

# Adaptation and Resilience Finance in an Overshoot World

## The Global Landscape of Climate Finance 2026: Adaptation Deep Dive

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CLIMATE POLICY INITIATIVE

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Responsibility for the information and views set out in this publication lies entirely with the authors.

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# EXECUTIVE SUMMARY

**Decisions made today will shape how communities manage climate risk for decades.** A home built today may still be sheltering families well into the second half of the century, in a climate very different from the one we know today. Global average temperatures are expected to exceed 1.5°C above pre-industrial levels in the next few years. Even under the best remaining emissions reduction pathway, the world will experience climate overshoot, a period when long-term average temperatures remain above 1.5°C before eventually returning below that threshold. This means homes today will need to withstand hotter summers, heavier rainfall, and other changing climate risks. Where homes are constructed, the materials used, how they are cooled and protected from flooding, and whether affordable technologies and services are available to help families adapt over time will determine how safe and livable they remain for generations to come.

This long-term perspective is relevant across economies. Governments are making choices about development pathways and public investment in infrastructure, food, health, water, and energy systems. Corporations are deciding where to locate operations and how to manage supply chains. Businesses and investors are identifying which adaptation technologies, products, and services can be developed and scaled affordably to meet growing demand. Asset managers and financial institutions are assessing the long-term viability of assets and investments that will operate for decades. For many of these actors, resilience is already a commercial proposition: measures that protect assets and operations can lower operating costs, avoid losses from extreme weather, defer capital spending, and open markets for new products and services. Whether these decisions account for a changing climate will affect economic growth, fiscal and financial stability, and the protection of people and livelihoods.

The need is immediate as well as long-term. In 2026 alone, flash floods in Nepal, wildfires in Indonesia, floods in Thailand and heatwaves across Europe have claimed lives and disrupted economies, and a strengthening El Niño threatens to compound drought, flooding, and extreme heat into 2027 (WMO 2026). These events expose the severity of incoming hazards, how thin the protection is where the risks are arriving fastest, and how far the current pattern of finance is from building sufficient resilience.

**Tracking adaptation and resilience finance helps us understand whether resources are reaching the people and places most vulnerable to climate change**. Examining where finance flows and what it supports can inform investment priorities and the allocation of scarce public resources. Yet financial flows tell only part of the story. Measuring progress also requires understanding how investment decisions are changing and whether they are building resilience to growing climate risks.

This report has two central aims.

1. **Understand where adaptation and resilience finance stands today**. Drawing on data from CPI's Global Landscape of Climate Finance (GLCF), the report examines where finance is flowing, what it supports, and on what terms.
2. **Redefine how progress on adaptation and resilience finance is measured**. The report sets out a broader approach to assessing progress, examining how climate risks are shaping investment decisions, whether those investments are building resilience, and how finance can respond as climate conditions evolve.

## WHAT COUNTS, AND WHAT GETS COUNTED

Throughout this report, we use adaptation finance to describe the input-level financial flows that can be tracked, and resilience to describe the outcome those flows are intended to support at the level of assets, communities, and economies.[1]

Mitigation finance can be more readily identified by the activities it supports and their contribution to reducing greenhouse gas emissions. Adaptation, by contrast, is an ongoing process of responding to climate risks and vulnerabilities that vary across locations and over time. What constitutes adaptation, how much financing should be counted, and what level of investment is needed therefore depend on the specific context, making adaptation finance needs and flows harder to define and quantify consistently.

Reporting conventions also differ: some institutions count only the added cost of making investments resilient, while others report nearly the full project value. Much of what governments, businesses, and households spend to protect assets and livelihoods is never reported as adaptation. Companies investing in supply chain resilience, business continuity, and asset protection generally do not describe that spending as climate adaptation, and have little reason to (CPI 2024). A significant share of real resilience investment therefore sits outside every tracking system, including ours. Existing data, including from CPI's GLCF database, remain the best available comparable basis for understanding the volume, distribution, sources, instruments, and sectors of adaptation finance. These data gaps and limitations are important for interpreting the figures that follow, and the report sets out a broader agenda for improving how progress on adaptation and resilience finance is understood and measured.

## WHAT AVAILABLE DATA SHOWS

Even within that partial picture, tracked flows tell us a great deal about the distribution, sources, and terms of adaptation finance.

- **CPI's Global Landscape of Climate Finance 2026 report finds that tracked adaptation finance reached USD 69 billion in 2024,**[2] drawing on data from over 30 datasets, covering more than 5,000 institutions and over 30,000 projects. Flows rose by about 7% a year on average from 2019 to 2024, with exceptional peaks driven by domestic spending in 2021 and 2022 linked to COVID-19 recovery spending and a rise in Chinese public finance.
- **Private sector engagement in adaptation and resilience is broadening, and our ability to track adaptation finance from the private sector is improving.** Corporations and commercial financial institutions account for a growing share of tracked private flows, pointing to emerging commercial opportunities for adaptation investment. Volumes remain volatile: tracked private flows rose from USD 3.3 billion in 2019 to USD 8.6 billion in 2023, driven largely by water and wastewater investments in the Middle East and North Africa, as well as East Asia and Pacific. However, they then fell to USD 3.8 billion in 2024. At this scale, annual figures are sensitive to the timing of large individual transactions, so year-on-year movements should be interpreted with care.

1 There is some variance in the way these terms are used across the field, and we do not attempt to settle those differences in this report. Our usage reflects a distinction between an input that can be counted and an outcome that must be assessed. Some actors, particularly in the private sector, invest substantially in resilience without describing it as adaptation at all, a point we return to below.

2 This figure is based on the latest year for which comprehensive and consistent data were available. Data gaps are prevalent across adaptation finance, particularly for private and domestic public sources. See Section 1 and Figure 1 for details on tracking limitations.

- **International sources supplied 61% of tracked adaptation finance globally over 2019-24, and at least 90% in developing regions.** These flows were driven largely by multilateral development finance institutions (DFIs). Domestic sources made up the remaining 39% but dominated in more developed markets, where government finance and national DFIs played leading roles. The higher share of international finance partly reflects more comprehensive data coverage, potentially underestimating the contribution of domestic and private sources.
- **Adaptation finance for developing regions is growing.** Sub-Saharan Africa retained the largest volume of tracked adaptation finance in 2024, with tracked flows nearly doubling to USD 13.9 billion from 2019. Central Asia and Eastern Europe, East Asia and Pacific (excluding China), and Latin America and the Caribbean all saw adaptation finance flows grow by at least 15%.
- **Vulnerability does not predict allocation of capital to adaptation, with fragile and conflict-affected countries tending to be underserved.** Among the 21 most vulnerable countries, those with near-identical vulnerability scores received widely varying amounts of adaptation finance. These disparities likely reflect the tendency for adaptation finance to flow toward countries with greater financial and institutional readiness rather than those facing the highest climate vulnerability. Limited absorption capacity and security challenges further constrain access to finance in fragile and conflict-affected settings.
- **The types of adaptation finance countries receive broadly reflect their level of debt vulnerability, with more concessional financing directed toward countries facing greater debt distress.** In 2024, countries already in debt distress received 73% of tracked adaptation finance as grants and the remaining 27% as concessional debt. This represents an improvement since 2019, when non-concessional debt accounted for 21% of their adaptation finance, compared with none in 2024. By contrast, non-concessional financing continued to account for a substantial share of adaptation finance received by countries at lower levels of debt vulnerability.
- **The strongest observed growth was in sectors with long-lived, climate-exposed assets.** Adaptation flows to transport more than tripled from USD 1.9 billion to USD 6.7 billion, while energy systems tripled from USD 0.5 billion to USD 1.5 billion. On the other hand, disaster-risk management finance rose only modestly from USD 7.7 billion to USD 8.6 billion, indicating global inadequacies in preparing for more frequent and more intense climate shocks.
- **Starting from a low base, flows of adaptation finance to Least Developed Countries (LDCs) and Small Island Developing States (SIDS) showed growth.** However, they continue to capture only a minimal share of the global total. LDC finance rose by almost 50% between 2019-24, from USD 8.1 billion to USD 11.9 billion, while their share went from 17% to 18% of total global adaptation finance. Adaptation finance in SIDS tripled from USD 0.8 billion to USD 2.4 billion in the same period, but remained between 1% and 4% of the total.

We find that volumes have risen across most regions and in the sectors with the most exposed assets, and private participation is broadening. But the data also shows that the share reaching LDCs and SIDS has barely moved, vulnerability does not predict allocation, and fragile and conflict-affected states remain underserved. Change would require a more deliberate approach to how different actors contribute. Governments set the policy and regulatory conditions for investment, and better tagging of domestic spending would show how countries finance their

own resilience priorities. DFIs can deploy scarce concessional capital against structural barriers, using catalytic finance, risk-sharing instruments and project preparation to attract private capital where commercial returns exist, and sustaining essential adaptation where they do not, particularly in LDCs and SIDS. Private investors are already doing more than the data reveals, building resilience into assets and supply chains and scaling adaptation products and services, largely without labeling any of it as adaptation (CPI 2024).

Adaptation finance flows reflect decisions taken years earlier, and financial-flow data will always have gaps. Additional metrics would show what commitment figures cannot. They might include whether climate criteria are applied when public projects are appraised and selected; how much of a country's exposure is insured or guaranteed; what climate conditions new assets were designed to withstand; and whether financing terms allow an investment to be upgraded later. Together, these would reveal whether ministries, lenders, and insurers are changing what they do, and whether communities are better protected. The wider GLCF recommendations point in the same direction, calling for greater investment in resilience to manage fiscal and financial risks, broader recognition of resilience-building activities, and stronger standards for the quality of adaptation finance.

Making individual assets climate-resilient does not by itself make an economy resilient. Assessing progress should also consider whether financing strategies and capital allocation are addressing structural vulnerabilities and supporting climate-resilient development. Building on CPI's work on the quality of adaptation finance, that assessment benefits from distinguishing the quality of an intervention's design and delivery from the quality of its results, including its contribution to wider systemic change, since longer-term outcomes are often difficult to attribute to individual interventions (CPI 2026).

## REDEFINING ADAPTATION FINANCE PROGRESS IN AN ERA OF OVERSHOOT

Understanding progress across a range of measures matters even more in an era of climate overshoot. This overshoot means that the decades ahead will not follow a single trajectory: climate conditions are expected to worsen beyond the level at which temperatures eventually stabilize, hold there for an uncertain period, and then ease. Neither the height nor the duration of that peak is yet known. The recent assessment of the United Nations Environment Programme (UNEP) calls for flexible adaptation pathways that sequence low-regret, reversible and modular options, cautioning against locking in solutions that fail if overshoot is higher or longer than expected, and against overinvesting if it proves lower or shorter (UNEP 2026). Investments may therefore need to perform under different warming conditions or be upgraded as risks evolve.

**Beyond tracking adaptation finance flows, we need to understand whether climate risks are shaping financial decisions, whether those decisions are translating into more resilient investments and outcomes, and whether financing arrangements allow adaptation efforts to evolve as conditions change.** These questions apply to public and private actors alike, though the processes differ: budgets, public investment management, and procurement in the public sector; credit, underwriting, capital allocation, and corporate investment decisions in the private sector.

Five questions can help us assess progress across these dimensions:

1. **How well are public and private institutions embedding climate risk into their financial decisions?** Does physical risk change budgets, project appraisal, lending, underwriting, procurement, and capital allocation, beyond surface-level assessments and disclosures? Following if and how risk analysis is embedded into decision-making would reveal whether resource allocation is changing.
2. **How effectively is risk-sharing enabling climate-resilient investment?** Guarantees, insurance, reinsurance, credit enhancement, and contingent finance can alter who bears risk and whether investment proceeds, without necessarily transferring capital. Measurement should examine the risks covered, who is protected, and the investment enabled.
3. **To what extent is climate resilience being built into public finance and private investment?** Tracked adaptation finance does not show whether larger flows to infrastructure, development, mitigation, and private investment are designed for future climate conditions. This requires knowing which risks were assessed and how project design changed.
4. **How well can finance adjust as the warming pathway becomes clearer?** Financing terms, triggers, phasing, and provisions for future investment can determine whether assets can be upgraded as risks evolve. Tracking these features can distinguish investments that preserve options from those that lock in assumptions. Beyond individual instruments, this also requires assessing whether country-led financing strategies and broader financial systems can adjust priorities and resource allocation over time.
5. **Does finance deliver outcomes that make durable climate resilience possible?** Commitments cannot tell us whether people and ecosystems are better protected. Assessing finance quality can examine whether forward-looking risks shaped design, interventions reached those most exposed, and maladaptation risks were considered. Good design cannot guarantee positive outcomes but helps indicate prospects for lasting resilience.

For private actors, adaptation and resilience is both a growing commercial investment opportunity, and prudent risk management. Investing in more resilient assets, operations, and supply chains can reduce operating costs, prevent losses and disruptions, and extend the useful life of existing investments. At the same time, rising demand for climate-resilient infrastructure, water management, cooling, and other adaptation technologies and services is creating new markets and opportunities for investment. The commercial value of resilience is already evident in individual transactions, pointing to a broader investment opportunity that is not yet fully understood. Much of this investment is embedded in routine business expenditure and is not reported as adaptation. Capturing these investments based on their contribution to resilience, irrespective of how businesses label them, would help identify viable business models and opportunities to scale investment.

## WHAT COMES NEXT

Turning these questions into credible, useful measures that will improve finance tracking will take work. There is a need for common measures and approaches that follow risk identification through to the decisions it should change; a comparable record of what insurance and guarantees cover and what they leave uncovered; and project-level information on the hazards assessed and the climate conditions assets were designed for. In many cases, relevant evidence already

sits in climate risk assessments, project appraisals, contracts, insurance books, and investment decisions. Governments, development banks, financial institutions, insurers, and standard-setting bodies can help make this evidence more accessible and consistent. The tracking community has a key role in bringing these sources together, improving comparability and interoperability, and expanding coverage. Equally important is building the capacity to translate this evidence into better policies, financing strategies, and investment decisions. Section 3 sets out, for each of the five questions, what evidence would be needed, which institutions already hold it, and what each could contribute.

**Adaptation finance now needs a step-change in measuring and communicating progress**, with better coverage and consistency of financial-flow data and methods to answer complementary questions. Climate finance tracking has faced a need for a step-change before. Around 2009, systems for tracking finance across institutions, instruments, sectors, and geographies were nascent. CPI's first Landscape of Climate Finance followed in 2011. More than a decade of sustained effort across many institutions, including trackers, reporting bodies, standard-setting bodies, and the providers of finance themselves, has greatly improved our collective picture of global financial flows. Today's tracking systems continue to evolve and steadily improve what we know and what we can measure.

Addressing these questions would generate information that is essential for a functioning market: evidence of where resilience investment pays, which exposures remain uncovered, and which assets are built to last. **Measuring adaptation progress cannot stop at finance labeled as adaptation. It must also reach the decisions, the terms, and the designs that determine whether people and economies are actually better prepared.**

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# 1. INTRODUCTION

**Adaptation comes down to whether people, and the systems they rely on, can adjust to a changing climate.** Can crops survive prolonged drought? Can cities keep residents safe during extreme heat events? Can energy systems keep hospitals, water plants, and other essential services running through extreme weather events? Recent calamities around the world show how quickly climate change can take lives and upend a country's economy and the systems it depends on. In 2026 alone, these have included devastating flash floods in Nepal, wildfires in Indonesia, floods in Thailand, and heatwaves across Europe. An El Niño forecast to rank among the strongest on record threatens to compound these impacts through drought, flooding, and record heat in the months ahead. Acute climate shocks are set to grow in frequency and severity with every additional increment of warming, increasing risks to lives, livelihoods, and economies. Adaptation and resilience finance will play a critical role in determining whether, and how well, people and economies can prepare for these impacts and how quickly they can recover.

**Tracking adaptation and resilience finance helps us understand whether financial resources are being directed toward the people, places, and systems facing growing climate risks**. This requires looking beyond global totals to see where capital flows, what activities it supports, and the instruments through which it is provided. These patterns can inform public spending priorities, the allocation of scarce concessional resources, and decisions about how to reach the most vulnerable. Yet financial commitments tell only part of the story. To understand whether people and economies are becoming more resilient, we need additional evidence on how investment decisions are changing and what resilience is being built.

**This report examines the current state of adaptation finance and also considers how our approach to measuring progress must evolve as climate risks intensify:**

- **Section 2** examines what the best available data tells us about the sources, destinations, instruments, and uses of adaptation finance, drawing on more than one million rows of project-level financial data collected from over 30 sources in CPI's Global Landscape of Climate Finance (GLCF).
- **Section 3** considers what measuring progress will require in an era of climate overshoot, when today's investments must withstand changing climate conditions over decades.

Together, these analyses establish what we can learn from tracking financial flows, where current data falls short, and what it will take to measure progress in a way that reflects the scale, urgency, and changing nature of climate risks.

## 1.1 HOW ADAPTATION FINANCE IS CURRENTLY MEASURED

**Progress in mobilizing adaptation finance is commonly assessed in terms of quantity: how much has been committed, who provides it, and whether the total is increasing.** This emphasis is reflected in the New Collective Quantified Goal, the Belém Adaptation Indicators, and the COP30 call to at least triple adaptation finance by 2035 (UNFCCC 2024, 2025a, 2025b), as well as regular tracking reports published by CPI, the OECD, multilateral development banks (MDBs), UNEP, and others (OECD 2026a; EIB 2026; UNEP 2025).

