GLOBAL CENTER ON ADAPTATION

State and Trends in Adaptation Report 2023

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Introduction

Global climate change has heightened the need for urgent and ambitious adaptation actions, particularly in vulnerable regions like Africa. The continent is especially vulnerable to the fallouts of climate change for several reasons. A substantial proportion of its people depend on agriculture for their livelihood – in Sub-Saharan Africa, more than 60 percent. Some of Africa's distinctive geographical features (three-fifths of its land area consists of drylands, where rainfed agriculture and livestock husbandry support over 500 million people) and climatic characteristics, such as its dependence on monsoonal weather systems, also increase its vulnerability to changing weather patterns and more extreme weather events.

The continent is also experiencing a wave of rapid urbanization, leading to severe pressure on its urban infrastructure and risk management systems. Finally, the countries of Africa find themselves with a greatly reduced fiscal space for investment in adaptation and mitigation after the COVID-19 pandemic. All these factors, when added to the existing developmental challenges of poverty, food insecurity, and conflict, mean that Africa will likely experience higher impacts from climate change, as a percentage of GDP, than most other world regions. Projections estimate that climate change will lead to an equivalent of 2 percent to 4 percent annual loss in Africa's GDP by 2040.

The climate emergency has put Africa at a cross-roads. A low carbon, climate resilient development pathway offers an unparalleled investment opportunity in Africa with a triple dividend of avoided losses, positive economic gains, and enhanced social and environmental benefits.

The time to adapt is now. Given the potentially large macroeconomic implications of climate change, there will need to be a rapid scale-up of adaptation in the next 20 years in Africa. Doing so could have many positive knock-on effects in the decades to come. To date, much of the focus on adaptation has been downstream and piecemeal. The Global Center on Adaptation's State and Trends in Adaptation in Africa report calls for the immediate "mainstreaming" of adaptation into national plans and budgets, and a stepping up of adaptive efforts and knowledge sharing across the continent as a whole. Adaptation is rising on the policy agenda. But adaptation finance is growing too slowly to keep pace with the rising costs of climate change.

Tracking adaptation finance globally, and specifically in Africa, is crucial for identifying trends, uncovering gaps, and setting concrete priorities for effective finance flows. The global adaptation funding gap continues to widen concerningly, driven by accelerating climate impacts and relatively slower growth in adaptation finance flows. All countries face increasing pressure to invest in adaptation as they experience accelerating climate-related risks and impact. At the same time, the adaptation finance gap remains poorly understood, with finance flow estimates requiring robust data, effective modelling, and strong technical capacity. In the absence of these elements, needs assessments are likely to substantially underestimate the true cost of adaptation measures. The challenges in costing adaptation needs include uncertainty regarding future risk, disagreement on objectives, and variation in geographic and sectoral coverage of analysis.

Though the precise volume of adaptation finance needs remains challenging to calculate, it is clear that current adaptation finance flows are several orders of magnitude below the lower boundary of adaptation cost estimates advanced. Immense collective ambition is required to bridge the gap. The Global Center on Adaptation (GCA) along with Climate Policy Initiative (CPI) therefore conducted in 2023 a comprehensive analysis of the global status and trends of adaptation finance, with a deeper analysis of Africa at a regional level, given its heightened adaptation needs and opportunities. It resulted in three reports and serve as the GCA's flagship State and Trends in Adaptation 2023 (STA23) Report. The STA23 delivers the most up-to-date analysis of the adaptation funding gap and tracking of adaptation finance flows globally and in Africa while underscoring the importance of a supportive environment (including policies, institutions, and programs) for absorbing finance and implementing the most critical adaptation actions at scale for each country. An initial policy brief - Accelerating Adaptation Finance—Africa and Global Perspectives - prepared as an input to the Africa Climate Summit (Nairobi, September 2023), highlights the need to dramatically increase the amount and efficacy of adaptation financing to Africa. This brief presents analysis on the adaptation funding gap using 2019-20 adaptation finance flows tracking data. It spotlights the persistent challenges related to adaptation finance flows in Africa, and highlights priority actions for the global finance community to undertake to address them.

A full report with further analysis was published ahead of COP28: the State and Trends in Climate Adaptation Finance. This report provides the latest analysis on the adaptation funding gap, including: additional sectoral gap analysis; updated 2021-22 adaptation finance flows tracking globally and in Africa; a more comprehensive mapping of adaptation finance pledges and commitments; in-depth analysis of the type and efficacy of financial instruments deployed in practice for adaptation; review of the challenges and barriers to tracking adaptation finance; and presents—for the first time—analysis of the intersection between adaptation finance and humanitarian assistance, including emergency response funding and post-disaster reconstruction funding. Ramping up climate finance flows for adaptation is critical to addressing the irreversible impacts of climate change, but this alone will not be enough to protect the

continent. Clear priorities and institutions with the capacity for comprehensive planning and large-scale adaptation actions are equally essential. Recognizing this need, GCA conducted a thorough review of all the national strategic adaptation documents prepared by governments in the African continent in it's Strategy and Planning to Redouble Adaptation in Africa report.

Planning is crucial when making strategic choices for policies and programs for climate adaptation, particularly in the face of constrained budgets. Climate change is a complex and multifaceted challenge that affects various sectors and all of society. Developing effective adaptation strategies requires careful consideration of these interconnections and potential trade-offs. Adaptation action likewise involves multiple levels of government and stakeholder engagement. Planning provides a structured approach to ensure that different policies are consistent and complementary, avoiding conflicts or duplication of efforts and ensuring coordination among actors.

The report provides a summary of the history of strategic adaptation documents globally and in Africa followed by a brief overview of related work and analysis of these strategic adaptation documents to date by other institutions. The report then presents an original analysis of the current state of strategic adaptation plans in Africa—providing statistics of continental coverage and a detailed analysis of the depth and quality of sectoral adaptation programs in these plans and identifies gaps in sector prioritization. An important analysis in this report is the level of integration between climate change adaptation and disaster risk reduction management strategies at the country level, to understand whether and how countries leverage the synergies between these two agendas for resource and planning optimization. Finally, the paper reviews two new instruments by the World Bank and the IMF designed to support the institutional and policy reforms of countries in their fight against climate change.

The report serves as input to the preparation of the Country Climate Adaptation Compacts, driven forward by the GCA and the African Development Bank (AfDB) , that build on each country's strategic adaptation documents and specify priority investment programs and projects ready for financing and scaling-up. All these activities are connected to the Africa Adaptation Acceleration Program, which is mobilizing US$25 billion for adaptation investments in the region.

While each report presents a set of analysis and recommendations, they are all complementary and shows the need to speed up and scale up adaptation actions. This overall report is presented as follows:

Part 1 presents Accelerating Adaptation Finance—Africa and Global Perspectives
Part 2 presents State and Trends in Climate Adaptation Finance
Part 3 presents Strategy and Planning to Redouble Adaptation in Africa

Part 1
Accelerating Adaptation Finance – Africa and Global Perspectives

Key messages

MESSAGE 1

Adaptation finance flows to Africa must grow 5–10-fold

Adaptation finance flows in Africa only reached USD11 billion annually in 2019-2020. The increase in 2021-2022 is likely to be modest, potentially in double-digit percentages, but it will not approach doubling before 2025 if current trends continue.

