

POLICY BRIEF

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Climate Adaptation Finance: The Gap Between Needs and Resources Continues to Grow

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Abstract

Our recent research on the state and trends of climate adaptation finance needs, gaps, and trends globally and in Africa provides new insights that call for greater urgency in adaptation action and financing. The global adaptation funding gap continues to widen because the understanding of needs shows much higher levels of investment required, and the rate of increase of adaptation financing is insufficient. In this policy brief, we review global climate finance trends, the growing funding gap in climate adaptation finance globally and in Africa, financial instruments used for climate adaptation, and challenges and recommendations to improve the tracking of climate adaptation finance.

Global Climate Finance Trends

Climate finance refers to financial resources and instruments that are used to support action on climate change. Our analysis shows that climate finance crossed, for the first time, USD 1 trillion in commitments in 2021-2022. This level is about double the investments in 2019-2020, increasing from USD 653 billion to USD 1.3 trillion. This amount corresponds to tracked flows from public, private, international, and domestic financiers.¹ These are great news and are the result of rapid growth in clean energy, especially in China, the U.S., Japan, and India, which invested about 90 percent of the total amount.

KEY MESSAGES:

1. **The global adaptation funding gap is widening**, driven by higher than estimated costs and impacts of climate change, and the relatively slow growth of adaptation finance compared to the needs. Climate finance crossed, for the first time, USD 1 trillion in commitments in 2021-2022. This level is about double the investments in 2019-2020, increasing from USD 653 billion to USD 1.3 trillion.
2. **Developing countries currently need about USD 212 billion per year in adaptation finance up to 2030.** Only USD 56 billion were tracked for adaptation in 2021-2022. Adaptation finance flows must almost quadruple as climate impacts grow rapidly.
3. **Adaptation finance in Africa is nowhere close to the need.** Most climate adaptation finance was in the East Asia and Pacific Region, with about 45 percent of the total flows. Africa's share is 20 percent (USD 13 billion).
4. **High utilization of debt, particularly foreign-denominated or hard currency debt, for adaptation finance presents a significant risk.** By far, the most common instrument was market-based debt (USD 37.5 billion) in 2021-2022.
5. **Adaptation finance tracking is plagued by data gaps, methodological inconsistencies, and reporting limitations** at both domestic and international levels, which makes it difficult to measure collective progress. Furthermore, it is not enough to measure finance; it is also necessary to capture adaptation results, benefits, and outcomes.

¹ Global Center on Adaptation and Climate Policy Initiative (2023). State and Trends in Climate Adaptation Finance 2023 https://gca.org/wp-content/uploads/2023/12/State-and-Trends-in-Climate-Adaptation-Finance-2023_WEB.pdf

Unfortunately, the portion of climate financing that supported adaptation actions only saw a modest increase in absolute values and diminished as a percentage of the total investment. Of the USD 1.3 trillion tracked for climate mitigation and adaptation in 2021-2022, only USD 63 billion (5 percent) was invested in adaptation. This was a decrease from the 7 percent that the world invested in adaptation in 2019-2020. Tracked climate adaptation finance for developing countries was about USD 56 billion in 2021-2022. The low level of adaptation financing in developed countries is linked to the lack of consistent reporting.

The Growing Funding Gap in Climate Adaptation Finance

The global estimates of adaptation finance needs vary from the UN Environment Programme (UNEP) calculations of USD 130–415 billion annually, with a significant increase by 2050,² to the UN Intergovernmental Panel on Climate Change (IPCC) estimates of USD 127 billion annually by 2030 and USD 295 billion by 2050 for developing countries. The 2023 Global Landscape of Climate Finance estimates USD 212 billion per year in adaptation finance up to 2030 and USD 239 billion annually between 2031 and 2050.³ Despite the variations in methodologies, it is clear that developing countries need hundreds of billions of US dollars annually this decade, and the needs will increase as climate impacts grow rapidly.

As the tracked climate adaptation funding flows in 2021-2022 to developing countries was USD 56 billion, the needs are about four times higher than the actual flows. The insufficient adaptation funding in developing economies means that vulnerability increases as climate impacts grow in magnitude and intensity, and today's economy and investments are insufficiently prepared for those climate shocks.

Most climate adaptation finance was in the East Asia and Pacific Region, with about 45 percent of the total flows. Most of these adaptation funding flows were domestic (close to 85 percent⁴) and primarily in China.

The second developing region regarding climate adaptation financing was Africa, with 20 percent (USD 13 billion), followed by Latin America and South Asia at about 10 percent in 2021-2022.

Climate Adaptation Gap in Africa

Climate change impacts all aspects of African life. Contributing a meager 5% of global greenhouse gas emissions, Africa is more victim than contributor to climate change. A low carbon, climate resilient development pathway offers an unparalleled investment opportunity in Africa with a triple dividend of avoided losses, positive economic gains, and enhanced social and environmental benefits.

