0.94
Central African Republic						
Chad						
Comoros						
Congo, Dem. Rep.	0	0.06	0.06	0.06	0.06	1.38
Djibouti						
Equatorial Guinea						
Eritrea						
Ethiopia	0	0.01	0.01	0.01	0.01	1.81
Gambia						
Guinea	0	0	0	0	0	2.01
Guinea-Bissau	0	0	0	0	0	1
Haiti	0	0	0	0	0	0.11
Kiribati						
Lao PDR						
Lesotho						
Liberia	0	0	0	0	0	3.26
Madagascar	0	0	0	0	0	0.99
Malawi	0	0	0	0	0	0.96
Maldives						

Mali	0	0	0	0	0	1.58
Mauritania	0	0	0	0	0	1
Mozambique	0	0	0	0	0	1.35
Myanmar	0	0	0	0	0	#DIV/0!
Nepal	0	0	0	0	0	1.55
Niger	0	0.01	0	0.01	0.01	0.29
Pakistan	0	0	0	0	0	1
Phillipines	0	0	0	0	0	0.83
Rwanda	0	0	0	0	0	1.3
Samoa						
Sao Tome and Principe						
Senegal	0	0	0	0	0	0.99
Sierra Leone	0	0	0	0	0	1
Solomon Islands						
Somalia						
South Sudan	0	0	0	0	0	0.54
Sri Lanka						
Sudan						
Tanzania	0	0.01	0	0.01	0.01	1
Timor-Leste						
Togo						
Tuvalu						
Uganda	0	0.01	0.01	0.01	0.01	0.98

Vanuatu						
Yemen, Rep.	0	0	0	0	0	#DIV/0!
Zambia	0	0	0	0	0	1.24
TOTAL	0	0.13	0.1	0.11	0.13	1.22

Table A8: Transport & Storage

Country	Total Loan	Total Grant	Total Climate	Total Climate	Total CF (in billion)	Disbursement-
Afghanistan	0	0	0	0	0	4.37
Angola						
Bangladesh	0.43	0	0.29	0.14	0.43	0.91
Benin	0	0.01	0.01	0	0.01	0.19
Bhutan	0	0.01	0.01	0.01	0.01	0.75
Botswana						
Burkina Faso						
Burundi	0	0	0	0	0	#DIV/0!
Cabo Verde	0	0	0	0	0	1
Cambodia	0.06	0.04	0.1	0	0.1	0.33
Central African Republic						
Chad						
Comoros						
Congo, Dem. Rep.						
Djibouti						
Equatorial Guinea						
Eritrea						
Ethiopia	0.1	0.01	0	0.12	0.12	0.16
Sri Lanka	0	0	0	0	0	1

Sudan	0	0	0	0	0	0.01
Gambia						
Guinea						
Guinea-Bissau						
Haiti	0	0.04	0.04	0	0.04	0.78
Kiribati						
Lao PDR	0.02	0.01	0.02	0	0.02	0.91
Lesotho						
Liberia	0	0	0	0	0	0.08
Madagascar						
Malawi						
Maldives						
Mali						
Mauritania	0	0	0	0	0	1
Mozambique	0.01	0.05	0.02	0.04	0.06	0.36
Myanmar	0	0	0	0	0	1.1
Nepal	0	0	0	0	0	0.39
Niger						
Pakistan	0.15	0	0	0.15	0.15	0.57
Phillipines	0.67	0.01	0.06	0.62	0.67	0.25
Rwanda	0	0.01	0.01	0	0.01	0.11
Samoa	0	0.01	0.01	0	0.01	0.14
Sao Tome and Principe						
Senegal	0.27	0.01	0.01	0.27	0.28	0.86

Sierra Leone						
Solomon Islands	0	0	0	0	0	1
Somalia						
South Sudan	0	0	0	0	0	0.56
Tanzania	0	0.05	0	0.05	0.05	0.15
Timor-Leste	0	0.02	0.02	0	0.02	0.63
Togo						
Tuvalu						
Uganda	0	0	0	0	0	14.28
Vanuatu						
Yemen, Rep.						
Zambia	0	0.01	0.01	0	0.01	0.53
TOTAL	1.71	0.29	0.6	1.41	2	0.53