**While financial volumes are a common measure of progress, this focus is more complicated for adaptation, which is inherently more difficult to define and measure than mitigation.** Mitigation activities can be identified by the emissions they reduce, whereas an activity's resilience-building potential depends on the climate risk, location, and level of protection required. Approaches also differ in how adaptation finance is captured when it is embedded in broader development activities and private investment. Consider an agriculture extension program that teaches women farmers to budget, use drought-tolerant seeds, and reach markets beyond their village. Some of this content clearly builds resilience to drought, but it is delivered in the same training sessions as the business and market skills, so there is no practical way to say what share of the financed training went to the climate-specific components. These differences make the boundaries of adaptation finance harder to establish and the resulting estimates harder to compare**.**

**Existing tracking publications differ in coverage, methodology, and resulting estimates, but share a common approach**: each counts finance committed to activities identified as adaptation. CPI's GLCF follows this approach, tracking primary financial flows into the real economy, in line with the UNFCCC Standing Committee on Finance working definition of climate finance. In most cases, CPI relies on reporting institutions to identify which activities qualify as adaptation finance, using various established methodologies.[3]

**Differences in how institutions apply these methodologies affect what and how much finance is counted.** The MDB–IDFC Common Principles for Climate Change Adaptation Finance Tracking recommend counting the portion of an investment's cost attributable to adaptation. In practice, institutions apply this principle differently: some report only the identified adaptation component or the added cost of making an activity resilient. In contrast, others report amounts closer to the project's full value. Meanwhile, mitigation finance is generally reported at the full value of eligible activities (UNFCCC 2025c). A dollar of reported adaptation finance can therefore mean different things depending on who reports it.

## 1.2 WHAT CURRENT TRACKING CAPTURES, AND WHAT IT MISSES

The strengths and limitations of adaptation and resilience finance tracking extend beyond CPI's methodology. Figure 1 sets out how well primary adaptation and resilience investments are captured today, by source of finance and by instrument. Many sources are captured only partially, or not at all.

3 While there are multiple methodologies, many use the MDB-IDFC Common Principles for Climate Change Adaptation Finance Tracking and Rio markers.

**Figure 1:** Data coverage of adaptation and resilience investments

| SOURCE | FINANCING INSTITUTION | GRANTS | DEBT | EQUITY | OWN FUNDS / CAPEX |
|---|---|---|---|---|---|
| INTERNATIONAL PUBLIC | MDBs and regional DFIs | GOOD | GOOD | GOOD | N/A |
| | Bilateral DFIs and aid agencies | GOOD | GOOD | GOOD | N/A |
| | Multilateral climate funds | GOOD | GOOD | GOOD | N/A |
| | Other South-South public flows | LIMITED | LIMITED | LIMITED | N/A |
| DOMESTIC PUBLIC | National DFIs | PARTIAL | PARTIAL | PARTIAL | N/A |
| | SOEs | LIMITED | LIMITED | LIMITED | UNTRACKED |
| | State / provincial governments | LIMITED | PARTIAL | N/A | UNTRACKED |
| | Municipal / local governments | LIMITED | LIMITED | N/A | UNTRACKED |
| PRIVATE | Private equity and venture capital | N/A | N/A | LIMITED | N/A |
| | Commercial financial institutions | N/A | LIMITED | N/A | N/A |
| | Asset managers | N/A | N/A | LIMITED | N/A |
| | Corporates / supply chains | N/A | N/A | LIMITED | UNTRACKED |
| | Households / smallholder farmers | N/A | N/A | N/A | UNTRACKED |

Note: Data coverage reflects the extent to which adaptation finance flows are captured through datasets and tracking methodologies used by CPI, across institution types and financial instruments. Good: Systematic tracking provides comprehensive coverage of flows across institutions in this category. Partial: Systematic tracking captures flows from many, but not all, institutions in this category. Limited: No systematic tracking; only a small share of flows are captured incidentally through project-level investment databases. Untracked: No systematic tracking, and no flows are captured through datasets used by CPI.

## WHAT IS CURRENTLY CAPTURED WELL

The cells marked as having good data coverage in Figure 1 are all international public finance. Multilateral and regional development finance institutions (DFIs), bilateral DFIs and aid agencies, and multilateral climate funds report flows systematically at project level, across grants, debt, and equity, with enough detail to support analysis by sector, instrument, and destination. This is the clearest part of the picture of volume-based adaptation finance, and it is why the analysis in Section 2 is strongest on questions of who provides international finance, on what terms, and to which countries and sectors.

## WHAT NEEDS TO BE CAPTURED BETTER

Everything coded as partial, limited, or untracked in Figure 1 describes finance that exists and could be counted in principle, but is not reported in a way that allows it. The constraint here is recognition and disclosure rather than methodology.

- **Domestic public finance** thins out quickly below the level of national DFIs, which CPI captures partially through IDFC Green Finance Mapping reports. State, provincial, and municipal government spending is captured only where national climate budget tagging exists and produces publicly accessible numbers, and state-owned enterprises' own capital spending is not tracked at all.

- **Private investment** tracking is limited across every instrument and source shown.
    - Corporate investment in resilience is largely invisible, as companies investing in supply chain resilience, business continuity and asset protection rarely label or report these expenditures as adaptation.
    - Household and consumer spending, from cooling to flood protection and water storage, is untracked despite CPI estimating it at USD 48 to 61 billion annually, a figure approaching the entire global total of tracked adaptation finance (CPI 2024).
    - Private equity and venture capital are the relative exception and currently have moderately usable transaction-level data.

## WHAT VOLUME-BASED FINANCIAL DATA IS NOT DESIGNED TO ADDRESS

This third category is different in kind. The first two describe coverage problems that better reporting and broader data collection could narrow. The third covers dimensions of adaptation progress that a record of financial commitments was never designed to represent, and that more complete flow data would not reveal.

- **How risk-sharing and risk-transfer mechanisms support resilience.** Guarantees, insurance, reinsurance, and related instruments change who bears climate and financial risk and what investment becomes possible, but are not themselves financial flows equivalent to the capital committed to an investment. Understanding their contribution requires looking at the risks covered, who is protected, and the investment enabled.
- **The broader value of investment made climate-resilient.** Resilience embedded in development and private investment, such as a road built to withstand flooding or a water system designed for a drier future, is not fully reflected in tracked adaptation finance. While proportional or additional costs of specific adaptation measures may be counted, this does not capture how much of the wider investment has become more resilient. Broader development investments can also strengthen climate resilience without including separately identifiable adaptation measures.
- **How finance translates into resilience outcomes.** Adaptation finance is generally counted *ex ante*, at the project design and appraisal stage, based on stated objectives or intent. Financial commitments alone therefore cannot establish how effectively investments reduced climate risks or improved resilience after implementation. Understanding the resilience delivered requires additional evidence on project implementation, performance, and outcomes, as well as the quality of finance delivery.

**Even with these limitations, tracking financial flows is valuable, provided adaptation finance figures are interpreted with care**. CPI's existing data provides the strongest comparable evidence of where adaptation finance is documented and moving. The patterns carry important signals for policymakers, public finance providers, and private investors. Section 2 examines what current financial-flow data reveals about how adaptation finance is allocated and where gaps remain, and Section 3 builds on this analysis to explore how broader measures can provide a more complete picture of adaptation progress.

# 2. THE CURRENT STATE OF ADAPTATION FINANCE

**This section analyzes trends in adaptation finance**,[4] building upon CPI's latest Global Landscape of Climate Finance (GLCF) report, referred to hereafter as GLCF 2026. Since the publication of this report in June 2026, we have updated and revised the underlying dataset to incorporate new data, including the latest edition of the OECD CRDF database (OECD 2026b), and have fine-tuned data processing. **These updates have revised tracked global adaptation finance up to USD 69 billion in 2024 (see Figure 2), from the previously reported estimate of USD 64 billion (CPI 2026).**

The section explores four aspects:

1. **Where adaptation finance is going and who is providing it**, examining regional trends, the balance between domestic and international sources, and how flows relate to measured climate vulnerability at the country level.
2. **Through which instruments adaptation finance flows**, looking at the mix of grants, equity, and debt, and how it varies with countries' debt positions.
3. **What adaptation finance is paying for**, tracing its sectoral composition and the substantial share that cannot be attributed to any single sector.
4. **Whether finance is reaching the most climate-vulnerable countries**, through a closer examination of flows to Least Developed Countries (LDCs) and Small Island Developing States (SIDS).

Each aspect is answerable using tracked flows, but each also faces limits that examining volume data alone cannot resolve. Areas for complementary analysis are outlined in Section 3.

## 2.1 OVERALL TRENDS

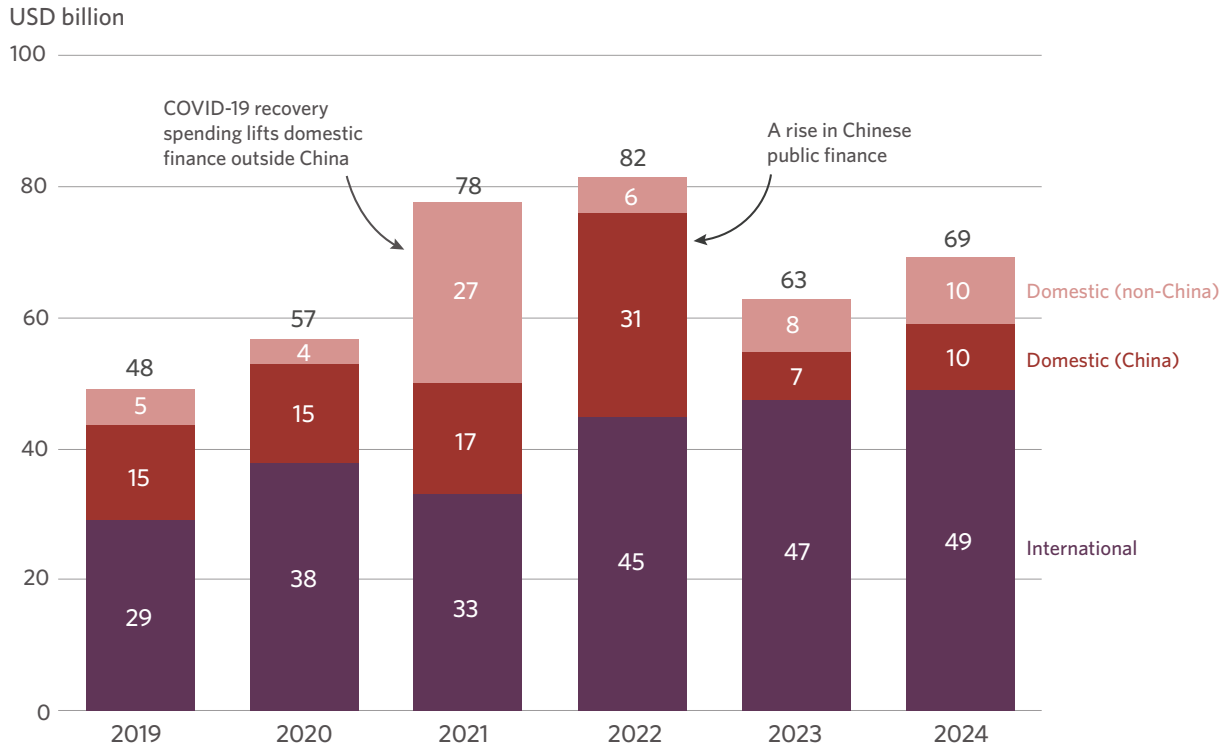
**Tracked adaptation finance grew moderately between 2019 and 2024, with notable spikes in 2021 and 2022.** Finance increased at a compound annual growth rate (CAGR) of around 7% between 2019 and 2024, reaching USD 69 billion. However, annual flows fluctuated considerably, with 2024 levels remaining below a 2022 peak of USD 82 billion (see Figure 2). Due to the limitations outlined in Section 1, these flows predominantly reflect public finance, particularly from DFIs, and do not capture the full scale of global adaptation expenditure.

4 The Global Landscape of Climate Finance (GLCF) captures primary capital flows directed toward low-carbon and climate-resilient development. Our scope follows CPI's working definition of climate finance, aligned with the UNFCCC Standing Committee on Finance, and applies consistent inclusion and exclusion criteria across editions. The GLCF report includes:
- Investments with direct or indirect mitigation or adaptation benefits.
- Policy support and capacity-building expenditures that enable climate action.
- Total primary transactions and investment costs.

To ensure comparability across editions, avoid over-reporting flows, and focus only on new climate-related investments, the GLCF excludes:
- Secondary market transactions (e.g., resale of assets, public trading), which do not represent new climate-specific investments.
- Financial risk management instruments (e.g., guarantees, insurance). While these may catalyze private finance, they are not counted in climate finance figures since no actual disbursement may occur.

CPI captures all climate finance—domestic and international, public and private—regardless of geography. For full definitions and methodological decisions see (CPI 2025b).

**Figure 2:** Tracked adaptation finance, domestic vs international, 2019-24




Note: International Chinese adaptation investment is included in total international figure, accounting for 1% of finance over 2019-2024.

**Available estimates suggest that adaptation-related expenditure extends substantially beyond tracked finance flows, particularly among domestic public and private actors.** Smallholder farmers are estimated to invest USD 368 billion annually in climate adaptation activities (IIED 2023). On the public side, the Philippines allocated PHP 457.41 billion (roughly USD 7 billion) to climate change expenditure in its 2024 national budget, with 96.6% of it directed to adaptation, illustrating the scale of domestic public expenditure that is not comprehensively captured in global tracking (PSA 2025). Corporate adaptation expenditure also remains poorly quantified. Although companies are increasingly disclosing adaptation plans, with a study of 9,242 companies finding that 46% had disclosed such plans (S&P Global 2026), these disclosures do not necessarily translate into dedicated adaptation budgets, making it difficult to quantify corporate adaptation expenditure (WBCSD 2026). Although observations are not directly comparable with tracked finance flows, they demonstrate that existing figures provide an incomplete picture of global adaptation investment.

**Changes in tracked adaptation finance over time reflect three important and distinct factors.** First, changes in underlying commitments partly reflect genuine changes in the volume and composition of adaptation finance. Second, tracking commitments rather than disbursements means that the timing and structure of individual commitments create annual volatility. Third, changes in financial institutions' practices can affect their reported flows beyond changes in actual financing. This is the case for MDBs and IDFC members, which adopted a new adaptation finance tracking and reporting methodology between 2022 and 2023 (IDFC 2023).

**The 2021 spike in tracked adaptation finance was driven by domestic actors, not a broad-based rise across all sources.** While domestic finance more than doubled to USD 44 billion in 2021, internationally sourced adaptation finance fell from approximately USD 38 billion in 2020 to USD 33 billion in 2021. Notably, domestic finance outside China rose from approximately USD

4 billion to USD 27 billion. This coincided with the exceptional fiscal response to COVID-19, when governments mobilized substantial green recovery expenditure and sovereign green bond financing, with a large share allocated to adaptation-related expenditure (UK DMO 2022a, 2022b; German Government 2022).

**The 2022 peak was driven primarily by a sharp increase in tracked adaptation finance from Chinese public institutions, alongside a recovery in internationally sourced finance.** Domestic adaptation finance in China almost doubled to USD 31 billion, while internationally sourced adaptation finance rebounded by 35% to USD 45 billion. At the same time, domestic finance outside China fell back toward pre-recovery levels. This decline partly reflects the commitment-based nature of the data, where unusually large commitments recorded in 2021 were not repeated in 2022, rather than an equivalent contraction in ongoing adaptation expenditure.

**The subsequent fall in 2023 and partial recovery in 2024 should be viewed in the context of exceptional spending in 2021-22, rather than simply as a reversal in adaptation investment.** Much of the 2023 decline was concentrated in China, with Chinese domestic spending falling 77% to USD 7 billion. In addition, global interest rates and inflation soared, squeezing public finances (IMF 2023). This drop may reflect changes in financing and more conservative tracking methods, along with exchange-rate effects (CPI 2025a). With some of these exceptional influences receding, the 2023–24 levels sit closer to the trajectory implied by 2019–20 than to the high 2021–22 observations.

**Box 1. Adaptation is increasingly eligible under green bond frameworks, but allocations have barely shifted**

Adaptation and resilience are increasingly recognized in green bond frameworks, but this has not yet translated into substantial allocations of bond proceeds. In 2025, 1,389 green bond frameworks referenced adaptation and resilience, up from 18 in 2016 (Webb 2026). Yet in the GLCF, adaptation's share of tracked green bond allocation increased by only three percentage points between 2019 and 2024, from 17% to 20%.

Two factors help explain this gap:

- **Limited project pipelines.** Issuers may identify adaptation as an eligible category but lack sufficient investment-ready projects to absorb funding. Project preparation, technical capacity, and access to finance remain significant barriers, particularly in developing countries (OECD 2023).
- **Limited eligible adaptation costs within broader investments.** Adaptation measures are often embedded in larger infrastructure or development projects, but only the costs directly attributable to adaptation may be classified as such. For example, where a road is made more resilient through upgraded drainage, the adaptation-eligible expenditure may represent only a small share of the total project cost. This can constrain reported adaptation allocations even where broader investments deliver substantial resilience benefits (CBI 2025).

The Climate Bonds Initiative's updated Resilience Taxonomy is a promising step toward clearer classification and more consistent identification of resilience investments (CBI 2026). However, better definitions alone will not ensure additional funding: project pipelines, allocation practices, and transparent reporting must also improve.