While curbing warming is essential for Africa, it is not sufficient: the continent needs decisive action on adaptation, including through bold increase of climate finance. But the growth in climate adaptation finance in Africa between 2019-2020 and 2021-2022 was only 14%. An important commitment in 2021 of the UN Climate Change Conference, more commonly referred to as Glasgow COP26 was for developed countries to double adaptation finance by 2025. The observed trends do not give hope that this commitment will be met.

Adaptation finance was only 36 percent of the total tracked climate finance to Africa in 2021-2022. As Africa is the region with the highest adaptation needs, it is unclear why the continent is investing more in mitigation than adaptation.

When comparing the adaptation finance flows in Africa (USD 13 billion in 2021-2022) to the stated needs in Nationally Determined Contributions (NDCs)⁵, we estimate that the continent needs several times more, as much as USD 53 billion per year for adaptation.

However, our analysis also indicates that this amount underestimates actual needs by as much as 100 percent.⁶ This means that current adaptation finance flows are less than 15 percent of today's needs for Africa (see Figure 1).

When we review the source of funding for adaptation in Africa, we observe that multilateral development finance institutions provide 63 percent. African governments are not passive observers of the climate crisis. In total, 19 percent of adaptation funding comes from African governments to tackle a problem the region did not cause. Notably, bilateral agencies from developed countries only contribute 11 percent less than African governments. Furthermore, the adaptation finance flows in Africa are concentrated in a few countries. The top ten countries in the region received more than half of the total adaptation finance in 2019-2020.⁷

² UN Environment Programme. (2023). *Adaptation Gap Report 2023*. <https://www.unep.org/resources/adaptation-gap-report-2023>

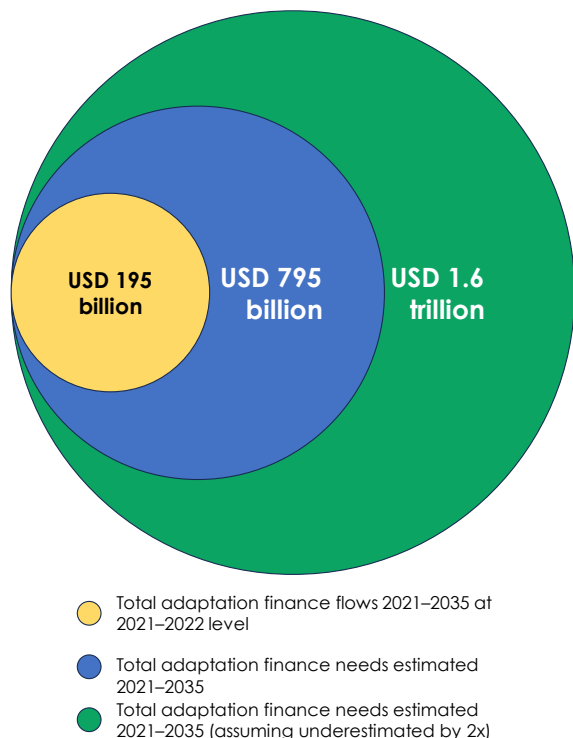
³ Climate Policy Initiative. (2023). *Global Landscape of Climate Finance 2023*. <https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Global-Landscape-of-Climate-Finance-2023.pdf>. The USD 212 billion estimate is CPI's analysis based on a combined assessment of available needs information from across sources notably: UNEP (2021) & World Bank and GFDRR (2021).

⁴ It is important to note that the domestic climate adaptation expenditure has several data and methodological limitations. Government budgets do not always account for adaptation investments and those that do generally have very different methodologies.

⁵ Nationally Determined Contribution, is a climate action plan to cut emissions and adapt to climate impacts. Each Party to the Paris Agreement is required to establish an NDC and update it every five years. <https://unfccc.int/process/conferences/pastconferences/paris-climate-change-conference-november-2015/paris-agreement>

The private sector must be part of efforts to bridge the adaptation funding gap in Africa. The private sector contributes 12% of total climate finance to Africa, less than the contribution of the private sector in other regions like South Asia (55%) and East Asia and the Pacific (52%)⁸. The need for private participation is particularly evident for adaptation efforts in Africa, where currently the private sector contributes less than 3% of adaptation finance.

Figure 1. Estimated Total Climate Adaptation Finance Flows and Needs in Africa, 2021-2035



Financial Instruments for Climate Adaptation

As part of our analysis, we reviewed the financial instruments used to fund climate adaptation action. By far, the most common instrument was market-based debt (USD 37.5 billion of 59 percent) in 2021-2022. With the current situation of debt distress in numerous developing countries, the use of market-based debt for adaptation financing compounds the challenges caused by climate change.