Table A9: Water Supply & Sanitation

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.01	0.01	0	0.01	1.39
Angola	0	0.01	0.01	0	0.01	0.47
Bangladesh	0.47	0.06	0.51	0.03	0.53	0.41
Benin	0	0.07	0.06	0.01	0.07	0.56
Bhutan	0	0.01	0.01	0	0.01	0.19
Botswana						
Burkina Faso	0.11	0.09	0.19	0.02	0.2	0.24
Burundi	0	0.01	0.01	0.01	0.01	0.58
Cabo Verde	0.18	0.06	0.23	0.01	0.24	0.26

Cambodia	0.29	0.01	0.29	0	0.3	0.76
Central African Republic	0	0.01	0.01	0	0.01	0
Chad	0	0.05	0.05	0	0.05	0.35
Comoros	0	0.01	0.01	0	0.01	0.48
Congo, Dem. Rep.	0	0.08	0.08	0.01	0.08	0.64
Djibouti	0	0.15	0.15	0	0.15	0.51
Equatorial Guinea						
Eritrea	0	0.01	0.01	0	0.01	0
Ethiopia	0.02	0.16	0.16	0.02	0.18	0.25
Gambia	0	0	0	0	0	0.9
Guinea	0	0.04	0.04	0	0.04	0.88
Guinea-Bissau	0	0	0	0	0	1.21
Haiti	0	0.01	0.01	0	0.01	0.69
Kiribati	0	0.02	0.02	0	0.02	0.02
Lao PDR	0	0.03	0.03	0	0.03	0.8
Lesotho	0	0.09	0.09	0	0.09	0.21
Liberia	0	0	0	0	0	0.6
Madagascar	0.03	0.01	0.03	0	0.03	0.67
Malawi	0	0.04	0.01	0.03	0.04	0.44
Maldives	0	0.01	0.01	0	0.01	1.46
Mali	0.04	0.05	0.09	0	0.09	0.23
Mauritania	0	0.02	0.02	0	0.02	0.4
Mozambique	0	0.06	0.05	0.02	0.06	0.68
Myanmar	0	0	0	0	0	0.98
Nepal	0	0.05	0.05	0.01	0.06	0.47

Niger	0.05	0.03	0.08	0	0.08	0.53
Pakistan	0.11	0.18	0.25	0.04	0.29	0.4
Phillipines	0.1	0.04	0.12	0.02	0.14	0.63
Rwanda	0	0.01	0.01	0	0.01	1.03
Samoa	0	0.02	0.02	0	0.02	0.17
Sao Tome and Principe	0	0.01	0.01	0	0.01	0.02
Senegal	0.13	0.1	0.21	0.02	0.23	0.4
Sierra Leone	0	0.01	0.01	0	0.01	4.18
Solomon Islands	0	0.03	0	0.03	0.03	0.01
Somalia	0	0.01	0.01	0	0.01	0.17
South Sudan	0	0.01	0.01	0	0.01	0.24
Sri Lanka	0.38	0.01	0.24	0.2	0.38	0.41
Sudan	0	0.02	0.02	0	0.02	1.5
Tanzania	0.08	0.1	0.12	0.05	0.17	0.72
Timor-Leste	0	0.03	0.02	0.01	0.03	0.9
Togo	0.05	0.02	0.07	0	0.07	0.18
Tuvalu	0	0	0	0	0	1.65
Uganda	0	0.16	0.15	0.09	0.16	0.71
Vanuatu	0	0	0	0	0	1.01
Yemen, Rep.	0	0.03	0.02	0.01	0.03	0.22
Zambia	0.02	0.05	0.06	0	0.06	0.63
TOTAL	2.04	2.11	3.67	0.66	4.15	0.48