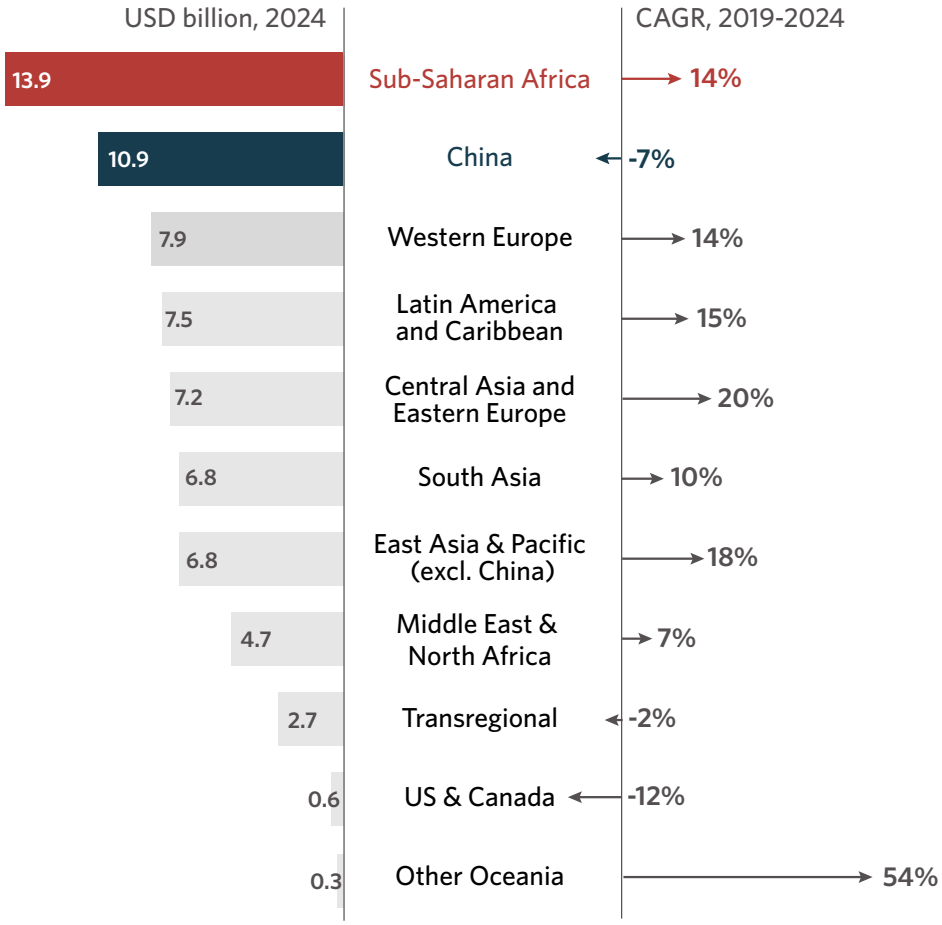
## 2.2 REGIONS: WHERE IS ADAPTATION FINANCE GOING, AND WHO IS PROVIDING IT?

**Key messages**

1. **Developing regions' adaptation finance is growing, while flows are contracting in China and some advanced economies**. Tracked adaptation finance grew rapidly across developing regions between 2019 and 2024. Flows in Central Asia and Eastern Europe grew at a 20% CAGR, East Asia and Pacific (excluding China) at 18%, Latin America and the Caribbean at 15%, sub-Saharan Africa at 14%, South Asia at 10%, and the Middle East and North Africa at 7%. Sub-Saharan Africa became the largest region for adaptation finance in 2024 (excluding China), nearly doubling from USD 7.3 billion to USD 14 billion since 2019. Meanwhile, China, historically the largest single country for adaptation finance, had a CAGR of -7%.
2. **Adaptation finance remains geographically concentrated, with limited flows to the most climate-vulnerable countries.** The ten largest recipients accounted for one-third of international adaptation finance in 2024 (USD 16 billion). At the same time, the ten most climate-vulnerable, according to ND-GAIN, each received less than USD 160 million, representing 0.2% or less of the global total in 2024.
3. **International sources account for at least 90% of adaptation flows in five developing regions since 2019**, with multilateral DFIs alone providing 53% in sub-Saharan Africa, 73% in Latin America and the Caribbean, 61% in South Asia and 68% in Central Asia and Eastern Europe. The reverse holds in developed markets, where domestic sources account for over 80% of tracked adaptation finance since 2019.
4. **Vulnerability does not predict allocation of capital to adaptation, with fragile and conflict-affected countries tending to be underserved**. Among the 21 most vulnerable countries, those with near-identical vulnerability scores received very different volumes. Almost every country receiving under USD 10 per person (Afghanistan, Sudan, Yemen, Mali, Somalia, and Chad) is conflict-affected or fragile. These disparities may reflect the tendency for adaptation finance to flow toward countries with greater financial and institutional readiness rather than those facing the highest climate vulnerability, with limited absorption capacity and security challenges further constraining access to finance in fragile and conflict-affected settings (World Bank 2024).

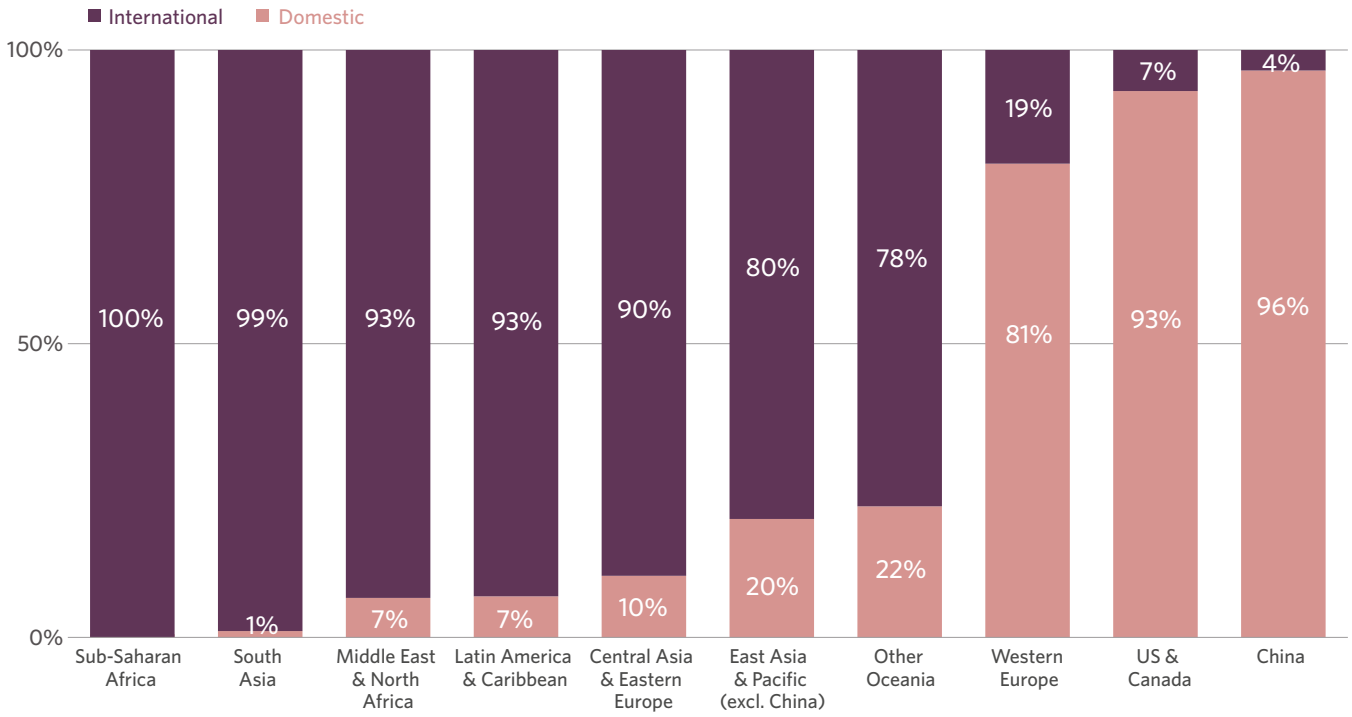
**Adaptation finance increased across most regions between 2019 and 2024, with particularly strong growth in several developing regions, while flows declined or remained more volatile in some developed regions.** Sub-Saharan Africa had the largest volume of tracked adaptation finance in 2024, with annual flows increasing from USD 7.3 billion in 2019 to USD 13.9 billion in 2024, equivalent to a 14% CAGR. Central Asia and Eastern Europe recorded the highest CAGR among the major regions, at 20%, although from a lower starting base, followed by East Asia and Pacific (excluding China) with an 18% CAGR. Latin America and the Caribbean and South Asia also recorded strong growth (CAGRs of 15% and 10%, respectively), while the Middle East and North Africa grew from USD 3.4 billion to USD 4.7 billion, a 7% CAGR. In contrast, China, historically the largest single-country recipient of adaptation finance, recorded a decline of 7% (Figure 3).

**Figure 3:** Adaptation finance by region, 2024, with compound annual growth rates 2019-2024



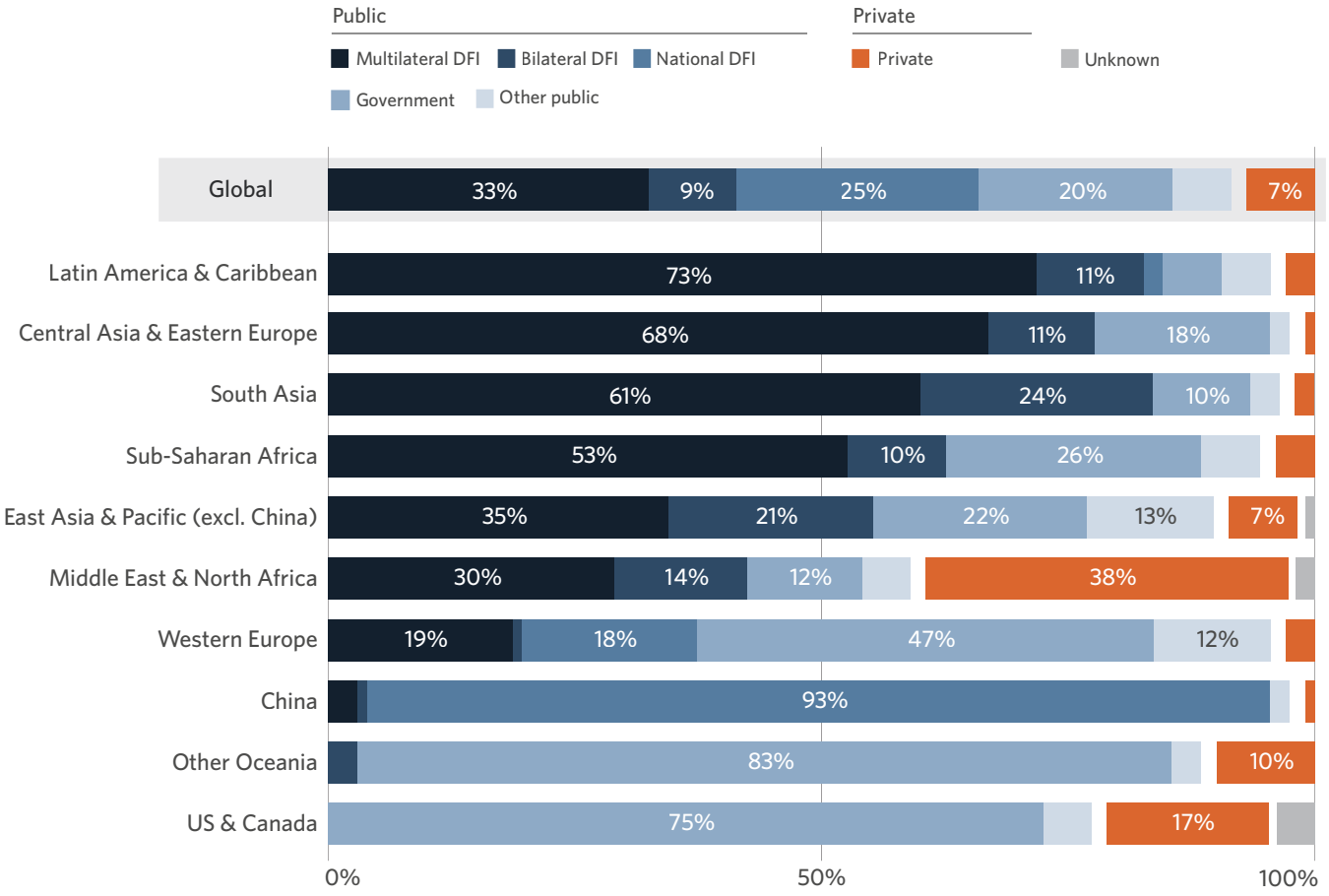

**International sources accounted for the majority of tracked adaptation finance globally (61%) over 2019–2024, representing at least 90% of flows across five developing regions:** Sub-Saharan Africa, Latin America and the Caribbean, South Asia, the Middle East and North Africa, and Central Asia and Eastern Europe (Figure 4). Multilateral DFIs were particularly important, accounting for 53% of tracked flows in sub-Saharan Africa, 73% in Latin America and the Caribbean, 61% in South Asia, and 68% in Central Asia and Eastern Europe. Bilateral DFIs provided a further 10% in sub-Saharan Africa, 11% in Latin America and the Caribbean, and 24% in South Asia (Figure 5).

**Figure 4:** Adaptation finance by region, domestic vs. international, cumulative 2019-24




**Domestic sources accounted for 39% of tracked adaptation finance globally. At least 80% of adaptation finance was domestic in Western Europe, and over 90% in the US & Canada and China, highlighting marked differences in financing structures in more developed markets.** National DFIs alone accounted for 93% of tracked adaptation finance in China, while government finance represented 47% of tracked flows in Western Europe and 75% in the US and Canada. These differences show that the balance between tracked domestic and international sources varies substantially across regions, with international DFIs playing a prominent role in tracked adaptation finance in developing regions. Importantly, limited tracking of domestic public and private finance means that the relative contribution of domestic sources is likely understated.

**Figure 5:** Adaptation finance by region, actor type, cumulative 2019-24

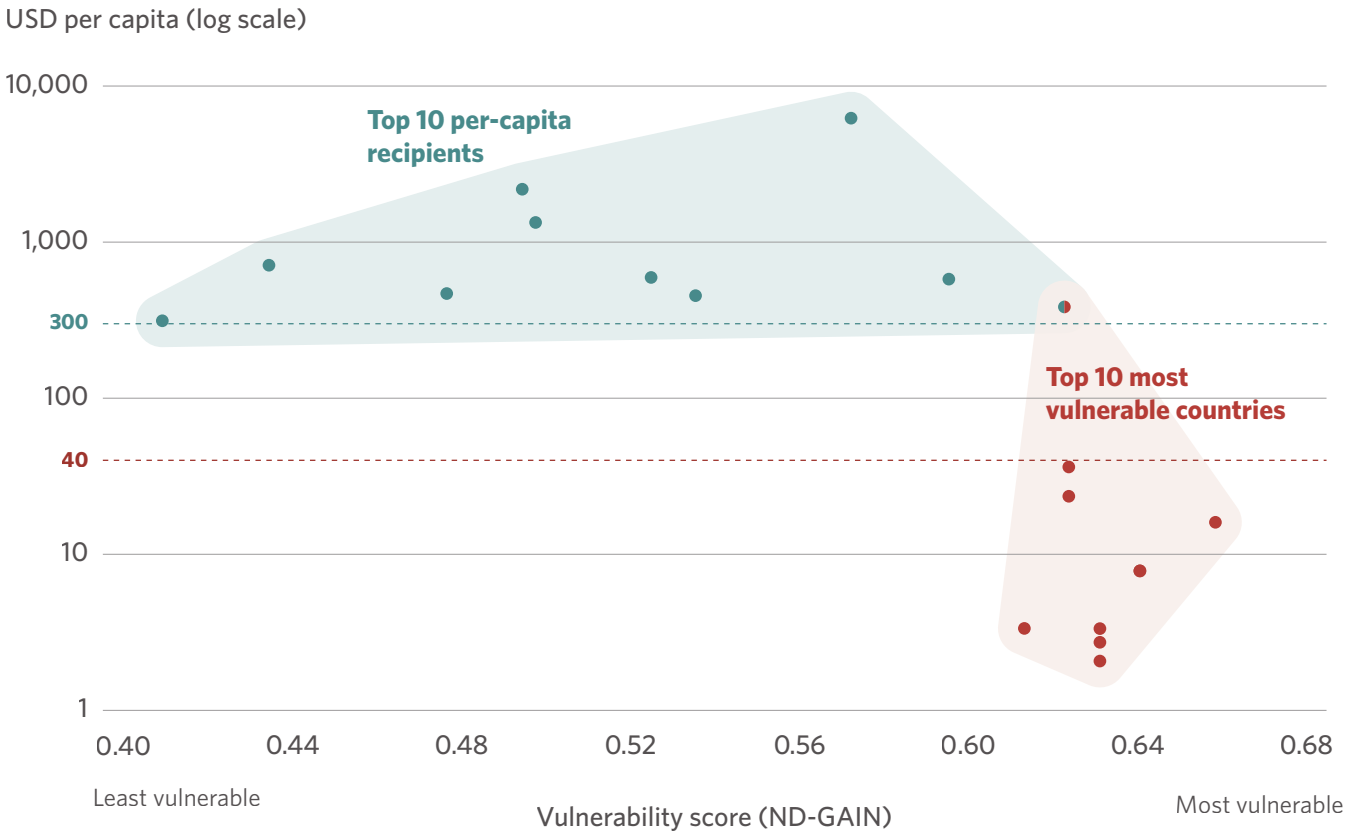



**At the country level, international adaptation finance is concentrated in a relatively small number of large economies, while the most vulnerable countries receive comparatively limited volumes.** The ten countries receiving the highest volume of international adaptation finance together received more than 30% of the total volume of that finance.[5] In contrast, none of the ten most vulnerable countries received more than USD 160 million, and each accounted for 0.2% or less of total adaptation finance.[6]

5 The top ten recipient countries are India, the Philippines, Bangladesh, Kazakhstan, Indonesia, Turkey, Pakistan, Brazil, Côte d'Ivoire, and Morocco.
6 The ten most vulnerable countries according to the ND-GAIN index are Afghanistan, Micronesia, Guinea-Bissau, Solomon Islands, Eritrea, Sudan, Yemen, Somalia, Chad, and Mauritania.