African Nationally Determined Contributions (NDCs) calculate that the continent needs USD 53 billion per year for adaptation or 2.5% of Africa's gross domestic product (GDP). However, this number is likely to be an underestimate by as much as 100%:[1] Africa may need more than USD 100 billion per year for adaptation.

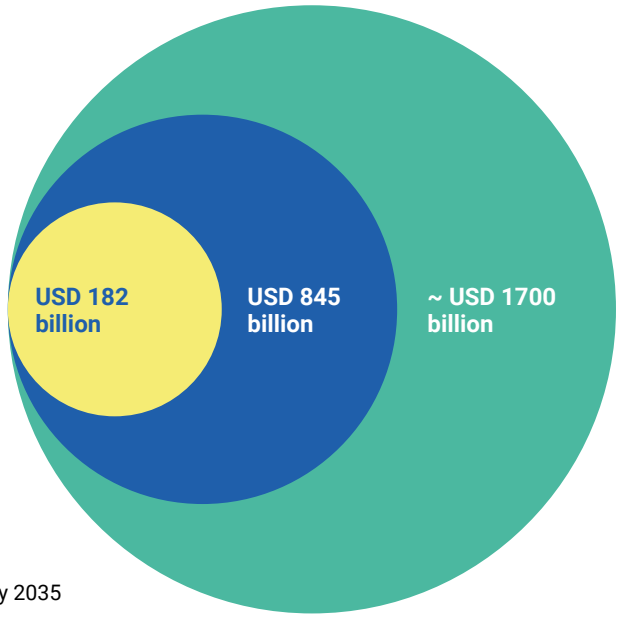
This means that, by 2035, Africa may need as much as USD 845 billion to 1.7 trillion for adaptation, given the expected underestimation.

At the current growth rate of adaptation finance, Africa will receive only about USD 180 billion by 2035, less than one-tenth of what the region needs.

Even if the world achieves the doubling of adaptation finance by 2025, or USD 40 billion, and it all comes to Africa, it doesn't even cover the USD 53 billion needed today.

Adaptation flows to Africa must increase 5–10-fold (from USD 11 billion to USD 53–106 billion per year).

Estimated Adaptation Finance Flows and Needs in Africa through 2035



Total adaptation finance flows by 2035

Total needs estimated by 2035

Estimated unaccounted adaptation finance needs for all African countries by 2035 *(assuming underestimated by 2x)*

MESSAGE 2

The foregone economic benefits of missing adaptation investments in Africa could reach as much as USD 6 trillion by 2035.

As GCA's State and Trends in Adaptation report shows, the economic benefits of adaptation actions in Africa far outweigh the financial costs.

The lack of adaptation financing for Africa means that as much as 6 trillion dollars of economic benefits will not be realized by 2035.[2]

MESSAGE 3

The majority of adaptation finance to Africa is channeled through loans, making the debt situation of countries more onerous

In Africa, more than half (54%) of the adaptation finance commitments in 2019-2020 were channeled through debt.

In energy and transport, the grant component of adaptation finance is less than 15%. Even for agriculture, the grant component is about half (53%). Africa is paying back the majority of adaptation finance flows.

MESSAGE 4

Everybody must increase adaptation finance

Adaptation finance flows into Africa are still only 39% of total climate flows. Every stakeholder can substantially increase adaptation finance and the grant component of such finance:

- Multilateral financial institutions can further increase the adaptation flows into Africa, following the lead of the African Development Bank (AfDB), World Bank, and International Monetary Fund (IMF).
- Bilateral development finance institutions can account better for adaptation finance and increase the USD 1.8 billion that they contribute per year.
- Philanthropies only contribute less than 3% of adaptation finance and can substantially increase their support.
- The private sector has the most potential to increase financing for adaptation. Today, the corporate private sector invests less than 0.3% of total adaptation finance in the region. In South and East Asia, the private sector invests nearly 40% of total climate finance flows,[3] generating jobs and supporting climate-smart economic growth.

MESSAGE 5

Adaptation finance is highly concentrated in Africa; countries must strengthen their strategic planning, adaptation priority programs, and institutions

In Africa, ten countries receive more than half of the continent's adaptation finance. The bottom ten countries receive less than 1%.

Africa's ten most climate-vulnerable countries only receive 18% of adaptation finance.

Only seven countries in Africa today have all the key strategic and planning elements for adaptation action in place: clear institutional mandates, priority sectors identified, adaptation costs estimated, and specific adaptation goals stated. These countries are ready to absorb financing and implement adaptation programs at scale.

Strengthening strategic planning, adaptation priority programs, and institutions is a critical task for most African countries. The Country Climate Adaptation Compact is a tool to support the translation of directions from the NDCs to implementable projects.

1 Introduction

As climate change impacts accelerate globally, adaptation efforts have become an urgent imperative. This is especially true in the most vulnerable regions, including Africa. A low carbon, climate resilient development pathway offers an unparalleled investment opportunity in Africa with a triple dividend of avoided losses, positive economic gains, and enhanced social and environmental benefits.

Tracking adaptation finance globally, and specifically in Africa, is critically important to identify trends, uncover gaps, and set concrete priorities for effective finance flows. In the context of the Africa Climate Summit, this policy brief highlights the need to dramatically increase the amount and efficacy of adaptation financing to Africa. This brief also spotlights the persistent challenges related to adaptation finance flows in Africa, and highlights priority actions for the global finance community to undertake to address them.

A full report with further analysis will be published ahead of COP28. This report will provide the latest analysis on the adaptation funding gap, including: additional sectoral gap analysis; updated 2021-22 adaptation finance flows tracking globally and in Africa; a more comprehensive mapping of adaptation finance pledges and commitments; greater depth of analysis regarding deployment of financial instruments in practice for adaptation; and a mapping of the intersection between adaptation finance and humanitarian assistance for climate emergencies and post-reconstruction funding.

Five Key Messages Related to Adaptation Finance Flows Globally and in Africa

1. **The global adaptation funding gap is widening,** driven by higher than estimated costs and impacts of climate change, and the relatively slow growth of adaptation finance compared to the needs. In addition, out of 160 updated Nationally Determined Contributions (NDCs), only 62 mention adaptation finance needs, suggesting that the actual adaptation finance needs might be higher than the estimated annual requirement of nearly USD 1.1 trillion.
2. **Adaptation finance in Africa is nowhere close to the need**. In 2019-2020, Africa received USD 11.4 billion on average in adaptation finance annually. In 2021-2022, this finance is likely to see a double-digit increase but will remain far below the annual financing need of USD 52.7 billion or 2.5% of Africa's GDP.
3. **Public financial institutions must structure ambitious adaptation targets to close the funding gap**. The absence of clear and robust commitments for climate adaptation is concerning. While nine multilateral development banks (MDBs) already exceeded their joint commitment to double adaptation finance to USD 18 billion by 2025, the overall lack of ambitious pledges from public institutions remains evident.
4. **High utilization of debt, particularly foreign-denominated or hard currency debt, for adaptation finance presents a significant risk** given existing severe debt burdens in many Africa countries, especially those facing the most severe climate risks. Globally, debt constituted 70% of annual adaptation flows between 2019-2020; Africa follows a similar trend with 53% of its adaptation finance commitments being debt-based. A wide array of financial instruments must be mobilized to bridge the adaptation financing gap in Africa.
5. **Adaptation finance tracking is plagued by data gaps, methodological inconsistencies, and reporting limitations** at both domestic and international levels, which makes it difficult to measure collective progress. Some headway is made by a few public financial institutions but much needs to be done to standardize, harmonize, and disclose granular, consistent, and comparable information.