Table A10: Others/ Multi Sector Cross-Cutting

Country	Total Loan	Total Grant	Total Climate Adaptation	Total Climate Mitigation	Total CF (in billion)	Disbursement -Commitment
Afghanistan	0	0.03	0.03	0	0.03	0.84
Angola	0	0.08	0.08	0	0.08	0.02
Bangladesh	0.04	0.16	0.14	0.09	0.2	0.55
Benin	0.05	0.03	0.07	0.01	0.07	0.32
Bhutan	0	0.03	0.03	0	0.03	0.69
Botswana	0	0	0	0	0	3.12
Burkina Faso	0.13	0.03	0.16	0	0.16	0.38
Burundi	0	0.01	0.01	0	0.01	1
Cabo Verde	0	0	0	0	0	0.07
Cambodia	0.13	0.1	0.23	0.01	0.23	0.55
Central African Republic	0	0.01	0.01	0	0.01	0.08
Chad	0	0.05	0.03	0.03	0.05	0.69
Comoros	0	0.01	0.01	0	0.01	0.62
Congo, Dem. Rep.	0	0.04	0.04	0.01	0.04	0.37
Djibouti	0	0.05	0.05	0	0.05	0.19
Equatorial Guinea						
Eritrea	0	0.01	0.01	0	0.01	0.76
Ethiopia	0.04	0.1	0.11	0.04	0.14	0.53
Gambia	0	0.02	0.02	0	0.02	0.33
Guinea	0	0.01	0	0.01	0.01	0.07
Guinea-Bissau	0	0.01	0.01	0	0.01	0
Tanzania	0.02	0.02	0.04	0	0.04	0.31

Haiti	0	0.16	0.14	0.04	0.18	0.22
Kiribati	0	0.01	0.01	0	0.01	0.32
Lao PDR	0	0.03	0.03	0	0.03	0.41
Lesotho	0	0.01	0.01	0	0.01	0.1
Liberia	0	0	0.01	0	0.01	0.54
Madagascar	0.08	0.02	0.1	0.03	0.1	0.52
Malawi	0	0.04	0.03	0.01	0.04	0.54
Maldives	0	0	0	0	0	9.74
Mali	0	0.08	0.08	0.01	0.08	0.54
Mauritania	0	0.06	0.06	0	0.06	0.17
Mozambique	0.01	0.1	0.09	0.02	0.11	0.43
Myanmar	0	0.03	0.03	0	0.03	0.63
Nepal	0	0.03	0.02	0	0.03	0.93
Niger	0.04	0.04	0.07	0.01	0.08	0.24
Pakistan	0	0.02	0.02	0	0.02	1.19
Phillipines	0.36	0.07	0.42	0.01	0.42	0.96
Rwanda	0.01	0.09	0.08	0.02	0.09	0.38
Samoa	0	0.01	0.01	0	0.01	0.25
Sao Tome and Principe	0	0.01	0.01	0	0.01	0
Senegal	0.19	0.06	0.18	0.07	0.25	0.34
Sierra Leone	0	0.01	0	0.01	0.01	0.14
Solomon Islands	0	0.02	0.02	0	0.02	0.3
Somalia	0	0.11	0.11	0	0.11	0.51
South Sudan	0	0.03	0.03	0.01	0.03	0.7
Sri Lanka	0.06	0.01	0.07	0	0.07	0.1

Sudan	0	0.02	0.02	0	0.02	0.22
Timor-Leste	0	0.01	0.01	0.01	0.01	0.45
Togo	0	0.01	0.01	0	0.01	0.43
Tuvalu	0	0.01	0.01	0	0.01	0.16
Uganda	0	0.03	0.03	0.01	0.04	0.73
Vanuatu	0	0.01	0	0	0.01	0.73
Yemen, Rep.	0	0.03	0.03	0	0.03	0
Zambia	0	0.01	0.01	0	0.01	0.99
TOTAL	1.15	1.99	2.83	0.49	3.17	0.49

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M. Zakir Hossain Khan is an unstoppable actor in the global fight for nature and climate justice, sustainable finance, integrity, and governance. As the Chief Executive as well as co-founder of Change Initiative, a think tank, his unparalleled expertise positions him as a transformative leader in the global landscape of climate finance, community-led resilience, environmental sustainability, renewable energy-based just transition, and innovative anti-corruption efforts. His book titled Sovereignty for Nature, Survival for All: Natural Rights Led Governance Towards Sustainable Future (EXTINCTION OR PROSPERITY?) has provided a new global governance framework to protect nature and lives. Collaborating with global institutions like SOAS University of London, UNDP, Transparency International, World Bank, M. Zakir Hossain Khan reshapes climate finance, energy reform, and anti-corruption strategies across Asia, Africa, and the Middle East. His Dhaka Renewable Energy and Finance Talk (DREFT) and extensive publications amplify his impact, establishing him as a visionary architect of transparency, resilience, and sustainable prosperity. He has been recently appointed as a global Observer of the World Bank-funded Climate Investment Fund.

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