**The most vulnerable countries are not the highest per-capita recipients.** Only one of the ten countries with the highest ND-GAIN[7] vulnerability rankings was among the ten largest per-capita recipients of tracked adaptation finance in 2024. Nine of the most vulnerable countries each received less than USD 40 per person, compared with more than USD 300 per person in each of the ten largest per-capita recipient countries.

**Figure 6:** Tracked adaptation finance per capita to most vulnerable countries, 2024




The top ten per capital recipients in alphabetical order are: Dominicana, Kiribati, Marshall Islands, Micronesia, Nauru, Palau, St. Vincent and the Grenadines, Samoa, Tonga, and Tuvalu.

The top ten most vulnerable countries in alphabetical order are: Afghanistan, Chad, Eritrea, Guinea-Bissau, Mauritania, Micronesia, Solomon Islands, Somalia, Sudan, and Yemen.

Note: SIDS per capita numbers should be interpreted in the context of the smaller geographic and population sizes of those countries.

7 The Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index assesses countries' vulnerability to climate change and their readiness to improve resilience. This analysis uses the vulnerability score, which measures exposure, sensitivity, and adaptive capacity across six sectors: food, water, health, ecosystem services, human habitat and infrastructure.

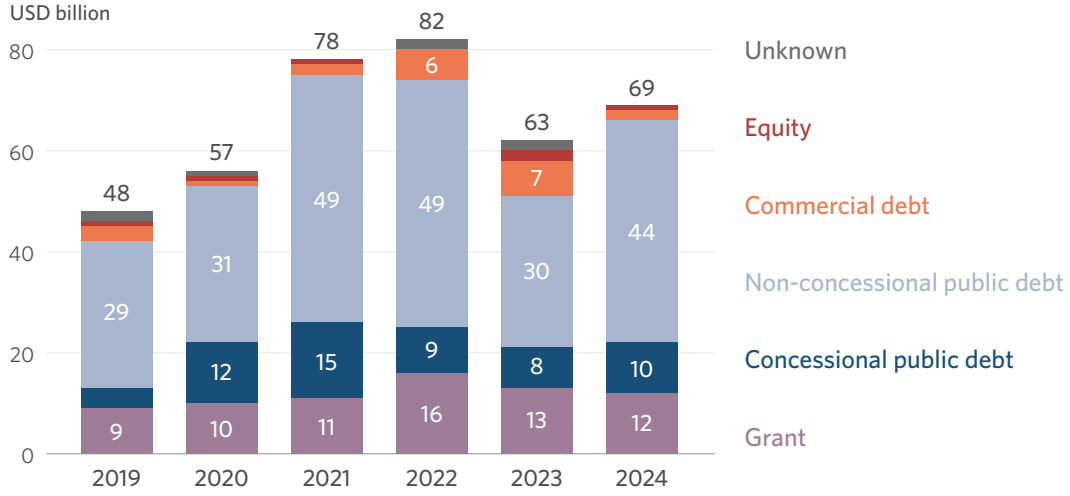
# 2.3 FINANCE INSTRUMENTS: THROUGH WHICH INSTRUMENTS DOES ADAPTATION FINANCE FLOW?

**Key messages**

1. **Non-concessional public debt remains the dominant instrument for adaptation,** rising from USD 29 billion in 2019 to USD 44 billion in 2024, with the global instrument mix remaining consistent since 2019.
2. **The concessionality of tracked adaptation finance broadly reflects countries' levels of debt vulnerability:** more concessional finance is concentrated in countries facing greater debt distress.
3. **Exceptions remain.** Some countries at high risk of debt distress received around 70% of their tracked adaptation finance through non-concessional public loans. While these loans may offer better terms than private markets, they still add to debt-service obligations.
4. **Barbados shows an alternative path.** Its 2024 debt-for-climate swap refinanced more expensive debt with lower-cost financing, generating USD 125 million in fiscal savings to support water and food security investments. The transaction was enabled by USD 300 million in guarantees, an instrument that the GLCF does not track.

**Globally, the composition of tracked adaptation finance by financial instrument has been relatively stable since 2019—public debt consistently accounts for the largest share.** Non-concessional public debt dominated, rising from USD 29 billion in 2019 to USD 44 billion in 2024.[8] Concessional public debt and grants represented smaller but important shares, while commercial debt and equity were more limited. Public and development finance remain important for mobilizing adaptation investment, particularly in developing regions where domestic finance is more constrained.

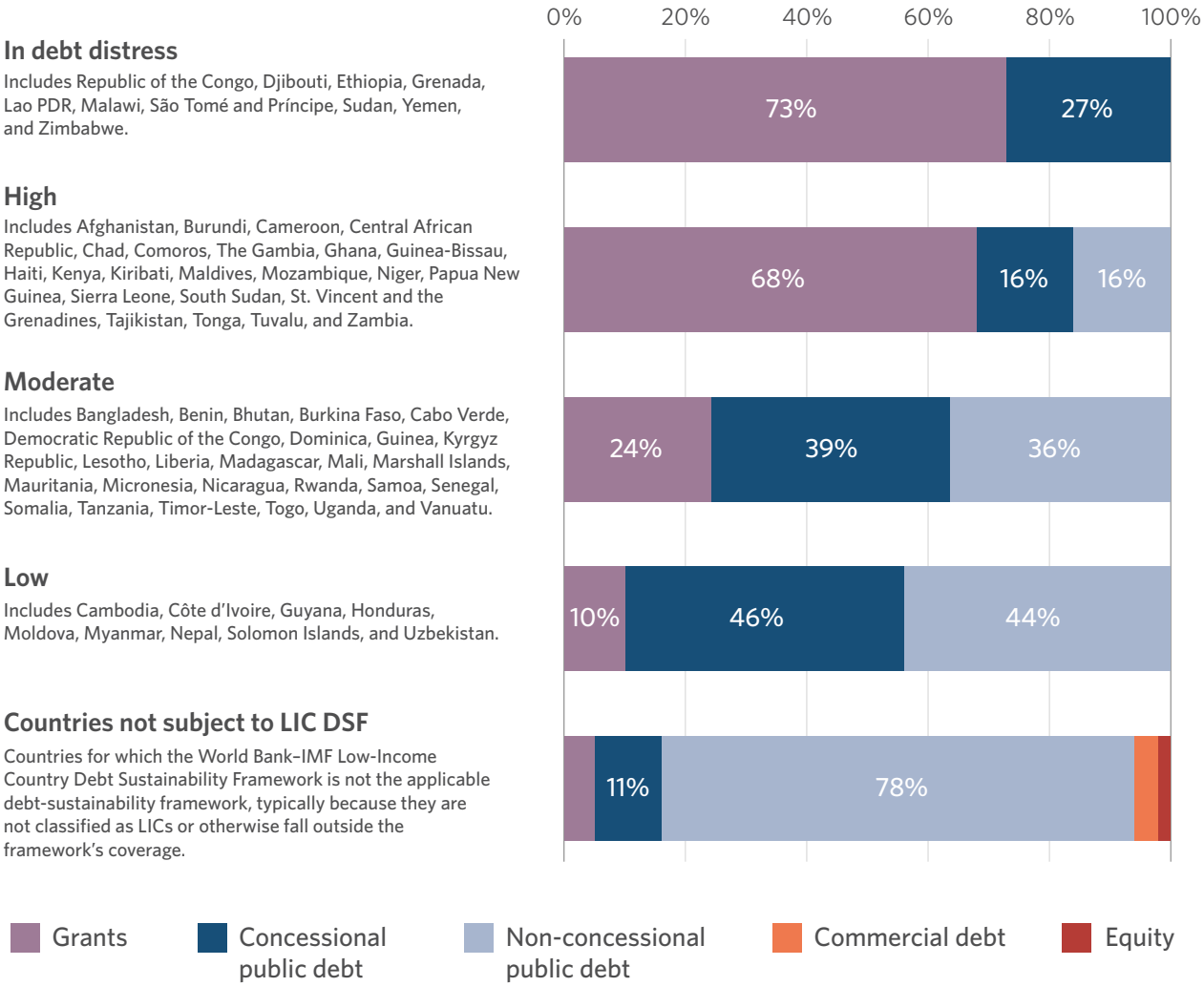
**Figure 7:** Tracked adaptation finance by instrument, 2019-24




8 While not strictly concessional by OECD criteria, these loans have borrowing terms based on public institutions' credit ratings and are most likely preferable to what many countries could receive on private markets.

**The capital system broadly matches modalities to debt vulnerability**.[9] Countries in debt distress received 73% of adaptation finance as grants and 27% as concessional debt in 2024. This marks an improvement over time, with debt-distressed countries' non-concessional debt falling from 21% in 2019 to zero in 2024. By contrast, non-concessional shares were 36% for moderate-risk countries, 44% for low-risk countries, and 78% for countries not subject to LIC DSF in 2024.

**Figure 8:** Adaptation finance by instrument and debt sustainability classification, 2024



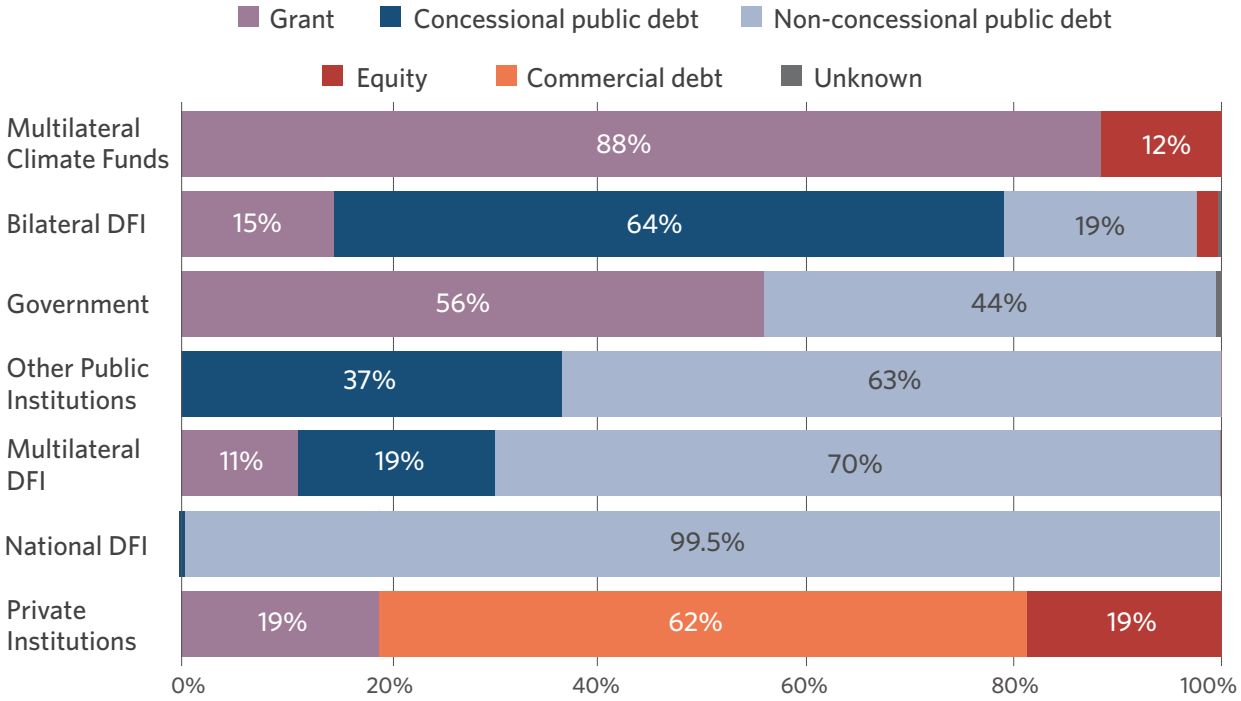

Note: Risk levels refer to external debt distress risk as classified under the World Bank-IMF Debt Sustainability Analysis (DSA)

**Differences in the level of financing concessionality across debt sustainability classifications partly reflect the types of institutions providing finance.** In 2024, national DFIs provided almost all their tracked adaptation finance through non-concessional public debt, compared with 70% for multilateral DFIs, 44% for governments, and 19% for bilateral DFIs. These institutions' adaptation flows were distributed roughly in line with countries' debt sustainability. Multilateral DFIs accounted for 58% of tracked adaptation finance for countries in debt distress, 62% for those at high risk, and 70% for each low and moderate risk. Meanwhile, governments accounted

9 This analysis uses debt distress classifications from the World Bank-IMF Debt Sustainability Analysis as of August 2026 (World Bank & IMF 2026). Classifications are based on the risk of external debt distress.

for 33%, 25%, 15%, and 7%, respectively. Concessional finance providers appear to direct more of their funding toward countries facing greater debt distress.

**Figure 9:** Adaptation finance by actor and instrument, 2024




Note: Other public institutions include export credit agencies, state-owned enterprises, state-owned financial institutions, and public funds.

**The continued use of non-concessional public lending for countries at moderate and high risk of debt distress raises questions over the long-term sustainability of adaptation financing.** While these loans may offer better terms than those from private markets, particularly where public institutions borrow at lower cost, they still create debt-service obligations. This is particularly concerning in some high-risk contexts, yet non-concessional public loans account for approximately 70% of tracked adaptation finance. Such cases underline the importance of assessing the quality and terms of adaptation finance alongside its volume, particularly where new borrowing adds to already substantial debt-service burdens.

**Innovative financing instruments can help create fiscal space for adaptation without relying solely on additional grants or conventional borrowing.** In 2024, Barbados completed the world's first debt-for-climate-resilience swap, replacing existing debt with longer-tenor, local-currency financing on more favorable terms. The transaction generated an estimated USD 125 million in fiscal savings to support investments in water resource management and water and food security. It also incorporated a debt-pause clause allowing payments to be deferred following major shocks. The operation was enabled by USD 300 million in guarantees from the Inter-American Development Bank and European Investment Bank, demonstrating how credit enhancement can improve financing terms and reduce debt-service pressures (EIB 2024). Debt-for-adaptation swaps have been highlighted as viable options for multiple countries (Hebbale and Urpelainen 2023; World Bank 2024). Instruments like guarantees are not captured within

the GLCF instrument taxonomy, highlighting that conventional grant and loan classifications may not fully reflect the range of financial mechanisms supporting adaptation.[10]

## 2.4 SECTORS: WHAT IS ADAPTATION FINANCE PAYING FOR?

**Key messages**

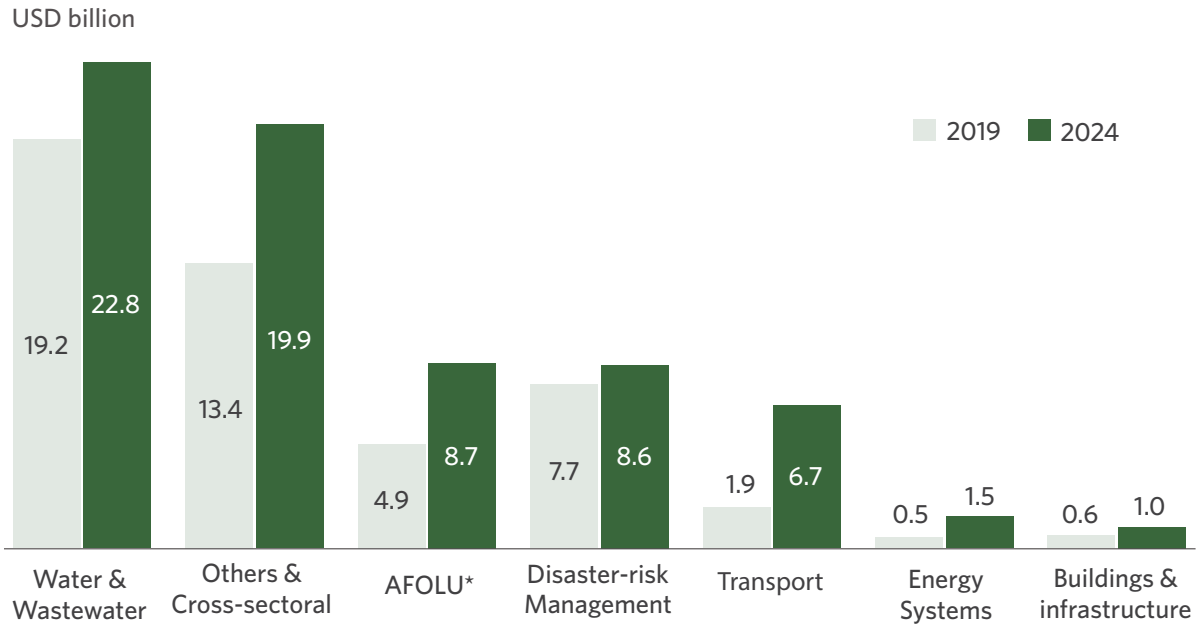
1. **Adaptation finance increasingly cuts across sectors, though reporting detail has not kept pace.** Other and cross-sectoral activities accounted for 28% (USD 19.9 billion) of tracked adaptation flows in 2024, with policy, budget support and capacity building making up a substantial share, consistent with adaptation being planned as cross-cutting rather than as standalone projects. How much reflects genuine mainstreaming is difficult to establish: 59% of the category (USD 11.7 billion) was recorded only as other or unspecified, as was 56% of transport's adaptation finance.
2. **Water and wastewater remained the largest sector for tracked adaptation finance**. Despite an 8% decline from USD 24.9 billion to USD 22.8 billion between 2023 and 2024, the sector remained the largest recipient of tracked adaptation finance. The overall decline also masked significant shifts in the composition of flows. Non-concessional public debt increased by 23%, driven by China and other emerging markets and developing economies (EMDEs), while finance in LDCs in particular shifted away from grants and towards concessional public debt.
3. **AFOLU adaptation finance rebounded strongly in 2024, driven by increased flows to EMDEs.** Finance increased by USD 1.5 billion from 2023 to reach USD 8.7 billion in 2024, with 59% concentrated in EMDEs (excluding China and LDCs) and 32% in LDCs. The increase in EMDEs was driven primarily by non-concessional public debt, while in LDCs, total finance remained broadly stable but shifted markedly from grants to concessional public debt.
4. **Growth was strongest in sectors with long-lived, climate-exposed assets.** Flows to transport more than tripled from USD 1.9 billion to USD 6.7 billion between 2019 and 2024, and energy systems tripled from USD 0.5 billion to USD 1.5 billion. Yet within that total, transmission and distribution fell from USD 200 million to USD 140 million. The grid is the only part of the energy system receiving less adaptation finance than it did five years ago, even though both generation and the wider energy transition depend on it.
5. **Disaster-risk management is broadening geographically as China's share falls.** Tracked flows rose modestly from USD 7.7 billion to USD 8.6 billion. At the same time, China's flows fell, and its share of the global total dropped from around 55% to 20%. This decrease was offset by rapid growth in Central Asia and Eastern Europe (46% CAGR), Western Europe (30%), Latin America and the Caribbean (20%), and sub-Saharan Africa (18%).