The proportion of grants and concessional finance as part of adaptation finance diminished from 19 percent and 24 percent in 2019-2020 to 17 percent and 21

percent, respectively, in 2021-2022. This is an important challenge for low-income countries with low emissions that did not cause the climate crisis and do not receive sufficient grants to adapt to the new climate reality.

Equity investments are a very small fraction of financing. We believe there are significant opportunities for the private sector to provide adaptation solutions, goods, and services. A growth in the adaptation markets would attract equity capital to adaptation action.

In Africa, the numbers are more striking. African governments invest in adaptation from their own budgets as much as the total grants received from developed countries – USD 2.42 billion and 2.78 billion, respectively, in 2021-2022. At the same time, African governments borrowed USD 7.11 billion to pay for climate adaptation.

In summary, climate adaptation financing needs all hands-on deck. It also needs larger volumes of grant financing that can leverage blended finance. The private sector opportunities must be leveraged to provide equity for adaptation investments. Furthermore, there is a need for a wide range of financial instruments to close the adaptation finance gap. Table 1 gives a range of examples that can be scaled up for adaptation.

Challenges and Policy Recommendations

The tracking of climate adaptation finance still has many constraints, ranging from inconsistent methodologies, insufficient coverage, and reporting issues among most stakeholders.

Some of the most important challenges include:

- There is no standard definition of adaptation finance that can be adapted to all types of financiers.
- There is little disclosure of adaptation investments, particularly in the private sector, partly due to a lack of standards and reporting requirements.
- Many financial institutions do not have the tools to identify which investments or what portion of a given investment can classify as climate adaptation.
- There is insufficient tracking of climate adaptation in domestic budgets.
- There are inconsistencies in the methodologies used by the multilateral development banks, other development financial institutions, and climate funds. The former only counts the incremental portion of financing dedicated to finance. The latter reports the total cost of the investment (in many cases, regardless of the portion of adaptation in the total).
- Integrating data from different sources is complex, leading to substantial delays and insufficient granularity and consistency.

⁶ There are two reasons for the underestimation: 1) only half of African NDCs calculate adaptation costs; 2) the damages from climate change are occurring faster and stronger than estimated and projected by science at the time of preparing the NDCs.

⁷ Egypt, Morocco, Kenya, Nigeria, Ethiopia, South Africa, Mozambique, Cote d'Ivoire, Tunisia, and Ghana.

Table 1. Financial Instruments Available for Adaptation Finance

Category	Description	Typical Use Case	Example
Debt-for-Climate Swaps	A debt swap is a situation in which the debtor nation makes payments in local currency instead of continuing to make external debt payments in a foreign currency to finance domestic climate projects.	Countries with high climate vulnerability, significant but manageable debt levels, and no imminent liquidity crisis. Institutional capacity is required to execute.	Belize and The Nature Conservancy (TNC) debt-for-nature swap (2021) . The Nature Conservancy (TNC) and the Belize Government finalized a USD 364 million marine conservation debt conversion, reducing Belize's debt by 12% of GDP. ¹¹
Financing Facilities	Debt or equity funding for a pool of projects, companies, or individuals at various levels of concessional, including subordinated debt and equity, private equity funds, and other debt facilities.	Wide-ranging: Can support investment, which requires aggregation and coordination.	Catalyst Climate Resilience Fund (2015–present) . The Catalyst Climate Resilience Fund (CCRF) is the leading impact fund and accelerator supporting pre-seed tech startups building a climate-resilient future in Africa. ¹²
Grants	Non-repayable or no interest rate reimbursable funding. It can include development grants, TA funding, and PPFs.	For projects with a critical development objective but low commercial potential, funding is needed to make an effort to be 'investment ready.'	West Africa Coastal Areas Resilience Investment Project (WACA) (2018–2023) . The WACA program aims to strengthen the resilience of targeted communities and areas in coastal Western Africa through bilateral support with traditional development partners for concessional and grant financing. ¹³
Guarantees	A financial safeguard where a third-party guarantor commits to repaying part or all of a loan to the lender if the borrower defaults.	When a project requires a credibility boost to secure loans, acting as a de-risking mechanism provided by a third party.	USDA Water and Waste Disposal Loan Guarantees: (2020–present) . The USDA Water and Waste Disposal Loan program guarantees 80% of loans for rural water and waste projects, spurring private investment in essential public utility infrastructure.
Insurance	The most common form of risk transfer. It can include catastrophe bonds, parametric insurance, and index insurance.	Cases with high climate risk. It is most effective when climate data is robust, regulatory conditions are workable, and there is trust in insurance payouts.	Quintana Roo Reef Protection Parametric Insurance: (2018–present) . Swiss Re and The Nature Conservancy collaborated to deploy the first insurance that funds reef restoration immediately after hurricanes, based on wind speed. ¹⁴
Liquidity Instruments	Grant or debt facilities that are designed to provide immediate access to capital. Most frequently, shock-responsive cash transfers, liquidity support, and domestic budget reallocations.	In response to insufficient financial and technical capacity in the face of emergencies.	IMF Catastrophe Containment and Relief Trust (CCRT) (2015–present) . The CCRT offers debt relief grants to the poorest countries affected by major natural or public health disasters. ¹⁵
Local Currency Swaps	Long-term finance options in local currency through fixed and inflation-linked swaps are designed to mitigate the dual risks of currency and interest rate fluctuations for climate investments.	Commonly deployed to support investments in emerging markets and to hedge against currency and interest rate volatility.	Long-term FX Risk Management (TCX) (2013–present) . TCX specializes in mitigating currency and interest risks for energy investments in developing nations, enabling long-term, local currency financing. Since its inception, it has supported the de-risking of more than USD 8 billion in loans.
Project Finance	Direct debt or equity investments into a single/set of project(s) across commercial or concessional finance, including first-loss debt, off-taker	Direct development and investment in an infrastructure project or for financing based on a government contract.	Patong Desalination Investment (2020–present) . The project's primary objective is to produce safe drinking water using seawater desalination in regions with seasonal water scarcity. Funded by Climate Investor Two (CI2). ¹⁶