2 The Adaptation Funding Gap

Key Messages

- All countries face significant pressure to invest in adaptation as they experience accelerating climate-related risks and impacts. Developing countries especially will be hard-pressed to meet the anticipated investments of at least USD 127 billion per year by 2030, and subsequently USD 295 billion per year by 2050 needed to bridge the adaptation funding gap.
- Per analysis to date, Africa urgently requires more than USD 50 billion annually, approximately 2.5% of its GDP, for adaptation finance to meet its NDC commitments by 2035. However, this amount is likely to underestimate the actual needs, as only 28 African countries provided cost estimates for adaptation in their NDCs. The adaptation finance required by Africa to meet its NDCs is the highest globally, closely followed by South Asia.
- The global adaptation funding gap is widening, mainly driven by higher costs of adaptation finance given accelerating climate impacts compared to earlier estimates and relatively slower growth in adaptation finance flows. Only 62 out of 160 updated NDCs mention adaptation finance needs, hinting a higher than estimated adaptation cost of the nearly USD 1.1 trillion annual requirement.

The UNEP Adaptation Gap Report 2022[4] estimates that adaptation costs for developing countries could be in the range of USD 160–340 billion annually by 2030, rising to USD 315–565 billion by 2050.[5] Recent analysis by the IPCC suggests similar ranges for adaptation costs: USD 127 billion and USD 295 billion per year for developing countries by 2030 and 2050, respectively. These costs are 5–7 times higher than the USD 49 billion in current tracked adaptation finance flows globally in 2019-2020.[6]

The estimated volume of finance required in NDCs for adaptation between 2021-2030 is nearly USD 1.1 trillion per year globally, though the quality of adaptation component analysis in NDCs is highly variable. As of October 2022, 144 out of 160 countries that submitted new or updated NDCs have mentioned adaptation components. However, only 62 countries have outlined their adaptation finance needs, suggesting that global adaptation finance needs are underestimated.[7]

CPI's analysis estimates Africa's adaptation finance needs to be roughly USD 579 billion by 2030, extrapolated to USD 845 billion by 2035, the highest of any global region. Adaptation needs make up about 24% of the total climate finance needs identified in African NDCs which translates into USD 52.7 billion per year between 2020 and 2035, or 2.5% of Africa's GDP, though these needs are likely undercounted given limitations in methodology and lack of clarity from certain countries on their adaptation finance needs.[8]

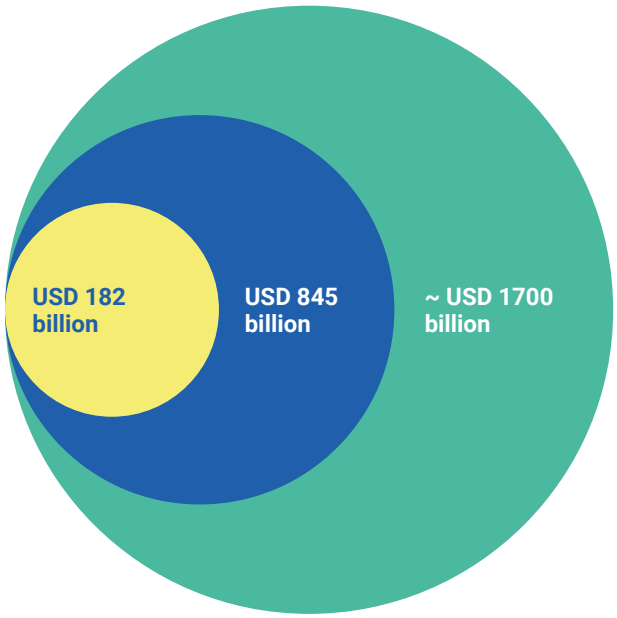
Unpacking sectoral and sub-regional adaptation finance needs remains challenging: more than 70% of the total needs reported in African NDCs (USD 408 billion) are not allocated to any adaptation sector. Countries that provided sector- specific data mainly reported adaptation needs for agriculture (25%), water (17%), infrastructure and building (12%), disaster prevention and preparedness (10%), and health (8%).[9] Data availability on adaptation finance

needs varies significantly across African regions. Central Africa and Western Africa reported the most complete information on adaptation needs. Southern Africa and Eastern Africa have high adaptation needs but current data does not specify where this finance is needed.[10]

Estimating adaptation finance needs necessitates robust data, modeling, and technical capacities. In the absence of these resources, needs assessments are likely to underestimate the true cost of adaptation measures substantially. We predict that African countries' estimated adaptation finance needs—calculated based on NDC submissions—are likely to be less than half the required amount, given that only 28 African countries provided cost estimates for adaptation in their NDCs.[11] When compared with financial estimates from other national frameworks, Ethiopia's NDC cost estimate variance was particularly pronounced: using the NDC's proposed figure of USD 40.5 billion as the baseline and comparing it against the National Adaptation Plan estimation of USD 90 billion, we found that the NDC underestimated the needs by 122%.[12,13]

Africa's adaptation finance flows are far short of its needs. In 2019-2020, USD 11.4 billion was committed to adaptation activities in Africa. CPI's early estimates anticipate a double-digit increase in these financing flows in 2021-2022, with more detailed analysis upcoming in a full report to be published on this topic ahead of COP28.[14] Even if a year-on-year increase were to continue through 2035, adaptation finance would total USD 182 billion in 2020-2035, far short of the USD 845 billion in estimated needs per cost of implementation stated in countries' NDC.[15] The share of adaptation finance flows in Africa compared to the estimated needs is demonstrated in Figure 1.

Figure 1. Estimated Adaptation Finance Flows and Needs in Africa through 2035



Total adaptation finance flows by 2035

Total needs estimated by 2035

Estimated unaccounted adaptation finance needs for all African countries by 2035 *(assuming underestimated by 2x)*

3 Current Trends in Adaptation Finance Flows

Key Messages

- Tracking adaptation finance is a means of monitoring progress towards meeting international agreements like the Paris Agreement. Trust within climate finance negotiations hinges on delivery against commitments, with adaptation finance as a particular focus area given accelerating climate impacts, particularly by countries with relatively low responsibility for global greenhouse gas emissions to date.
- Between 2011 and 2020, global adaptation finance grew faster than mitigation but remains severely underfunded compared to needs.
- The private sector contribution to climate finance in Africa is low (14% of total climate finance) compared to other regions (an average of 30-40% of total climate finance), and is virtually non-existent for adaptation (3% of adaptation finance).
- The bulk of climate finance in Africa goes to a few countries: 10 countries absorbed more than half of the total, for the period 2019-2020.