10 Guarantees and other risk-mitigation instruments are excluded from tracked climate finance totals, as CPI tracks primary investments in climate solutions, and disbursements mobilized through guarantees are contingent on uncertain future events and may never materialize. For more information, see (CPI 2025b).

**Tracked adaptation finance remains concentrated in a small number of sectors, despite a more than 40% increase in total flows between 2019 and 2024.** Water and wastewater was the largest sector in both 2019 and 2024, with flows increasing from USD 19.2 billion to USD 22.8 billion, followed by the Others and Cross-sectoral category; Agriculture, Forestry, Other Land Uses and Fisheries (AFOLU); and Disaster-risk Management (see Figure 10).

**Finance increased in absolute terms across almost all major sectors over the period, with sectoral composition remaining broadly stable.** Key exceptions were the water and wastewater sector, which saw a drop in overall share from 40% in 2019 to 33% in 2024, and transport, which saw an increase from 4% to 10%.

**Figure 10:** Adaptation finance by sector, 2019 and 2024




Note: Other/Cross-sectoral includes all tracked adaptation flows to the Other/Cross-sectoral sector, as per CPI's taxonomy, alongside flows to the Waste, Industry and ICT sectors. Disaster Risk Management is a sub-sector of Other/Cross-sectoral, which has been isolated here.

*AFOLU = Agriculture, Forestry, Other land uses and Fisheries

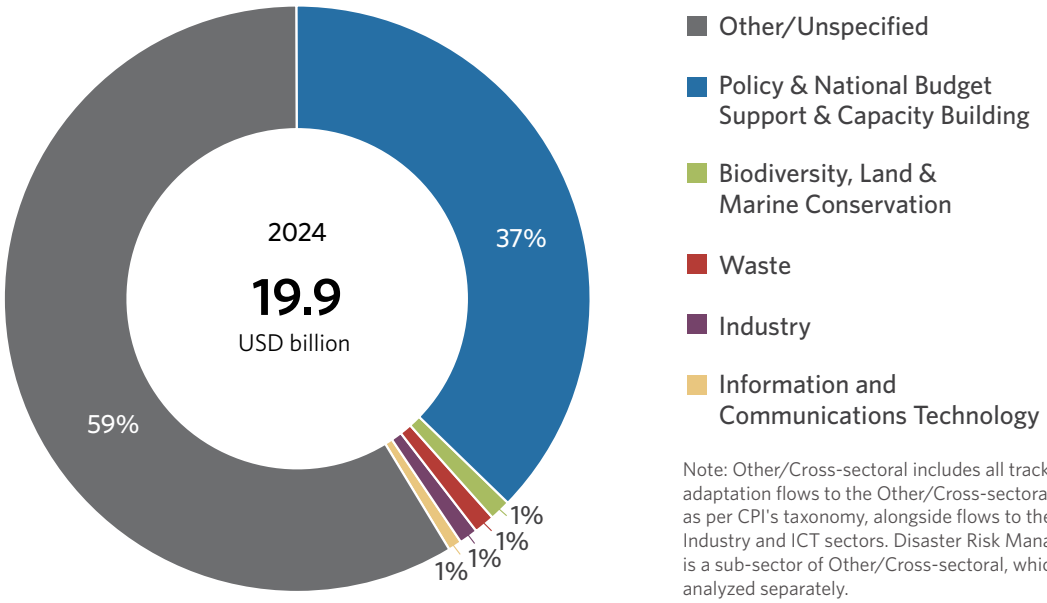
The persistent sectoral pattern provides a basis for examining where adaptation finance is concentrated and whether this reflects underlying adaptation investment needs, the characteristics of available financing, or the way adaptation activities are identified and classified in the tracking framework.

## 2.4.1 OTHERS & CROSS-SECTORAL

**Finance classified as "others and cross-sectoral" increased from 2019 to 2024, reflecting the crosscutting nature of several adaptation activities.** Over this period, tracked finance in this category increased by 48%, from USD 13.4 billion to USD 19.9 billion. In 2024, the "other/unspecified" subcategory accounted for the largest share (59%), highlighting the difficulty of assigning some adaptation activities to a specific sector. This suggests that sectoral breakdowns capture where adaptation finance is explicitly classified, but do not necessarily provide a complete picture of where resilience is being built across the economy.

The next-largest subcategory was "policy & national budget support & capacity building" (37%), in line with the substantial role of these activities and the cross-sectoral nature of measures that strengthen resilience across the economy. The waste and industry subcategories recorded substantial proportional increases, reaching USD 227 million and USD 205 million in 2024, respectively, though both rose from low levels of USD 7 million and USD 25 million in 2019.

**Figure 11:** Others and cross-sectoral adaptation finance by subsector, 2024

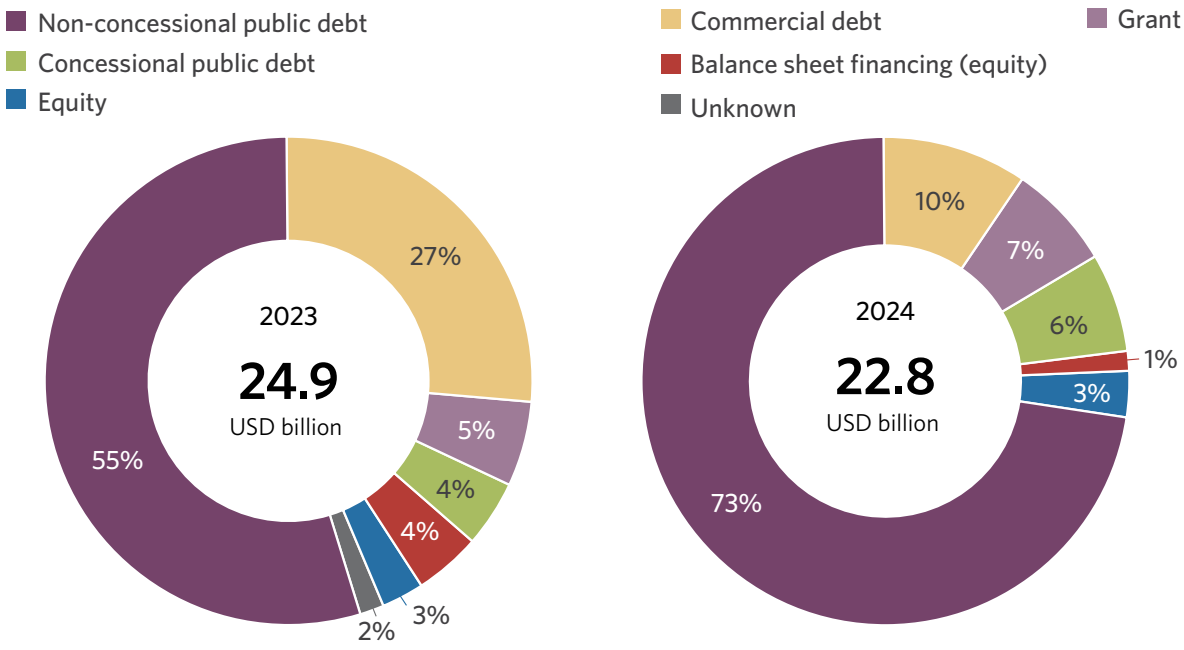



Note: Other/Cross-sectoral includes all tracked adaptation flows to the Other/Cross-sectoral sector, as per CPI's taxonomy, alongside flows to the Waste, Industry and ICT sectors. Disaster Risk Management is a sub-sector of Other/Cross-sectoral, which is analyzed separately.

## 2.4.2 WATER AND WASTEWATER

**Water and wastewater was the largest sector for tracked adaptation finance between 2019 and 2024.** It retained this status despite a decrease of 8%, from USD 24.9 billion in 2023 to USD 22.8 billion in 2024 (see Figure 12). Within this overall decline, there were important shifts in composition across country groups over this period. Non-concessional public debt increased by 23% from USD 13.6 billion to USD 16.6 billion, primarily in EMDEs (excluding LDCs). In China, it increased by 57%, from USD 5.3 billion to USD 8.3 billion, while in other EMDEs (excluding LDCs), it increased by 24%, from USD 3.5 billion to USD 4.4 billion. These increases were partly offset by a decline in advanced economies from USD 4.1 billion to USD 3.4 billion.

**Figure 12:** Adaptation finance for water and wastewater by instrument, 2023 and 2024




**LDCs followed a different pattern for water and wastewater finance, with declining total adaptation finance and a shift toward concessional public debt.** Their total flows fell by 28%, from USD 1.7 billion to USD 1.2 billion. Within this, concessional public debt increased by 67%, from USD 299 million to USD 499 million, while grants fell by 42%, from USD 746 million to USD 431 million, and non-concessional public debt more than halved, from USD 613 million to USD 295 million.

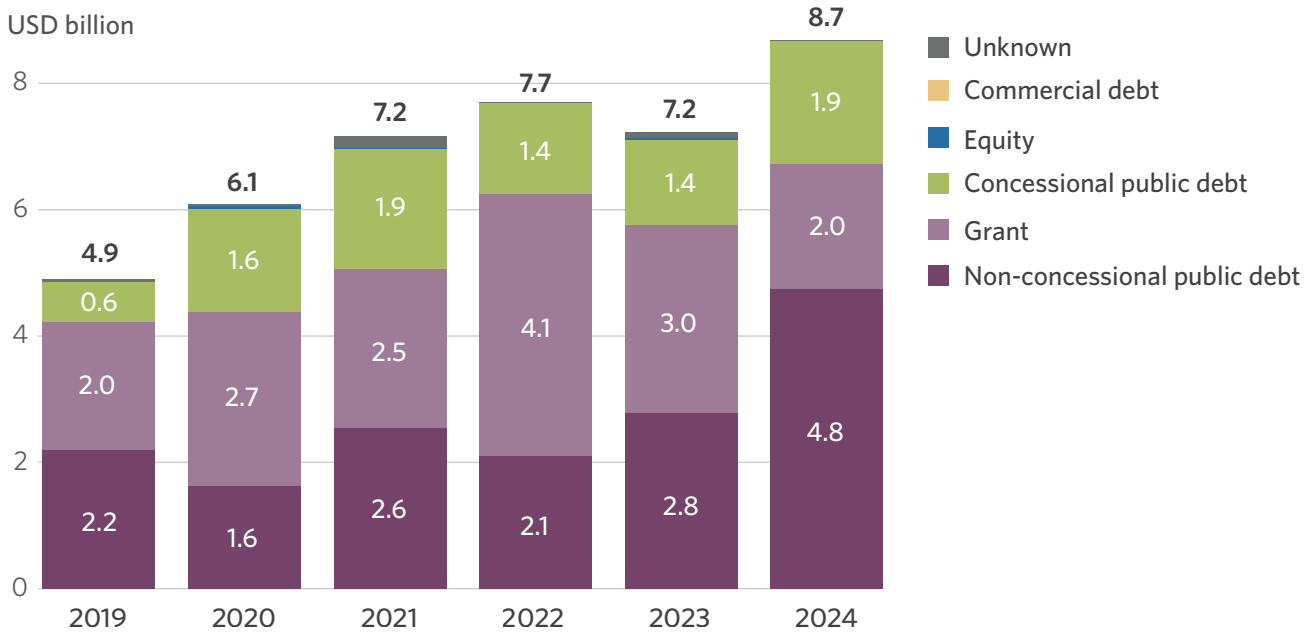
### 2.4.3 AFOLU

**Adaptation finance for AFOLU increased after a plateau between 2021 and 2023.** These flows increased by USD 1.5 billion between 2023 and 2024, reaching approximately USD 8.7 billion (Figure 13). This rise highlights increased financial support for a sector highly exposed to climate risks and structurally underfunded. EMDEs (excluding China and LDCs) accounted for 59% and LDCs for 32% of adaptation finance for AFOLU in 2024.

**AFOLU adaptation finance grew strongly in EMDEs (excluding China and LDCs) between 2023 and 2024, but saw a slight decline in LDCs.** EMDE flows increased by 38%, from USD 3.7 billion to USD 5.1 billion. LDCs' flows dropped by 4% from USD 2.9 billion to USD 2.8 billion.

**Both groups shifted from grants toward debt financing.** In EMDEs, growth was driven by a 79% increase in non-concessional public debt, from USD 2.1 billion to USD 3.7 billion. Its share of tracked finance rose from 56% to 72%, while the share of grants fell from 24% to 14%. LDCs saw a shift toward concessional public debt, which increased by 80%, from USD 682 million to USD 1.2 billion. Meanwhile, their grant finance fell by 43%, from USD 1.8 billion to USD 1.0 billion. As a result, grants' share of LDC finance fell from 62% to 37%, while concessional public debt increased from 24% to 44%.

**Figure 13:** Adaptation finance for AFOLU, by instrument

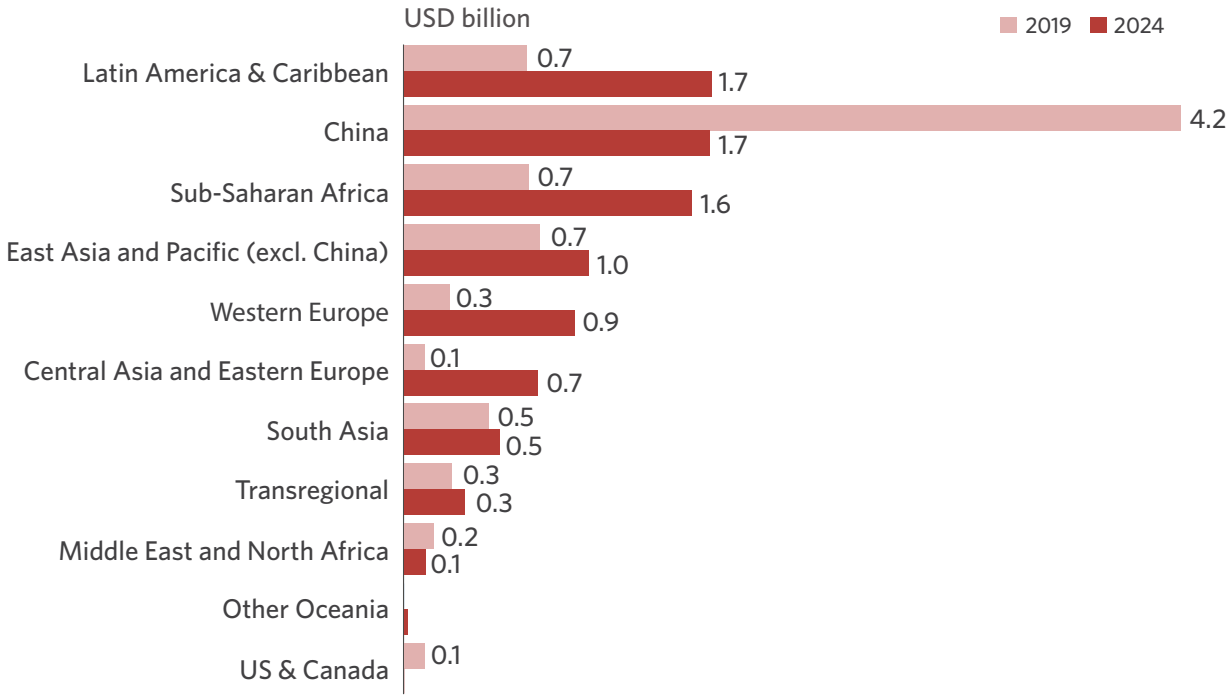



## 2.4.4 DISASTER-RISK MANAGEMENT

**Disaster-risk management activities respond to a range of climate and non-climate hazards and are relevant across sectors**, but the GLCF tracks them as a single discrete category rather than distributing them among other sectors. Examining them separately therefore shows how much finance is reaching disaster preparedness, risk reduction, and resilience, without double-counting flows recorded elsewhere.

**Finance for disaster-risk management increased between 2019 and 2024, with broadening geographical distribution.** Tracked flows rose by 11%, from USD 7.7 billion in 2019 to USD 8.6 billion in 2024. The most notable change was in China, where tracked flows fell from USD 4.2 billion to USD 1.7 billion, reducing the country's share of flows from around 55% to 20%. Central Asia and Eastern Europe recorded the fastest growth among the major regions, with a 46% CAGR, followed by Western Europe (30%), Latin America and the Caribbean (20%), and sub-Saharan Africa (18%). East Asia and Pacific (excluding China) and South Asia saw more modest growth, with CAGRs of 6% and 3% respectively, while the Middle East and North Africa recorded a decline.