The international and domestic financial community should come together to resolve some of these challenges. Better information on climate adaptation can help compare across geographies and countries, understand where funding should be directed to priority issues or regions, and identify the most urgent gaps for action.

Furthermore, it is not enough to measure finance; it is also necessary to capture adaptation results, benefits, and outcomes. Climate adaptation has no unique metric like tons of CO₂ used for mitigation. Much work is required to strengthen metrics for climate adaptation.

⁸ https://gca.org/wp-content/uploads/2023/12/State-and-Trends-in-Climate-Adaptation-Finance-2023_WEB.pdf

⁹ Climate Policy Initiative. (2022a). Africa Adaptation Financial Instruments. <https://www.climatepolicyinitiative.org/gca-africa-adaptation-finance/instruments/>

¹⁰ Climate Policy Initiative. (2021). Debt for Climate Swaps. <https://www.climatepolicyinitiative.org/publication/debt-for-climate-swaps/>

¹¹ International Monetary Fund. (2022). Belize: Swapping Debt for Nature. <https://www.imf.org/en/News/Articles/2022/05/03/CF-Belize-swapping-debt-for-nature>

¹² The Global Innovation Lab for Climate Finance. (nd). Catalyst Climate Resilience Fund (CCRF). <https://www.climatefinancelab.org/ideas/catalyst-climate-resilience-fund/>

¹³ World Bank. (nd.) West Africa Coastal Areas Management Program. <https://www.wacaprogram.org>

¹⁴ Green Finance Institute. (2021). Quintana Roo Reef Protection (Parametric Insurance). <https://www.greenfinanceinstitute.com/gfihive/case-studies/quintana-roo-reef-protection-parametric-insurance/>

¹⁵ International Monetary Fund. (nd). Catastrophe Containment and Relief Trust. <https://www.imf.org/en/About/Factsheets/Sheets/2023/Catastrophe-containment-relief-trust-CCRT>

We have five recommendations to strengthen the tracking of adaptation finance globally:

- Converting the NDCs into investment plans for adaptation action based on specific project pipelines is crucial. Monitoring and tracking the implementation of these pipelines should be at the core of reporting funding flows and clear linkages to adaptation actions.
- Continue the progress with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) with regulations that use consistent disclosure standards of climate risks at the portfolio level of companies. This information will support the movement towards greater adaptation action, hence greater funding flows.
- Build the capacity of public financial institutions and bilateral DFIs to report adaptation funding flows with a consistent methodology. The Multilateral Development Banks can play an important leadership role in this area by openly sharing information and internal experience with their monitoring systems.
- Private financial institutions should enhance their adaptation finance report systems. This will require sector specialists within financial institutions to understand better climate vulnerability and adaptation, as well as the use of consistent methodologies for reporting.
- There is a need to develop, harmonize, and simplify adaptation-relevant reporting standards.

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¹⁶ Climate Fund Managers. (nd). Patong - Desalination. <https://climatefundmanagers.com/portfolio/patong-desalination/>
¹⁷ European Bank for Reconstruction and Development. (2019). Climate Resilience Bonds/Green Bond Programme information. <https://www.ebrd.com/documents/treasury/framework-for-climate-resilient-bonds.pdf>