Adaptation finance tracking helps measure global progress on climate goals. It helps to identify trends and gaps in financing by delineating how much public and private finance sources are investing, and the sectors that are receiving these investments. Tracking enables the identification of barriers and challenges impeding the mobilization of adaptation finance, and informs strategies to address them. It can also help guide where to direct financial resources and which existing policies are effective or need reconsideration.

Global adaptation finance significantly lags behind mitigation flows. From 2019-2020, there was an average annual commitment of USD 653 billion in climate finance globally. Of this, only 7% (or USD 49 billion) was earmarked specifically for adaptation finance.[16] Though the cumulative growth rate of global adaptation financing significantly outpaced mitigation,[17] early estimates for the period 2021-2022 suggest that these finance flows will see modest increases, rather than the rapid increase that is urgently required. CPI's early estimates anticipate that global adaptation finance in 2021 decreased slightly compared to 2020 levels, but bounced back in 2022 strongly, presenting at least a single-digit increase on annual average basis in 2021-2022. Updated data and analysis on 2021-2022 adaptation finance flows will inform the full report to be published on this topic ahead of COP28.[18]

Cross-sectoral or 'nexus' solutions are critical for adaptation financing. During the period 2019-2020, cross-sectoral climate initiatives received 42% (or USD 21 billion) of the total funding. These solutions link climate goals with the Sustainable Development Goals (SDGs) and can provide developmental co-benefits. They help to break down silos between climate financing and

development aid, thereby facilitating cross-sectoral collaboration and capacity building. While these projects present challenges, such as making it more difficult for reporting institutions to categorize them under single objectives and assess their impact effectively, the need for such cross-sectoral approaches remains crucial.

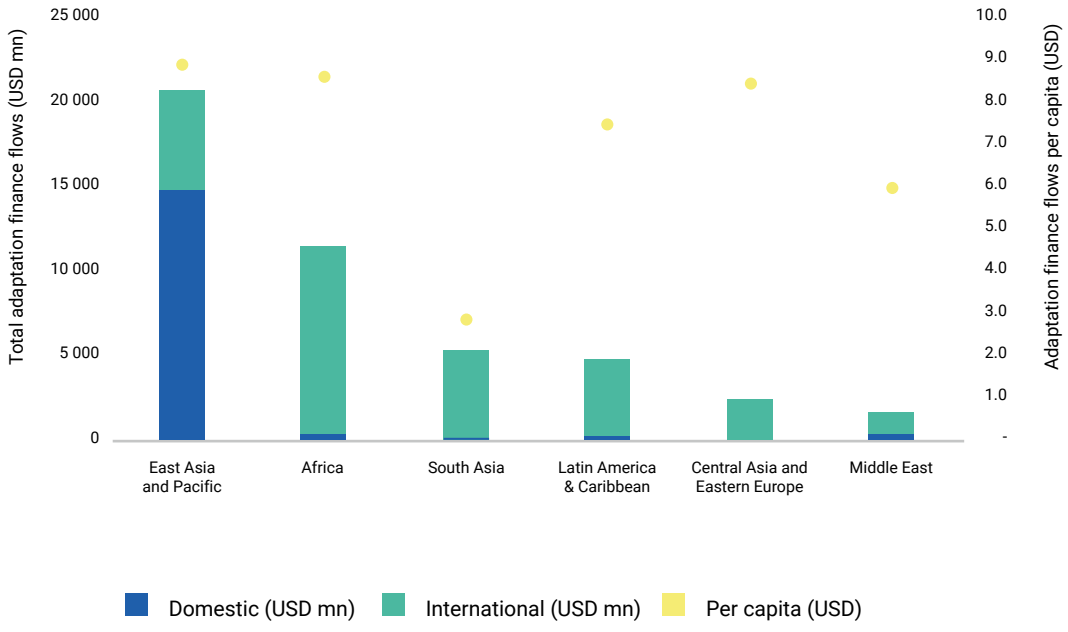
Development finance institutions (DFIs) are the largest source of adaptation finance globally. Multilateral DFIs provide 35% (or USD 17 billion) of total global public adaptation finance. National DFIs follow closely with 30% (or USD 15.5 billion), followed by bilateral DFIs and governments at 14% (or USD 7 billion) and 12% (or USD 6 billion), respectively.[19,20]

Africa received USD 11.4 billion on average in adaptation finance in 2019-2020. In 2019-2020, Africa was the second-largest recipient of global adaptation finance, with East Asia and the Pacific leading the list. Sub-Saharan Africa is the largest recipient of international adaptation finance, receiving roughly 25% of international adaptation flows in 2019-2020 (see Figure 2). However, the adaptation finance flows are nowhere close to the needs of the region in absolute terms as mentioned in Section 2.

The rate of growth in adaptation finance flows in Africa is insufficient to fulfill the need. CPI's preliminary analysis estimates a double-digit percentage increase in Africa's adaptation financing flows in 2021-2022 compared to the global single-digit increase. This positive trend in Africa can likely be attributed to both multilateral and bilateral DFIs displaying a strengthening focus on adaptation financing in low- and middle-income countries. The pace of growth is nevertheless insufficient to fulfill the adaptation financing demands of the region and align with the NDC requirements by 2035.

Climate finance to Africa is relatively more evenly split than the global trend between mitigation and adaptation finance, though the total volume of both remains insufficient. Africa received USD 29.5 billion on average in climate finance commitments in 2019-2020. Of that total finance, 39% (or USD 11.4 billion), were targeted specifically for adaptation activities, in contrast to the global average of 7%. South Asia, and Latin America and the Caribbean, received 16% and 13% of their climate finance for adaptation, respectively.[21]

Figure 2. Global Adaptation Finance Flows, Total and Per Capita, Breakdown by Region and Sources (2019-2020, Annual Average)



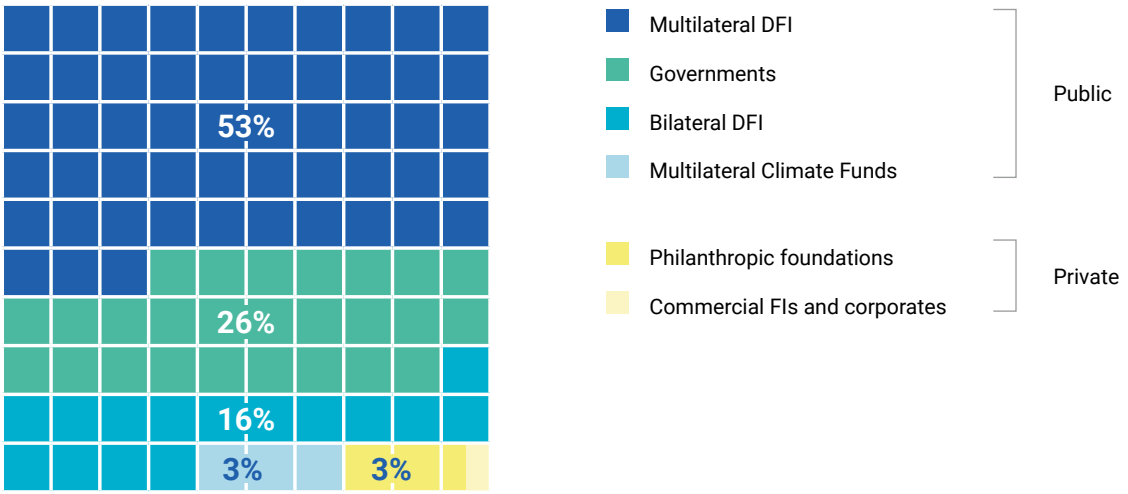
Adaptation finance in Africa delivered cross-sectoral benefits. In 2019-2020, 41% (or USD 4.7 billion) of tracked adaptation finance commitments went toward cross-sectoral activities. This included support for national-level policy and capacity building, disaster management activities, the COVID-19 response, urban issues, biodiversity, and social security. The agriculture, forestry, and other land use (AFOLU) sector saw the second-highest annual average commitments, accounting for 25% (or USD 2.8 billion), followed by the water and wastewater sector with 15% (or USD 1.7 billion).