**Figure 14:** Adaptation finance for disaster-risk management by region, 2019 and 2024




## 2.4.5 REMAINING SECTORS

**Several other sectors recorded strong growth in tracked adaptation finance between 2019 and 2024, with varied scale and composition.**

**Transport** saw the largest increase, with adaptation finance more than tripling from USD 1.9 billion to USD 6.7 billion. Transport's share of total adaptation finance also increased significantly between 2019 and 2024, from around 4% to 10%. More than half of this finance (56%) was not specified at the subsector level, while rail and public transport accounted for a further 26%. Across other subsectors, adaptation finance for waterways more than quintupled between 2019 and 2024, from around USD 136 million to USD 730 million, while finance for policy support and capacity building remained fairly constant.

**Energy systems** also saw finance triple from USD 0.5 billion to USD 1.5 billion, with around 80% for power and heat generation. In contrast, finance for transmission and distribution declined from USD 200 million to USD 140 million over the period. These trends illustrate that growth in adaptation finance extends beyond the largest sectors, though much of the additional tracked finance is concentrated in broad or unspecified subsector categories, which would benefit from more granular data being made available.

# 2.5 LDCs AND SIDS: IS ADAPTATION FINANCE REACHING THE MOST VULNERABLE?

**Key messages**

1. **Adaptation finance to LDCs and SIDS grew in volume, but their share of the global total barely moved between 2019 and 2024**. LDC finance rose almost 50%, from USD 8.1 billion to USD 11.9 billion, and their share went from 17% to 18%. SIDS' finance tripled from USD 0.8 billion to USD 2.4 billion, but remained between 1% and 4% of the total. Growth has tracked the overall expansion of adaptation finance rather than redirecting a larger share to the most vulnerable regions.
2. **Both groups depend almost entirely on public international finance, at 99% for LDCs and 98% for SIDS over 2019 to 2024**. With effectively no visible domestic or private adaptation finance data, flows to the countries facing the greatest climate exposure move with donor budgets and multilateral balance sheets.
3. **Finance is heavily concentrated in key regions for both LDCs and SIDS.** Sub-Saharan Africa's LDCs received USD 45.2 billion over 2019 to 2024, around 67% of tracked LDC finance. Of SIDS flows, countries in the Caribbean and Pacific together accounted for nearly 90%.
4. **The others and cross-sectoral activities category dominated, limiting analysis of what the finance pays for**. This category accounted for 40% of flows in sub-Saharan African LDCs, 36% in other LDCs, and 32-38% across SIDS subregions.

**Assessing whether adaptation finance reaches the countries most vulnerable to climate change is critical to understanding the effectiveness and equity of global flows.** LDCs[11] and SIDS face acute climate risks, often alongside limited domestic fiscal and institutional capacity to finance resilience. Examining flows to these groups helps reveal whether adaptation finance is reaching countries where climate risks are high and domestic financing capacity is constrained.

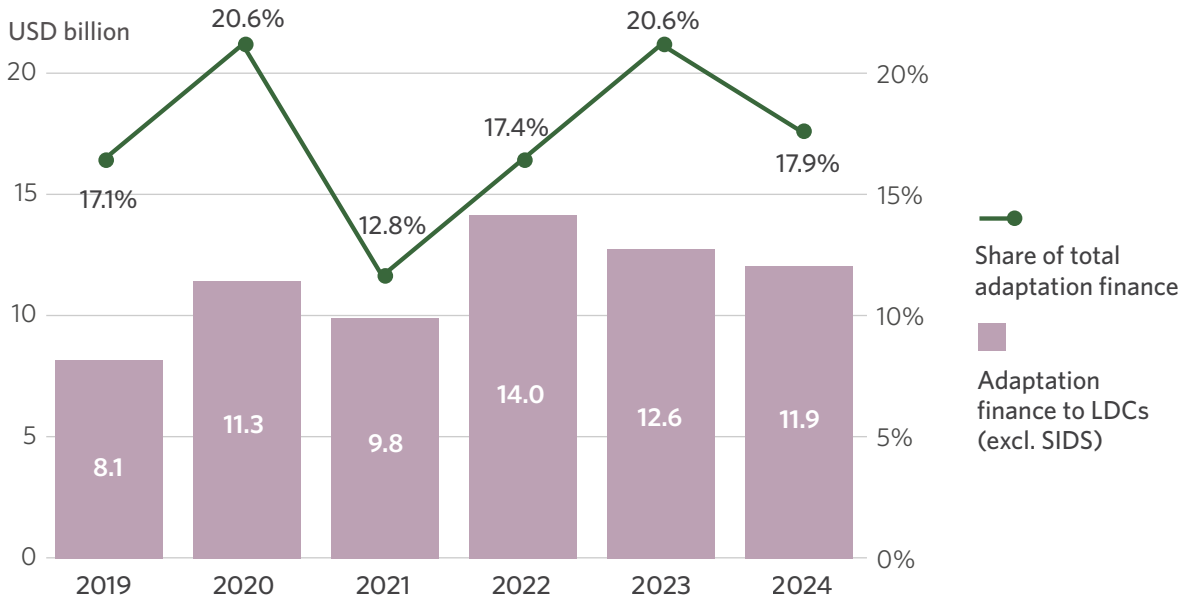
## 2.5.1 LDCs

**Adaptation finance to LDCs increased between 2019 and 2024, without meaningfully raising their share of total flows.** Public international finance made up 99% of LDC adaptation flows from 2019 to 2024. Finance to LDCs rose from USD 8.1 billion in 2019 to USD 11.9 billion in 2024, an increase of almost 50%, albeit with fluctuations over the period and a peak of USD 14 billion in 2022.

Growth in finance to LDCs has broadly kept pace with the expansion of adaptation finance overall, rather than attracting a greater share of global flows. Their share of total adaptation finance varied between 13% and 21%, standing at 18% in 2024. LDCs' high vulnerability and limited domestic resources for adaptation mean that external development finance plays an important role in supporting adaptation investment in these countries (OECD 2025).

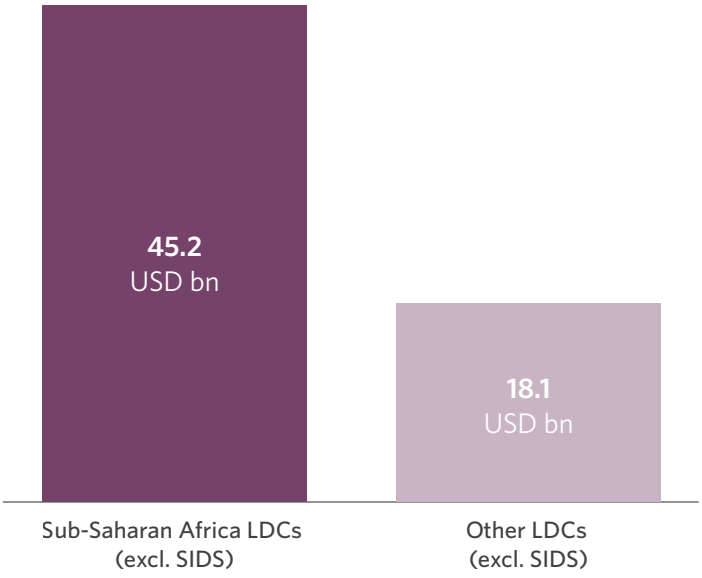
11 The LDC country group is fixed to the 2024 classification across all years of analysis. This ensures that observed trends reflect changes in the data rather than changes in country classification.

**Figure 15:** Adaptation finance to LDCs and share of total adaptation finance, 2019-24



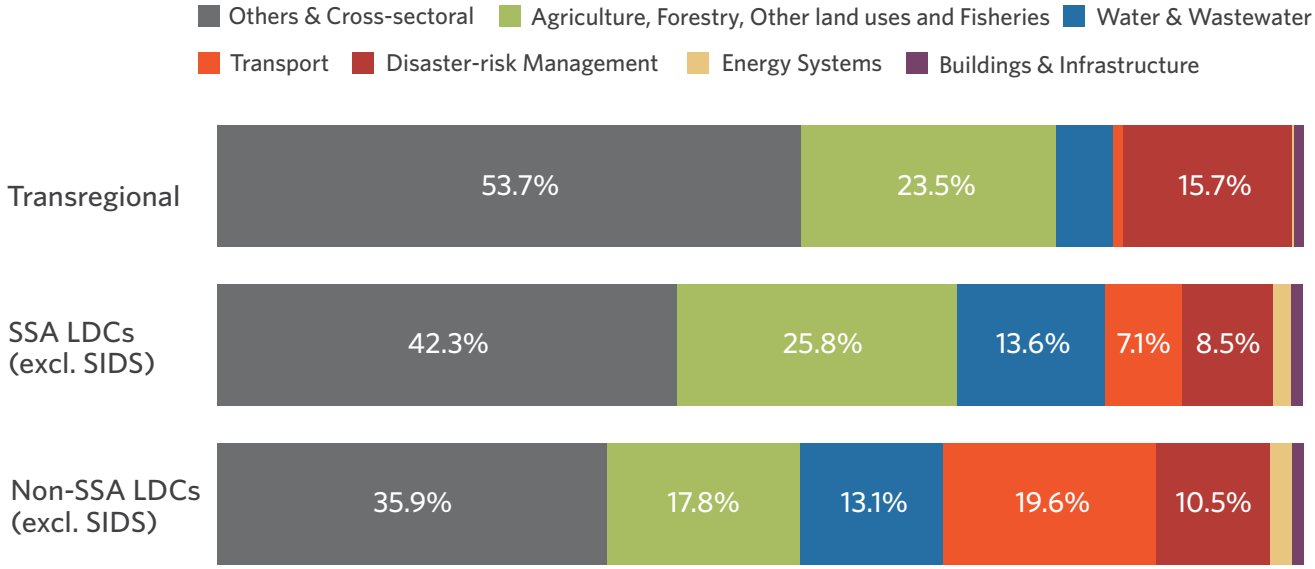

**Within the LDC group, adaptation finance is strongly concentrated in sub-Saharan Africa (SSA), reflecting both the number of LDCs in that region and the scale of their adaptation investment needs.** SSA LDCs accounted for USD 45.2 billion from 2019 to 2024, or around 67% of total tracked LDC adaptation finance, compared with USD 18.1 billion for LDCs elsewhere. A further 6% was transregional. While the concentration of finance in LDCs in SSA is consistent with the region's high climate vulnerability and large populations living in LDCs, aggregate volumes do not indicate whether finance is distributed across individual countries in proportion to their adaptation needs.

**Figure 16:** Regional distribution of adaptation finance to LDCs (excluding SIDS), 2019–24



**The sectoral allocation of finance also differs between SSA and other LDCs.** AFOLU accounted for 26% of adaptation finance to SSA LDCs, compared with 18% in non-African LDCs, while transport represented 20% of finance to non-SSA LDCs compared with 7% in African LDCs. The others and cross-sectoral activities category represented the largest category for both groups, accounting for around 40% of tracked finance, while water and wastewater represented a similar 13% in each. Transregional finance was even more concentrated in others and cross-sectoral activities, which accounted for 67% of flows. These differences suggest that the composition of adaptation finance varies across LDCs, alongside the broader geographic concentration of flows.

**Figure 17:** Adaptation finance to LDCs by sector, cumulative 2019-24

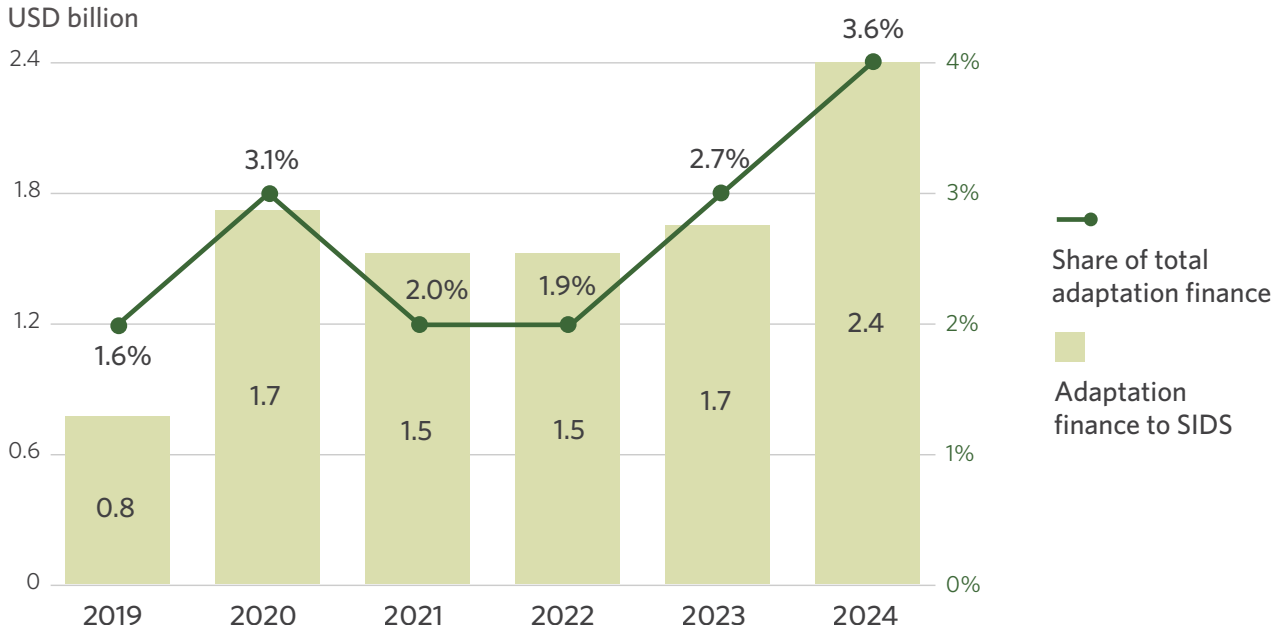



Note: Other/Cross-sectoral includes all tracked adaptation flows to the Other/Cross-sectoral sector, as per CPI's taxonomy, alongside flows to the Waste, Industry and ICT sectors. Disaster Risk Management is a sub-sector of Other/Cross-sectoral, which has been isolated here.
SSA=Sub-Saharan Africa

### 2.5.2 SIDS

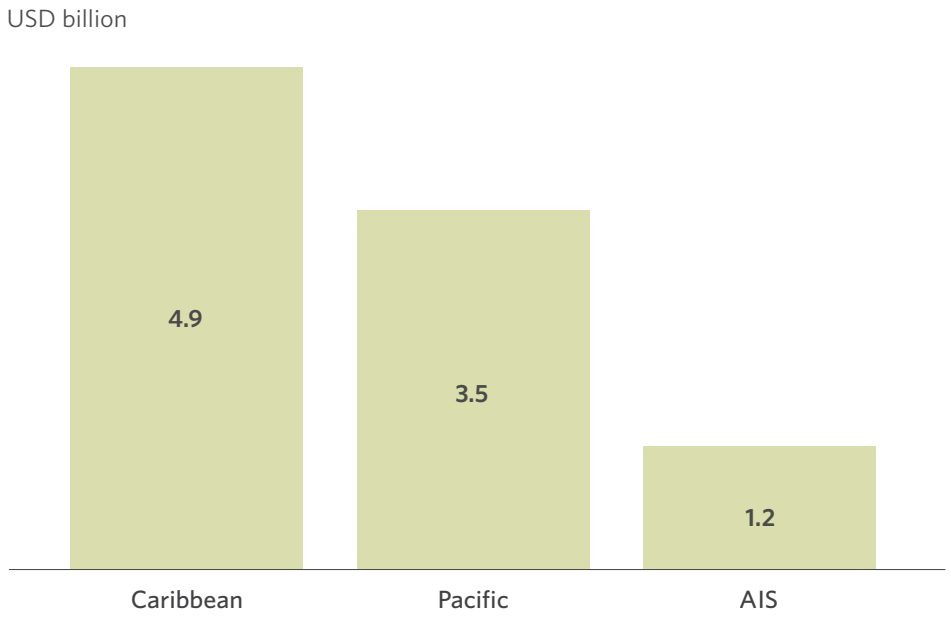
**Adaptation finance to SIDS also increased substantially from 2019 to 2024.** SIDS rely on public international finance for adaptation, which accounted for 98% of their tracked flows over the period. Finance to SIDS rose from USD 0.8 billion in 2019 to USD 2.4 billion in 2024. Even with this growth, SIDS still receive a small share of global adaptation finance relative to their high exposure and vulnerability to climate impacts. Their share of total adaptation flows remained between 1% and 4% over the period.

**Figure 18:** Adaptation finance flows to SIDS and share of total adaptation finance, 2019-24




**Adaptation finance to SIDS was concentrated in the Caribbean and Pacific regions over 2019-2024.** Caribbean SIDS received USD 4.9 billion from 2019 to 2024, accounting for around half of tracked SIDS adaptation finance. Pacific SIDS received USD 3.5 billion (37%). SIDS in the Atlantic, Indian Ocean, and South China Sea (AIS) received substantially less, at USD 1.2 billion (13%).

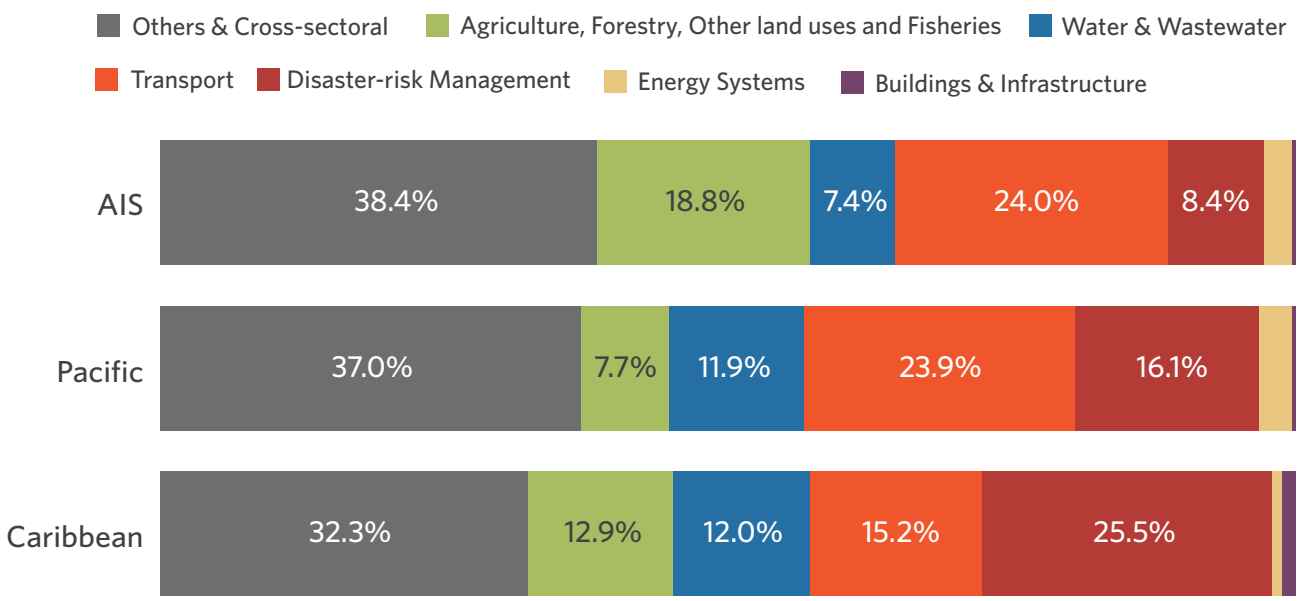
**Figure 19:** Regional distribution of adaptation finance to SIDS, 2019–24




Note: AIS = Atlantic, Indian Ocean and South China Sea

**Sectoral allocations are broadly consistent across SIDS subregions, with some regional differences for transport, disaster-risk management, and AFOLU.** The Caribbean directs a considerably larger share of adaptation finance toward disaster-risk management (25%) than AIS (8%). Meanwhile, transport accounts for a greater share in AIS and the Pacific (24% each) than in the Caribbean (15%). These differences suggest some variation in sectoral investment patterns, despite an otherwise similar distribution of finance.

**Figure 20:** Adaptation finance to SIDS by sector, cumulative 2019-24




Note: Other/Cross-sectoral includes all tracked adaptation flows to the Other/Cross-sectoral sector, as per CPI's taxonomy, alongside flows to the Waste, Industry and ICT sectors. Disaster Risk Management is a sub-sector of Other/Cross-sectoral, which has been isolated here.
AIS = Atlantic, Indian Ocean and South China Sea

# 3. REDEFINING PROGRESS IN AN OVERSHOOT WORLD

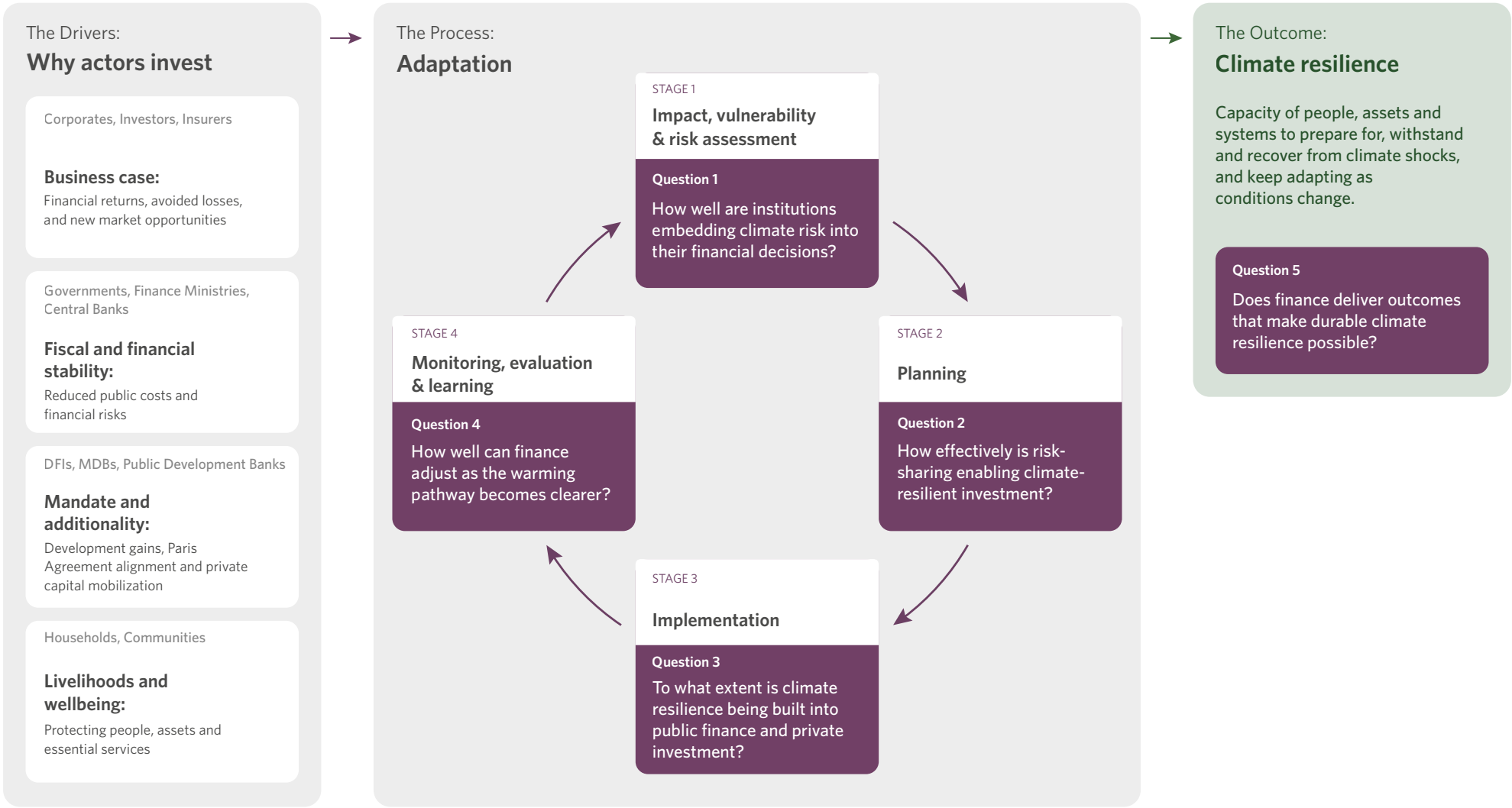
**As the world enters a period of temperature overshoot, tracking of adaptation finance must evolve to capture how investment decisions are shaping resilience and whether that resilience can be sustained as climate conditions change.** Section 2 sets out where trackable adaptation finance is going, who provides it, on what terms, and which sectors and countries receive it. The scale and direction of capital are the foundation of any assessment of adaptation finance, and it is the part of the picture the ecosystem has invested most in getting right. Building on that foundation, a fuller account of progress asks what that finance achieves for the communities and economies facing growing climate risk, and whether the financial system as a whole is becoming better able to anticipate a changing climate, absorb its shocks, and adjust as conditions become clearer.

**Consider a ministry upgrading a port or drainage system today**. The infrastructure will remain in use for decades, during which climate risks are expected to intensify and may change as global temperatures peak and eventually decline. The height and duration of that peak remain uncertain, creating difficult choices for investment planning. Designing infrastructure for eventual stabilization could leave it exposed to more severe conditions during overshoot, while designing for peak warming could mean investing more upfront than may be necessary over the longer term. Governments and investors must weigh the benefits of greater investment today against the option of building in stages, with scope to upgrade as risks become clearer. These choices affect not only what gets built, but when finance is needed and how it should be structured.

This uncertainty changes how we should understand adaptation and resilience finance progress. A more complete assessment must ask: **Is the broader financial system becoming better able to anticipate a changing climate, absorb its shocks, and adjust as future conditions become clearer?** Understanding progress requires looking beyond financial transaction data to how institutions prioritize, design, and finance investments. Much of the evidence needed already exists, but is scattered across governments, development banks, financial institutions, and companies.

The five questions explored below set out where this work can begin, what evidence is needed, and the contributions required from institutions across the financial system. Figure 21 illustrates how these questions connect the drivers for investing in resilience with the decisions made throughout the adaptation process and, ultimately, the resilience outcomes that finance is intended to achieve. **Answering them is critical to understanding whether the financial decisions being made today are preparing communities and economies for the climate impacts ahead or leaving vulnerabilities that will become increasingly difficult and costly to address.**

**Figure 21:** Five questions for assessing progress toward climate resilience




Stages follow the UNFCCC iterative adaptation cycle used in the UAE Framework for Global Climate Resilience.

# 3.1 HOW WELL ARE PUBLIC AND PRIVATE INSTITUTIONS EMBEDDING CLIMATE RISK INTO THEIR FINANCIAL DECISIONS?

## WHY IT MATTERS

Assessing progress begins with understanding whether information about physical climate risk informs capital allocation. Finance ministries set budgets, development banks screen pipelines, lenders set credit terms, and corporations decide where to build and what to protect. Those choices are shaped by the standards and codes that govern what gets built, the criteria used to appraise and approve projects, and the terms on which credit is extended. The capacity of capital providers to identify physical climate risk and act on it is itself an important measure of adaptation progress.

Examples from governments, corporations, and financial institutions show what changes when risk information informs decisions:

- **Singapore**, where roughly 30% of the island lies less than five meters above mean sea level and where projections point to sea-level rise of up to 1.15 meters by 2100, has been running site-specific coastal risk studies since 2021. New coastal protection legislation and a code of practice are being developed that will require raised structures and tidal gates in response (NCCS 2026).
- **AT&T** uses downscaled projections of risk to its network from wind, droughts, wildfires and flooding, which are resolved to the neighborhood level and extend 30 years ahead. This information is used to run a vulnerability index that prioritizes which existing sites are hardened and feeds severe weather risk scores into the software that selects new cell sites, and to set elevated platform heights for equipment and generators under a revised flood risk management policy (AT&T 2025).
- **Banco Davivienda** has geocoded the credit obligations in its USD 36.9 billion loan book and crossed them against current and future physical hazard maps, using the result both to manage portfolio risk and to identify lending opportunities. Its adaptation and resilience financing framework turns that analysis into a product: commercial teams screen for adaptation potential during ordinary credit analysis, and each candidate is tested for substantial contribution to reduced vulnerability, absence of maladaptation, and no significant harm (Davivienda 2025).

## WHAT ASSESSING IT WOULD INVOLVE

**The evidence sits inside institutions.** A finance ministry might apply climate criteria in project appraisal; a bank might revise its origination standards; a corporation might require a hazard assessment before approving capital expenditure. Such changes are recorded in methodologies, credit policies, procurement manuals, and codes. They also move on a different timetable from capital: a revised appraisal methodology can affect which projects reach financial close several years later. Adaptation finance totals measure capital committed, not these institutional capabilities.

The indicators would differ by institution and would involve understanding whether risk has been identified and disclosed, as well as what changed as a result:

- **Governments:** Whether physical climate risk enters macro-fiscal analysis and debt sustainability assessment; climate criteria are applied in project appraisal and selection; infrastructure standards, building codes, and procurement rules reflect projected conditions; budgets identify climate-related expenditure; and *ex-post* reviews examine climate outcomes.
- **Financial institutions:** Changes in lending criteria and origination, underwriting and pricing, client engagement and escalation, and capital allocation.[12]
- **Insurers:** Whether verified reductions in modeled loss are reflected in pricing, deductibles, coverage terms and capacity, and whether multi-year terms allow the benefit of a resilience investment to accrue to the party that made it.
- **Corporations:** Changes in capital expenditure approval, siting and supply chain decisions, and conditions attached to long-lived assets.

## WHO DOES WHAT

Approaches to assess how institutions handle physical climate risk exist in some capacity for governments, for financial institutions and for large corporations, but none is comprehensive, and none generally captures whether a decision changed as a result.

**For the public sector**, the IMF's Climate Public Investment Management Assessment (C-PIMA) is among the most relevant approaches, examining how climate considerations enter public investment management. Where it has been applied, it captures a consistent pattern: national and sectoral investment plans are aligned with climate goals, but there is much weaker integration of climate criteria at the point where projects are appraised and selected, and little clear methodology for doing so (IMF 2021). C-PIMA scores the policies, rules and procedures institutions have on paper rather than what they achieve, and it is undertaken only where a government asks for it. International financial institutions could extend structured assessment of public investment systems beyond the current request-driven pace, so that coverage follows where the need is greatest. Finance ministries could proactively commission assessments as part of their larger development planning.

**For the private sector**, two groups face different measurement problems. Financial institutions can be assessed at the entity level using information made available through disclosure and regulatory supervision. Corporations largely cannot, because most of what they spend on resilience is never labeled as adaptation.

- **For financial institutions**, the question is what an institution does with the physical risk it has identified. CPI's Responding to Risk (2026) examined eight frameworks relevant to private financial institutions and distilled 26 best practices across governance, strategy and planning, risk management, and real-economy and policy engagement. Those practices are being built into CPI's Net Zero Finance Tracker, which assesses the climate action of 1,500 of the world's

12 Work on this is already underway. Marsh and Carlyle's Investing in Resilience framework sets out an approach from forward-looking asset-level hazard and loss modelling, through a gap assessment against recognized standards, to documented post-mitigation reductions in average annual loss and downtime, and finally to insurance terms: pricing credits, lower deductibles, multi-year policy stability, broader business interruption cover and parametric overlays (Marsh and Carlyle 2026).

largest financial institutions and already covers climate risk management. Two changes would make this assessable at scale. Those who run institutional trackers, CPI included, could add adaptation and resilience indicators to the assessments they already publish, rather than treating resilience as a component of transition planning. Standard-setting bodies could define what those indicators should cover, so that assessments produced by different providers are comparable. Together, these would show not only which institutions report on physical risk but which have changed how they lend, underwrite, and allocate as a result.

- **For corporations**, voluntary disclosure provides the widest coverage. CDP's questionnaire, aligned with the recommendations of the Task Force on Climate-related Financial Disclosures since 2018 and now with S2 of the International Financial Reporting Standards, asks companies directly how they identify, assess and manage climate-related risks, and more than 22,100 companies disclosed through it in 2025 (CDP 2026). Extending disclosure, voluntary or mandatory, will not resolve the underlying problem, which is that firms investing in supply chain resilience, business continuity, and asset protection rarely recognize that spending as adaptation. An alternative is to classify activity by its effect rather than by what it is called. CPI has developed such an approach: a taxonomy and machine learning model that assess the likely adaptation relevance of an investment from its description, independent of whether the investor describes it as adaptation.[13] Developing this further would mean the tracking community building classification approaches that do not rely on self-labeling, and drawing on what lenders and insurers already observe about their clients' physical risk and the measures taken against it.

| Who | What |
|---|---|
| International financial institutions | Extend structured assessments of public investment systems beyond the current request-driven approach, prioritizing countries where the need is greatest. |
| Finance ministries | Proactively commission assessments of public investment management systems as part of broader development planning. |
| Standard-setting bodies | Define common indicators for assessing how institutions translate physical climate risk into financial decisions, allowing assessments across providers to be compared. |
| Climate finance data and research organizations | Incorporate adaptation and resilience indicators into existing institutional assessments to capture changes in financial decisions. Develop approaches to identify corporate resilience investments without relying on self-labeling, drawing on investment descriptions and information lenders and insurers already collect about their clients. |

These sources do not yet produce a comparable picture across capital providers. A common set of capacity indicators that follow risk identification through to decisions would allow public, private, and corporate capital providers to be assessed on a consistent basis. For financial institutions and corporates, this would also reduce the need to navigate multiple, inconsistent assessment frameworks while providing more useful information on whether physical climate risks are being addressed across investments, assets, and supply chains.

13 CPI's *Tracking and Mobilizing Private Sector Climate Adaptation Finance* (2024) sets out a taxonomy of seven themes and 165 activities, each tagged for adaptation likelihood on a low, medium and high scale alongside maladaptation risk, relevant climate hazards and the private actors likely to be involved. Adaptation likelihood is assessed on an activity's effects rather than the intent behind it. A machine learning model developed with Vibrant Data Labs classifies projects, companies and funds from their names and descriptions. Applied across World Bank private participation data, green bond listings, the GLCF, early-stage venture data and CDP responses, the approach raised tracked private adaptation finance for 2019 to 2022 to an annual average of USD 4.7 billion, more than four times the previously tracked figure. The report identifies the quality of available project text as the primary constraint on classification (CPI 2024).

# 3.2 HOW EFFECTIVELY IS RISK-SHARING ENABLING CLIMATE-RESILIENT INVESTMENT?

## WHY IT MATTERS

**Even when a project is designed to withstand physical climate risks, political, credit, or other financial risks may still prevent it from attracting capital**. Guarantees, insurance, reinsurance, and credit enhancement can transfer or share these risks with parties better able to bear them. A guarantee on a pipeline of climate-resilient infrastructure investments, for example, can bring private lenders into markets they would otherwise avoid. Other instruments help manage the financial consequences of climate shocks. A catastrophe risk pool can determine whether a government rebuilds quickly after a disaster or diverts its development budget for years, while contingent credit lines can provide liquidity for recovery. Understanding the contribution of these instruments to adaptation therefore requires tracking not only the risks they cover, but also the climate-resilient investments and recovery efforts they enable.