The 2019-2020 period was the first where more finance commitments tracked from multilateral DFIs were directed to adaptation than to mitigation in Africa. Multilateral DFIs were the most significant source of adaptation finance flows in Africa (53%, USD 6 billion), followed by governments (23%, USD 2.6 billion) and bilateral DFIs (16%, USD 1.8 billion) as shown in Figure 3.

The private sector must be part of efforts to bridge the adaptation funding gap in Africa. The private sector contributes 14% of total climate finance to Africa, less than the contribution of the private sector in other regions like South Asia (37%) and East Asia and the Pacific (39%).[22] The need for private participation is particularly evident for adaptation efforts in Africa, where currently the private sector contributes less than 3% of adaptation finance.

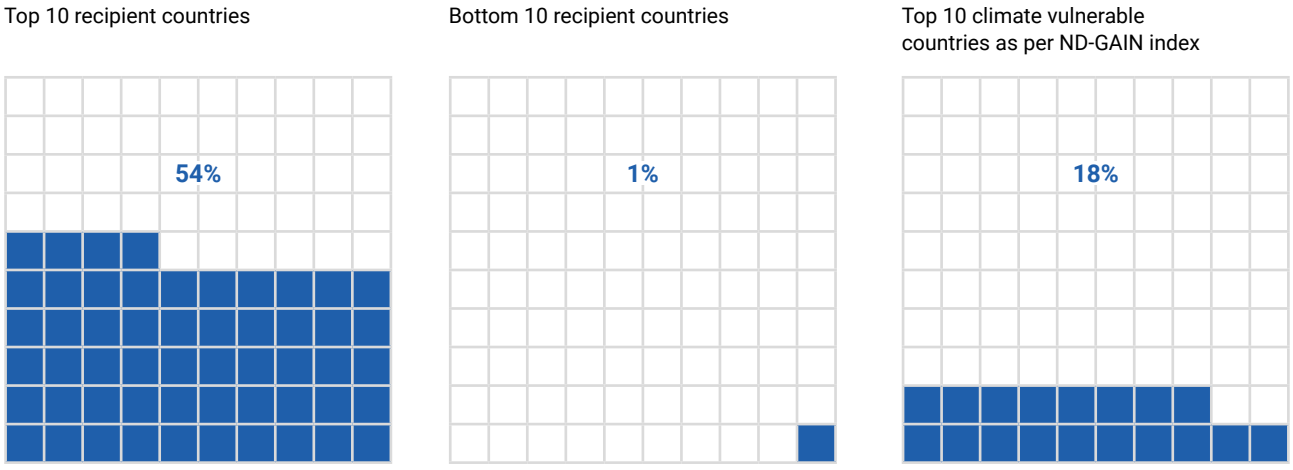
Most of the adaptation finance flowing to adaptation in Africa comes from large investors. Enhanced multi-stakeholder collaboration is essential to improve tracking and transparency in private adaptation finance. In addition, comprehensive data on private contributions also needs to be improved.[23]

Figure 3. Adaptation Finance Flows in Africa, by Sources and Actors



Africa's climate finance flows are concentrated in too few countries. Within Africa, data indicates that ten nations[24] received over half of the continent's climate finance.[25] Various factors, including institutional capacity, borrowing capacity, governance, and perceived and real investment risks, influence this allocation.[26] The top 10 most at-risk African countries per the ND-GAIN vulnerability index secured only 15% of total adaptation finance in 2019-2020. Moreover, the 20 African countries identified as being in fragile and conflict-affected situations (FCS) received a combined 35% of the continent's adaptation finance (see Figure 4).[27,28]

Figure 4. Adaptation Finance Flows in Africa (2019-2020), by Recipient Countries



4 State of Global Commitments and Pledges

Key messages

- Globally, and in Africa, public financial institutions have a key role to play in closing adaptation funding gaps through their own capital and mobilization of the private sector and other funders, yet the lack of clearly defined or comparable commitments relating to climate adaptation is concerning.
- By developing adaptation finance commitments that are public, credible, and measurable, development agencies alongside public and private financial institutions can signal their intent to respond to growing calls for action in this space.
- Commitments and pledges should be especially focused on the most vulnerable countries that need far more adaptation funding support than they are currently receiving.

Global climate finance goals are critical for boosting adaptation funding to Africa. In 2009, at the 16th Conference of Parties (COP16), a non-binding goal was set to mobilize USD 100 billion per year in climate finance from developed countries to developing countries by 2025. In 2015, the Paris Agreement established, for the first time, a global goal on adaptation. Discussions continue on ways to measure countries' ongoing adaptation efforts and assess future needs. In 2021, at COP26, the UNFCCC and G7 committed to doubling adaptation finance flows from 2019 levels by 2025 to roughly USD 40 billion. All of these processes are instrumental to channeling more adaptation finance to Africa.

Lack of ambitious public commitments for climate adaptation is concerning, especially as studies suggest that developed countries will only be able to provide half of the committed adaptation finance by 2025.[29] Public financial institutions have a key role to play in closing adaptation funding gaps, yet only a handful have committed to significantly increasing adaptation finance, with Africa often receiving limited attention.

A balance between commitments for mitigation and adaptation remains elusive both in the public and private sector. There is growing momentum globally among financial institutions to align investments to the Paris goals of low carbon and climate resilient development. As of November 2022, more than 140 countries, including the biggest polluters—China, the United States, India, and the European Union—have set net-zero targets, covering about 90% of global emissions.[30] Of the 70 largest public financial institutions (which represent 95% of the total assets held by public FIs), 20 have committed to net-zero or Paris alignment targets. However, a similar scale of commitments for adaptation and resilient investments is absent.[31]

Public financial institutions must set up ambitious adaptation targets to close the funding gap. Nine MDBs made a joint 2019 commitment to double total levels of adaptation finance by 2025 to USD 18 billion annually.[32]

In 2021, those MDBs announced that they had already surpassed the announced collective commitment on adaptation finance, totaling USD 19.2 billion for the year.[33] No new joint commitments have yet been announced to signal an intent to raise ambition on adaptation targets. Only four out of the nine signatory MDBs have specific adaptation finance targets, as tracked in Table 1.