## WHAT ASSESSING IT WOULD INVOLVE

**Because the outflows from risk transfer instruments are conditional, they are omitted from climate finance tracking under the GLCF methodology.** While risk transfer instruments such as guarantees play a critical role in mobilizing private climate finance, particularly in sectors and geographies perceived as high risk, they may never be triggered to result in any disbursement.

**The face value of a guarantee is not directly comparable to a disbursed grant or loan.** Its expected cost to the issuer is a fraction of the amount covered, determined by the likelihood of a call and the recovery that follows. Combining these amounts would produce a total without consistent meaning. Similarly, the OECD reports amounts mobilized from the private sector as a separate statistic rather than adding them to its tracked development finance totals.

Understanding the availability and deployment of risk-sharing instruments would require looking at both coverage and enabled investment:

- **Coverage:** What risks are protected, who retains or absorbs them, and how much exposure remains uncovered? Is protection reaching the most exposed countries, sectors, and households, or mainly those already able to manage risk?
- **Enabled investment:** How much climate-resilient investment went ahead because risk was shared, and what would have happened anyway? How does that protection expand what governments, firms and households are able to do?

Tracked over time, these questions would show which instruments enable new investment in resilience, and where public finance is most effective.

While risk-sharing instruments can help unlock climate-resilient investment, they cannot address all the barriers that constrain it. Many of these barriers are structural, requiring the strategic allocation of scarce public and concessional finance alongside non-financial interventions to help address them. Assessing the contribution of risk-sharing instruments should therefore also consider how they fit within broader strategies to address systemic barriers and enable sustained shifts in investment patterns - another important frontier for assessing the quality and efficiency of adaptation finance.

## WHO DOES WHAT

Relevant measurement infrastructure already exists, though none of it is aimed directly at this question. The closest is likely the OECD DAC methodology for amounts mobilized from the private sector, which includes instrument-specific rules for guarantees. The amount mobilized is recorded as the face value of the instrument covered, irrespective of the exposure assumed, so a modest first-loss position and a near-full cover on the same loan can register identically (OECD 2025).

Work has also begun on the supply side. CPI has supported the Green Guarantee Group in developing the GGG Guarantee Directory, the first public global platform mapping and comparing climate-aligned guarantee instruments, with each entry contributed or verified by the provider and recording the risks covered, eligible borrowers and lenders, sectoral scope, coverage terms, and tenors. It addresses a basic problem of visibility, as available guarantees are scattered across dozens of institutions on differing terms, and users cannot easily find or compare them. It catalogs the products on offer rather than the guarantees issued or the investment that followed them, but at minimum establishes the field of play and identifies the counterparties who would have to report.

No source currently provides a protected-versus-unprotected picture of which assets, sectors and populations are covered against which hazards, who retains residual risk, and how large the uncovered exposure is. Commercial catastrophe models hold much of the underlying information but are largely proprietary, built for underwriting rather than public policy, and concentrated in markets where insurance is already sold, rather than where the adaptation question is sharpest. Building that picture would draw on contributions from several actors:

| Who | What |
|---|---|
| Insurers, reinsurers and guarantee providers | Disclose coverage and calls on a consistent basis, so that protected and unprotected exposure can be distinguished. |
| MDBs and DFIs | Report guarantee exposure and issuance alongside lending, so that risk assumed is visible next to capital committed. |
| Industry bodies and supervisors | Pool information across institutions where commercial sensitivity prevents individual disclosure. |
| Climate finance data and research organizations | Connect risk-sharing instruments to the investment that followed and to the exposure that remains uncovered. |

# 3.3 TO WHAT EXTENT IS CLIMATE RESILIENCE BEING BUILT INTO PUBLIC FINANCE AND PRIVATE INVESTMENT?

## WHY IT MATTERS

**Infrastructure decisions today have long-lasting consequences for climate vulnerability.** Roads, water systems, hospitals, power grids, and other critical infrastructure will be in use through multiple stages of overshoot and stabilization. Whether these projects are designed in a way that is responsive to physical climate risk will significantly shape future climate vulnerability. When CPI last aimed to measure progress on this question in 2022, we found that for every USD 1 invested in infrastructure that integrated climate resilience principles, USD 87 went to infrastructure that did not (CPI 2022).

**The same question applies to investment driving the transition to net zero emissions.** Most tracked climate finance targets activities that reduce emissions, including new energy generation and transmission, and those assets face the same hazards as everything else. Droughts reduce hydropower generation. Heatwaves lower the output of solar panels and strain transmission lines. Storms and floods damage the grids that renewable power depends on (UNEP 2026). The definitional line that climate finance tracking draws between mitigation and adaptation is useful for accounting, but says little about whether the energy transition is being built to last. In a period of overshoot, understanding how resilient mitigation investment proves to be may be among the most consequential questions for climate finance.

## WHAT ASSESSING IT WOULD INVOLVE

**Assessing whether investments build resilience requires looking beyond financial transactions to how projects are designed.** This means understanding where assets are located, which hazards have been assessed, and what future climate conditions they have been designed to withstand. Appraisal processes routinely generate this information, but it is not always published.

Assessing progress would mean linking baseline investment records to four types of information:

1. Whether a physical climate risk assessment was conducted
2. The climate vulnerability of the asset's location
3. The climate hazards and future conditions considered in its design
4. The resilience measures incorporated in response

This would build on definitional work already done. The EU Taxonomy's climate change adaptation criteria require that a project has undergone a robust climate risk and vulnerability assessment and that the adaptation solutions it identified have been implemented, which is close to the first and fourth items above. The Climate Bonds Resilience Taxonomy sets out resilience criteria for use in bond issuance (CBI 2024), and the Green Bond Principles from the International Capital Market Association (ICMA) include climate change adaptation among eligible project categories.

CPI's 2022 report Tracking Investments in Climate Resilient Infrastructure showed that this kind of analysis is possible. Working from nearly 4,000 primary investments across four sectors, it tracked up to USD 31.3 billion a year in climate-resilient infrastructure in 2019/20 against

USD 2.7 trillion of total infrastructure investment, which is where the ratio above comes from. It also showed what becomes visible once the data is assembled: that public financial institutions provided 83.5% of tracked resilient infrastructure investment; that water and wastewater absorbed 42% of it while energy systems took 3%; that green infrastructure accounted for under 10%; and that there was no meaningful correlation between per capita resilient infrastructure investment and country vulnerability as measured by ND-GAIN (CPI 2022). The exercise was a snapshot of 2019/20 covering two hazards, floods and droughts, and the databases examined did not include information on project results, alignment with national plans, or monitoring over time.

Developments since then could make a broader assessment across more sectors, investment types, and hazards more feasible. These include mandatory physical risk and adaptation disclosure under some EU reporting standards; maturing asset-level geospatial data; established asset-level risk appraisal methodologies now in use by investors; and AI-assisted classification that could make screening large project databases far less resource-intensive than hand-coding 4,000 records.

Resilience is also a property of broader economic and social systems. Making individual assets climate-resilient does not necessarily address the structural drivers of vulnerability or ensure the resilience of interconnected systems. A further frontier for assessing progress would therefore be to examine whether investment strategies and wider financial flows are being redirected towards climate-resilient development pathways.

## WHO DOES WHAT

Where the first question calls for assessment of institutions, this one calls for data about assets and projects. Several actors can contribute:

| Who | What |
|---|---|
| Development banks and DFIs | Publish project locations, the physical risks identified, and the climate conditions projects were designed for, information their appraisals already generate but do not disclose. |
| Infrastructure and project finance databases | Add fields for whether physical climate risk was assessed and what design standard was applied, alongside the sector and instrument fields they already carry. |
| Standard setting bodies | Close the distance between disclosing physical risk exposure and disclosing what was done about it. |
| Taxonomy bodies | Align resilience criteria across frameworks, so that a project classified under one is recognizable under another. |
| Climate finance data and research organizations | Link investment data with information on physical climate risks and resilience measures, developing methodologies for using asset-level data to expand tracking across infrastructure, corporate capital expenditure, and financial institution portfolios. |

With these in place, the 2022 approach could extend from infrastructure to corporate capital expenditure and financial institution portfolios.

# 3.4 HOW WELL CAN FINANCE ADJUST AS THE WARMING PATHWAY BECOMES CLEARER?

## WHY IT MATTERS

**Climate overshoot makes flexibility an increasingly important consideration in adaptation finance.** Many adaptation investments will require adjustment over their lifetimes as the warming pathway evolves. UNEP's latest overshoot report calls for flexible adaptation pathways that sequence low-regret, reversible, and modular options.[14] It also cautions against locking in solutions that fail if overshoot is higher or longer than expected, and against overinvesting if it turns out lower or shorter (UNEP 2026). Most discussion of flexibility focuses on physical design. The finance behind it is equally important: a drainage system designed to be raised in a second phase is only sufficiently modular if the finance for that phase can be arranged when the time comes.

## WHAT ASSESSING IT WOULD INVOLVE

**Flexibility is related to the terms of finance.** Features such as repayment periods, phased disbursements, and provisions for follow-on financing can determine whether investments can be adjusted as climate risks evolve. Depending on these aspects, two commitments of identical size can leave a borrower with entirely different room to maneuver a decade later. Assessment would start with the financing documents themselves. Key questions address both whether the investment is designed to respond to changing climate conditions and whether financing arrangements enable that response:

- Was the investment appraised against more than one warming scenario?
- Are financing commitments or disbursements phased to align with the stages of an adaptation plan?
- Can contingent financing be released when agreed climate or performance thresholds are crossed?
- Have lender and borrower agreed in advance how future upgrades or additional adaptation measures would be financed?
- Do loan tenors and repayment schedules allow room to finance subsequent adaptation measures?
- Is funding available for monitoring and periodic reassessment to determine whether agreed thresholds have been reached?

Each of these features could be assessed as a binary or near-binary property of a transaction, recorded somewhere in its documentation. Yet, they are not currently captured in adaptation finance datasets. Tracked across a portfolio, they could provide a measure of financial flexibility to complement existing data on financing volume. Alongside the amount, instrument, and

14 A modular adaptation option is one built to be extended or upgraded in stages as conditions become clearer, rather than sized once for a single assumed future. Flood defenses are the clearest example: an embankment or sea wall can be constructed with foundations and land take sufficient for a later increase in height, so that raising it in twenty years is an incremental works contract rather than a rebuild.

concessionality of finance committed today, they would show whether its terms leave countries and asset owners financially able to keep adapting as the warming pathway becomes clearer.

A further frontier for assessing financial flexibility lies beyond individual financing arrangements, at the level of country-led financing strategies. This would involve examining whether institutions and entire financing frameworks can adapt investment priorities, reallocate resources and coordinate successive interventions as climate risks evolve.

## WHO DOES WHAT

Almost none of this is currently observable because no one has been asked to report it. The nearest existing practice is in disaster-risk finance, where contingent credit lines and parametric triggers are documented as a matter of course because payout depends on them. Progress would require contributions from several actors:

| Who | What |
|---|---|
| Development banks and climate funds | Report phasing structures, contingency features and pre-agreed follow-on arrangements alongside the headline commitment, since this information already exists in their loan documentation. |
| Standard setting bodies working on adaptation and resilience planning | Treat financial flexibility as a component of a credible adaptation pathway, rather than treating pathways as a question of engineering alone. |
| Climate finance data and research organizations | Add flexibility fields to the taxonomies already in use, so that a phased, trigger-linked facility is distinguishable from a single lump-sum commitment of the same size. |

Until this changes, two countries financing the same type of intervention on entirely different terms are distinguishable only to the people who read their loan documents.

# 3.5 DOES FINANCE DELIVER OUTCOMES THAT MAKE DURABLE CLIMATE RESILIENCE POSSIBLE?

## WHY IT MATTERS

**Adaptation finance must do more than manage climate risks: it must help reduce vulnerability for the people and ecosystems most exposed.** Two projects of identical size in the same sector can differ enormously in whether climate risk shaped their design, whether they reach the households most exposed or those easiest to reach, and whether they can be adjusted when conditions change. Poorly designed interventions can entrench vulnerability rather than reduce it. For example, an irrigation scheme can deplete the aquifer it depends on. Meanwhile, a crop insurance approach that compensates farmers for drought or flood losses year after year, without linking premiums, payouts or eligibility to risk-reducing practice, can leave the underlying exposure untouched and weaken the incentive to change what is grown, where, or how. In both cases, finance flows, and losses are covered, and vulnerability is unchanged or greater than before. Temperature overshoot sharpens this risk because an intervention appropriate for one warming pathway may be inadequate under an increased warming scenario.

**There is also a tension with the first question.** A lender that assesses flood risk rigorously and tightens lending criteria in exposed locations may be managing physical climate risk effectively. But capital may also have moved away from the households most exposed to flooding. Competent risk management does not, on its own, extend protection to those who need it most.

## WHAT ASSESSING IT WOULD INVOLVE

**Financial commitments can be tracked through transaction data, but assessing whether they improve community resilience is considerably more complex.** Adaptation success can mean a disaster loss avoided, an essential service maintained, or a harvest protected. Measuring these outcomes requires understanding what would have happened without intervention, but counterfactuals become increasingly difficult to establish as conditions change. Attribution is further complicated by the close relationship between adaptation and development outcomes, including poverty reduction, water security, and food supply. A globally comprehensive and usable outcome-level measurement system for adaptation is infeasible, and an agenda that requires one will wait indefinitely.

**A practical starting point is to assess whether an intervention is designed and financed in ways that make durable resilience more likely.** CPI's Assessing the Quality of Adaptation Finance (CPI 2026a) outlines one such approach: a decision-support tool for public finance providers that assesses adaptation finance quality at the project, market, and system levels, with five criteria at each level. An important dimension of quality is how finance is structured and delivered, including whether public resources are used to responsibly mobilize private investment where markets can support it, while directing public support toward underserved populations and essential services where financial returns are limited. At project level, the tool elaborates:

- Did a credible, forward-looking climate risk assessment shape project design?
- Does the intervention align with and strengthen nationally determined adaptation priorities?
- Does it reach populations most exposed to climate risk, including those who face access barriers?

- Can it learn and adjust as conditions change?
- Does it screen for maladaptation?

Market-level criteria ask whether public finance is shifting what other actors will do, and system-level criteria whether it is changing the structural conditions, including debt sustainability, investor behavior and the policy environment, that determine whether adaptation investment is possible at all.

**These criteria were built for public finance providers, and private investors would need a different set.** For a private investor, the equivalent questions are commercial: whether resilience measures reduce operating costs, avoid losses from extreme events, or defer capital expenditure, and whether the investment is bankable, meaning it has a reliable revenue source, a creditworthy payer, a workable risk allocation, and a tenor matched to the asset. These would sit alongside the criteria above rather than replace them, and no comparable set yet exists.

## WHO DOES WHAT

Increasing visibility into progress on the embedding of durable climate resilience would require a set of changes:

| Who | What |
|---|---|
| Public finance providers | Disclose how risk findings translated into design decisions, report who is reached and their vulnerability rather than aggregate reach alone, and document maladaptation screening where it occurs. |
| DFIs | Adopt a common quality framework, testing tools of this kind against their own portfolios, so that assessments become comparable rather than bespoke. |
| Funders and standard-setting bodies | Avoid reducing quality to volume or requiring outcome indicators that the underlying evidence base cannot support. |
| Private investors and their advisers | Develop the equivalent indicators for commercial investment, covering avoided losses, operating and capital cost effects, and bankability. |
| Climate finance data and research organizations | Develop comparable approaches to assess adaptation finance quality across projects, markets, and systems, drawing on evidence of risk-informed design, reach to vulnerable populations, and maladaptation screening. |

**One point of caution:** The countries where adaptation finance matters most often have the least developed climate data and weakest institutional systems and will score lowest on the criteria that require those things. Interpreted carelessly, quality assessment would penalize providers for working in the hardest places. A low assessment in those contexts should be read as identifying where foundational investment in data and institutional capacity is needed, and not as a reason to move finance somewhere easier to measure.

# 4. CONCLUSION

Tracking the volume of adaptation finance remains foundational for understanding progress on adaptation. Section 2 of this report details what it shows: more capital for adaptation is moving, but it is not accelerating swiftly enough and not toward the countries facing the greatest risk.

Adaptation finance volumes, even with tracking improvements, still only describe a fraction of what determines resilience. Most of the capital that determines whether people are protected is committed for other reasons: to build power systems, roads, water networks, and hospitals, and to deliver the energy transition. Resilience will not be delivered mainly through finance labeled adaptation, which means that measuring the volume of adaptation finance better will never, on its own, tell us whether the world is becoming more resilient.

Information that forms the base of an expanded understanding of resilience progress is already calculated, though not for this purpose. Insurers and reinsurers compute expected losses for the assets they cover and are beginning to translate verified risk reduction into pricing and terms. Investment committees weigh avoided losses, deferred capital spending, and bankability when deciding whether a resilience measure pays. Appraisal files record which hazards were assessed and what conditions an asset was designed for. Loan documents record whether finance can be staged or upgraded. The task ahead is therefore less about inventing new indicators than about surfacing and connecting ones that already operate inside the institutions making these decisions.

Many of the assets being financed this decade, among them grids, hospitals, bridges, and roads, will still be operating in 2050 and will carry countries through the peak of temperature overshoot. The decisions that shape them are being taken now. The investment required is substantial, but the cost of failing to adapt is likely far greater. Recent assessments of infrastructure assets find that relatively modest investments in resilience, adding only a small share to upfront capital costs, can substantially reduce expected losses (IFC 2026). **The question this report leaves open is whether, a decade into overshoot, the world will be able to say anything more about adaptation than how much was spent on it.**

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