Multilateral climate funds, including the Green Climate Fund (GCF) and Adaptation Fund, have also made public adaptation commitments, but stakeholder access remains a challenge. The GCF is required by mandate to invest 50% of resources in adaptation and at least half of that funding must be invested in small island developing states, least-developed countries, and African countries.[46] The Adaptation Fund specifically targets climate adaptation and resilience projects and programs, and its board approved a 5-year strategy in 2023 which includes a mobilization target of USD 300 million for 2023.[47] However, African countries face several challenges to access these funds due to socio-political and economic instabilities; regulatory and governance issues; micro-economic conditions, such as lack of a pipeline of bankable projects; counterparty risks; lack of technical capacity, transparency, and accountability mechanisms; and perceived risks due to information asymmetries.[48]

Given their mandate, financial stability, and relationships with stakeholders, Sub-Regional Development Banks (SRDBs) have a substantial opportunity to play a leading role in advancing climate adaptation across Africa, however, none of the four African SRDBs have made public adaptation-specific funding pledges.[49,50] In 2021, the Economic Community of West African States (ECOWAS) led the development of a regional climate strategy to support member states in implementing their respective NDCs and National Adaptation Plans (NAPs).[51] Notably, the financial institution established

Table 1. Tracked Adaptation Commitments of Nine Signatory MDBs[34]

Specific Adaptation Target	
Africa Development Bank (AfDB)	AfDB committed to doubling climate finance to USD 25 billion for the period of 2020-25, giving priority to adaptation finance and allocated half of its climate finance to adaptation in 2019.[35,36]
Asian Development Bank (ADB)	ADB announced a commitment to deliver USD 100 billion in climate finance between 2019 and 2030, including USD 34 billion to adaptation over that period.[37]
European Investment Bank (EIB)	In 2021, EIB pledged to increase its share of climate finance to adaptation projects to 15% by 2025, or approximately USD 5.2 billion annually.[38]
World Bank	The World Bank pledges to allocate 50% of its climate finance to adaptation as part of its 2021-2025 action plan.[39]
Joint Climate (Mitigation and Adaptation) Target, but no Stand-Alone Quantitative Adaptation Finance Target	
Inter-American Development Bank (IDB)	In 2020, IDB set an annual climate finance floor of 30% of total finance and set a goal that 65% of annual project approvals include investments in adaptation and/or mitigation to climate change.[40]
Islamic Development Bank (IsDB)	IsDB has a climate finance target of 35% of total lending by volume by 2025.[41]
New Development Bank (NDB)	NDB committed to a target of 40% of total financing to climate change mitigation and adaptation over 2022-2026.[42]
Asia Infrastructure Investment Bank (AIIB)	AIIB has a climate finance target of 50% of total financing by 2025 (which it exceeded in 2022 at 56% on the year).[43]
European Bank for Reconstruction and Development (EBRD)	EBRD has a green finance target of 50% of all EBRD's Annual Bank Investment by 2025. This green finance is composed of climate finance for both mitigation and adaptation, as well as finance addressing other environmental objectives.[44,45]

by ECOWAS, ECOWAS Bank for Investment and Development (EBID), deferred to member states' commitments, rather than declaring its own. Similarly, the West African Bank for Development (WABD) lacks adaptation commitments, although it was listed as a financier of specific actions under the regional climate strategy.[52] While it is evident that some SRDBs are incorporating climate change into their strategic planning efforts, there are significant strides to be made in formulating their own commitments as potential regional climate leaders.

A handful of donors are leaders in financing adaptation in Africa, but dedicated and comprehensive commitments remain lacking. Among the leaders, Germany and France were the largest contributors of bilateral funding to adaptation in Africa in 2019-2020 and at COP27, the UK government made a commitment to triple its funding on adaptation to GBP 1.5 billion by 2025, with a specific focus on Africa.[53] The Nordic Development Fund has also been a leader in adaptation finance and stated in its 2025 Strategy that it will invest at least 50% of its resources in adaptation.[54] By defining and disclosing adaptation commitments, more public financial institutions can signal intent to respond to growing calls for action in this space. A more complete mapping of organizational pledges and commitments on adaptation finance is forthcoming as part of the full report to be published on this topic ahead of COP28.

5 Instruments of Adaptation Finance

Key Messages

- Debt was globally the most utilized instrument to deliver adaptation finance, with project-level market rate debt and low-cost project debt representing over 70% of annual adaptation flows.
- High utilization of debt for adaptation finance presents significant risk given existing severe debt burdens in many countries (especially those facing the most severe climate risk).
- More than half (53%) of the adaptation finance commitments to Africa in 2019-2020 were loans. A high share of financing from multilateral DFIs was committed in the form of commercial-rate loans (41%) and concessional loans (32%), whereas bilateral DFIs primarily committed concessional loans (82%).

Globally, debt financing is the most utilized instrument to deliver adaptation finance. Collectively, project-level market rate debt and low-cost project debt accounted for over 70% of annual adaptation flows between 2019-2020. Specifically, project-level market rate debt constituted 48% (or USD 23.3 billion) of the financing, followed by low-cost project debt at 23% (or USD 11.2 billion), and grants at 18% (or USD 9.3 billion), while the remainder came from other or unknown sources.[55]

In Africa, more than half (53%) of the adaptation finance commitments in 2019–2020 were channeled through debt, a trend that is anticipated to continue in 2021 and 2022.[56] In light of existing severe debt burdens in many countries (especially those facing the most severe climate risk), high utilization of debt for adaptation finance presents significant risk.

A greater share of grant financing was used for agriculture, forestry, and water sectors than in energy and transport sectors. The majority of transport adaptation was financed via concessional loans, while the energy sector received the highest share of non-concessional loans (see Figure 5).

Climate adaptation finance mobilization requires an array of financial instruments, risk mechanisms, and broader finance-related solutions. Examples of each of the financial instrument types, along with the barriers they address for scaling up adaptation investments and factors that are critical to successful implementation, are outlined in Table 2.

Figure 5. Adaptation Finance in Africa, by Instruments and Sectors (2019-2020)[57]

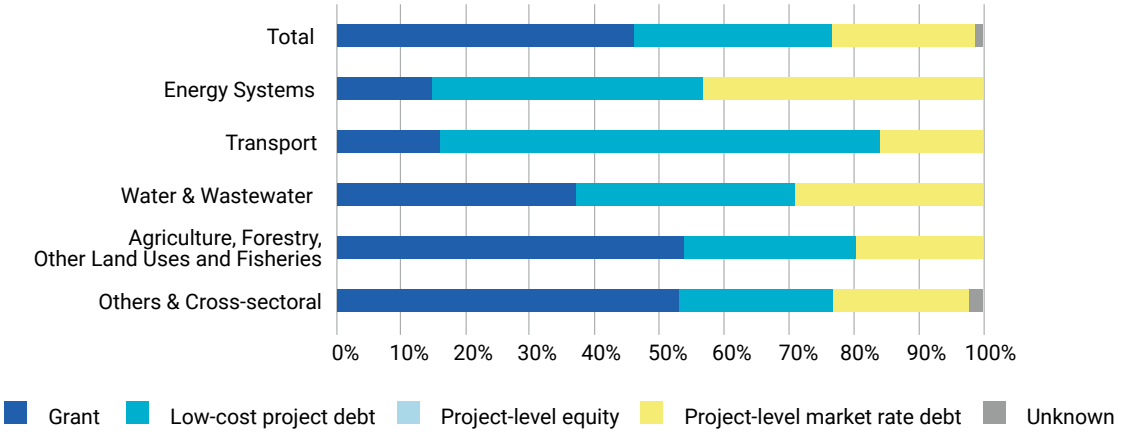


Table 2. Examples of Adaptation Financial Instruments in Africa

Instrument	Description	Typical Use Case	Example
Grants	Non-repayable or no interest rate reimbursable funding. Can include development grants, TA funding, and PPFs.	Used to support projects that serve a critical development objective, but where the commercial potential is low, or funding is needed to make efforts "investment ready."	The World Bank/IDA's Lesotho Transport Infrastructure and Connectivity Project.[58]
Liquidity Instruments	Grant or debt facilities that are designed to provide immediate access to capital. Most frequently shock-responsive cash transfers, liquidity support, and domestic budget reallocations.	Used to respond to insufficient financial and technical capacity in the face of emergency situations.	The Ethiopian government launched the Productive Safety Net Program (PSNP).[59]
Project Finance	Direct debt or equity investments into a single project or discrete set of projects across commercial or concessional finance including loan guarantees, first-loss debt, off-taker guarantees, direct infrastructure investments, and PPP financing.	Useful for direct development and investment in an infrastructure project or for financing based on a government contract.	Sustainable Development of Abu Rawash Wastewater Treatment Plant.[60]
Financing Facilities	Debt or equity funding for a pool of projects, companies, or individuals at various levels of concessionality including subordinated debt and equity, private equity funds, and other debt facilities.	Wide use case, can support investment which requires aggregation and coordination.	The Food Securities Fund.[61]
Results-Based Finance	Debt or grant capital for a project or portfolio of projects that is contingent on the achievement of certain outcomes. Can include impact notes, climate bonds, and conservation trusts.	Useful as a blended finance approach, involving favorable repayment terms or bonuses for achieving policy outcomes. Can support insufficiently bankable projects.	UBS Optimus Foundation Social Success Note.[62]
Debt-for-Climate Swaps	A type of debt swap in which the debtor nation, instead of continuing to make external debt payments in a foreign currency, makes payments in local currency to finance climate projects domestically on agreed terms.	Useful in national country content with significant debt burden and high climate vulnerability, and where institutional capacity is sufficient to execute.	DFC Swap – Seychelles.[63]
Insurance	The most common form of risk transfer. Can include catastrophe bonds, parametric insurance, and index insurance.	Used in cases with high climate risk and most effective when climate data is robust, regulatory conditions are workable, and there is trust in insurance payouts.	The African Risk Capacity.[64]

6 Improving Tracking of Adaptation Finance

Key Messages

- Adaptation finance tracking is plagued by data gaps, methodological inconsistencies, and reporting issues at both domestic and international levels.
- Some headway has been made by a few public financial institutions but much needs to be done to standardize, harmonize, and disclose granular, consistent, and comparable information on adaptation finance.
- The challenges are amplified for private financial institutions where there is lack of regulatory pressure, market demand, and incentives to report data on private adaptation financing.

Improved quality adaptation finance tracking is key to measuring progress. Tracking helps in identifying gaps and barriers in financing adaptation and resilience solutions globally, and in Africa, and effectively scaling up financing flows. It plays a crucial role in measuring progress and ensuring the scale is at the required pace and meets needs. Despite the critical importance of adaptation finance tracking, significant data, reporting, and methodological challenges limit a more insightful assessment of adaptation finance flows in Africa and globally by CPI and others.

DFIs play a key role in scaling up adaptation finance in Africa but present several challenges to tracking collective efforts. CPI has tracked adaptation finance flows from international public financial institutions, especially DFIs, for more than a decade and this experience has generated important lessons on tracking and reporting adaptation finance. Learning from these efforts will help improve measuring collective progress and promoting best practices. A detailed summary of some of the methodological and institutional challenges is presented in Table 3. The full report to be published on this topic ahead of COP28 will advance a set of proposed best practices and next steps to resolve these key issues across data gaps, methodological inconsistencies, and reporting protocols.

Addressing these challenges will require multi-stakeholder collaboration to track, report, and monitor adaptation finance data that is comprehensive, consistent, and comparable.

Table 3. Challenges in Tracking Adaptation Finance Flows

Methodological Challenges	
Definitional	There is currently no common definition of adaptation finance that can be easily adopted by all stakeholders. There is a wide spectrum of potential solutions that could be used across sectors to ensure that communities, systems, and infrastructure are adapted to climate change.
Variation in Disclosure Requirements and Incentives	Particularly in the private sector, disclosure of resilient investments is limited (if not non-existent). A lack of standards and reporting requirements limit private sector actors' incentives to report adaptation finance and many institutions simply do not have the tools to identify finance as adaptation. At present, private sector finance to adaptation is very difficult to compare to public finance in light of the inconsistent definitions and methodologies. Gaps in tracking private sector adaptation finance create significant uncertainty regarding current progress towards financing adaptation.
Context Dependency	Climate adaptation is process-based and context specific. Whether an investment has adaptation and resilience outcomes depends on specific regional or local vulnerabilities. It can thus be difficult to define and tag the expected outcomes of a financial flow.
Mix of Incremental and Total Tracking	The MDBs and International Development Finance Club (IDFC) recommend the use of incremental or proportional cost of adaptation to report adaptation finance: capturing a share of finance dedicated to adaptation activities.[65] However, in practice, only the MDBs are following the incremental/proportional approach while other DFIs, climate funds, and governments largely report the total cost of the projects and all institutions report the full amount for mitigation finance which yields comparability challenges between adaptation and mitigation finance.[66]
Lack of Impact Metrics	As the amount of adaptation finance grows, it is important that tracking of adaptation finance goes beyond measuring financing volume to capturing impact, results, benefits, and outcomes. Climate adaptation does not have a single impact metric, equivalent to the tons of CO^2 emissions that is commonly used for mitigation. This often leads to multiple impact metrics being used by different actors to evaluate the project performance, making it harder to identify and aggregate financing flows and associated impact.
Limited Understanding of Adaptation End Goals	There is a lack of collective understanding of what needs to be done to scale up adaptation financing and what are the intended objectives of combined adaptation efforts. The Sharm-El-Sheikh Adaptation Agenda made efforts to outline this post-COP27. However, there is still a lack of clarity regarding how the concessional and grant resources for adaptation and resilience can be scaled and how the private financing can be effectively targeted.
Lack of Domestic Budget Tagging	The lack of comprehensive climate tracking of domestic budget expenditures leads to significant data gaps in tracking domestic public climate finance. Many countries in Africa have ongoing efforts to improve budget planning in order to mainstream climate finance in their existing development plans and policies, and to better count investment flows that are already happening.
Institutional Challenges	
Inconsistent Use of Methodologies	Adaptation finance tracking methodologies used by MDBs and large DFIs which are members of the IDFC are often quite robust and resource intensive. Smaller DFIs, as well as other public and private financial institutions and governments, might not have the required technical, institutional, and financial capacity to implement these methodologies. This leads to varied levels of practical implementation, incomparability in reporting, and difficulty in aggregating data from different institutions.
Confidentiality Issues	Several DFIs and private financial institutions have strict client confidentiality, commercial sensitivity, and data protection concerns. This may make them reluctant to publicly disclose granular information about adaptation projects such as intended objectives, achieved outcomes, and associated adaptation finance flows. This is especially challenging for measuring progress if the institutions have made ambitious commitments for scaling up adaptation finance.
Fragmented Data and Processes	As many adaptation projects are cross-sectoral, there are several operational teams—besides those dedicated to strategy, policy, finance, monitoring and evaluations, research and communications—that are involved in data collection and the reporting process. Despite progress in engagement and collaboration, different teams often use disparate data collection methods and tools, leading to fragmentation of data. This can make it difficult to have a unified view of the information across different platforms and processes.
Limited Agility and Delay in Responses	Integrating data from different sources and teams can be a complex task. This may cause organizations to either respond slowly or provide limited data in the given timeframe without high granularity and consistency. Complex data collection processes also hinder the organization's ability to implement new methodologies rapidly and track adaptation finance flows efficiently.

This brief recommends three key actions to improve tracking, and ultimately mobilization, of adaptation finance:

Agree upon a 'north star' goal for adaptation: Stakeholders must collaboratively devise an accessible framework encompassing adaptation and resilience actions, technologies, policies, and financing. This framework will help in identifying a north star goal for adaptation finance that is the equivalent of the net-zero goal for mitigation finance. Such a goal will clarify any ambiguity in intended objectives for adaptation finance and engage a broader audience from the public and private sectors, spurring investment, innovation, and targeted interventions where they are most essential.[67]

Build consensus on definition, metrics, and frameworks: Stakeholders should focus on developing an agreed-upon menu of metrics and a related analytical approach to ensure consistent measurement of adaptation and resilient investments across public and private financial actors. International financial institutions, and especially DFIs, should continue to advance efforts to harmonize reporting to chart progress on adaptation and resilience.

Provide transparent leadership: DFIs and other advanced actors in adaptation finance can and should offer ambitious and transparent leadership on adaptation finance. This involves setting public, measurable, and ambitious climate adaptation finance goals and openly sharing information about the criteria used to identify and quantify adaptation finance and the data, models, and scenarios that are relevant in the context of adaptation action.

Part 2
State and Trends in Climate Adaptation Finance

Key Messages

- Global climate finance[1] doubled in the last two years to USD 1.3 trillion annually in 2021–2022 compared to the USD 653 billion tracked on average in 2019–2020[2].
- Unfortunately, global adaptation finance is diminishing in importance, from 7% in 2019–2020 to 5% of total climate finance in 2021–2022[3].
- In absolute terms, annual adaptation finance flows in 2021–2022 reached USD 63 billion[4], a modest 28% year-on-year increase compared to 2019–2021. Climate mitigation finance is growing much faster.
- Developing countries currently need about USD 212 billion per year in adaptation finance up to 2030. Only USD 56 billion were tracked for adaptation in 2021–2022. Adaptation finance flows must almost quadruple.
- Between now and 2035, developing countries will need USD 3.3 trillion. However, at current levels of financing, only USD 840 billion will flow.
- Africa is the most affected region by climate change. However, the region received only 20% of global adaptation finance flows, or USD 13 billion annually in 2021–2022[5]. For reference, about 45% of global adaptation finance flows went to the East Asia and Pacific region.
- Based on Africa's nationally determined contributions (NDCs), the region needs USD 53 billion per year[6] between 2020 and 2035, or 2.5% of Africa's GDP. However, the NDCs may underestimate by as much as 100% the adaptation needs[7],[8].
- At the current level of adaptation funding flows, Africa will only achieve USD 195 billion by 2035. However, the total adaptation finance needs may be as high as USD 1.6 trillion, more than 8 times larger.
- Adaptation flows to Africa are not growing fast enough, despite global commitments to increase adaptation finance. Adaptation funding to Africa only increased 14% compared to 2019–2020.
- Despite the urgency for adaptation action in Africa, adaptation finance was only 36% of total climate finance in 2021–2022. This was a decrease from 39% of total climate finance in 2019–2020. Adaptation is losing ground to mitigation financing in the continent.
- Most of the adaptation finance to Africa comes from multilateral development finance institutions (63%) and African governments (19%).
- African governments invest more resources in adaptation than flows from bilateral development finance institutions to the region (19% vs. 11%)
- From 2019–2022, the private sector has consistently financed less than 3% of adaptation activities globally and in Africa, mostly from large investors and channeled as grants, primarily to the agriculture sector.
- African governments provide almost as much adaptation finance as grants as the multilateral and bilateral financiers (USD 2.4 billion per year).
- In Africa and globally, the private sector has consistently financed less than 3% of adaptation activities from 2019–2022. A substantial portion of these funds come from philanthropies. The opportunity for commercial financiers and private enterprises to develop and finance adaptation solutions, products and services is enormous.
- Africa's climate finance flows are concentrated in too few countries. 54% of adaptation finance flows to only 10 countries. The bottom 10 recipient countries only have 1% of adaptation finance.
- Between 2019–2021, USD 94 billion was committed by international donors as emergency

response funding in developing countries[9]. This is similar to the international adaptation finance flows tracked over the same period (USD 91 billion).

- However, of the tracked USD 94 billion in emergency response funding, only 1.4% (or USD 1.3 billion) was also tagged as adaptation finance. There is insufficient consideration of climate adaptation in emergency response funding.
- In Africa, the situation is similar with international public emergency response funding (USD 26 billion) committed to the continent between 2019–2021 being similar to international public adaptation finance to the region (USD 28 billion).
- Unfortunately, there are insufficient resources for adaptation financing directed to most vulnerable African countries. These countries are instead dependent on emergency response funding to cope with hazards. South Sudan, Democratic Republic of the Congo, Ethiopia, Somalia and Sudan were the top five recipients of emergency funds. Of these, only Ethiopia was among the top five recipients of adaptation financing.
- Between 2019–2021, only 8% of international reconstruction funding was also counted as adaptation finance. There is a greater need to build back better and mainstream adaptation in post-disaster reconstruction.
- Very few public financial institutions have made public adaptation finance-specific commitments. Many of the commitments that do exist are not robust.
- Of the 60 public financial institutions reviewed, only 13 have made public adaptation-specific commitments.
- Multilateral climate funds are the clear leaders in climate adaptation commitments given their mandates. Multilateral development banks follow but still have ways to go. Five multilaterals have specific adaptation finance commitments. Six have climate finance commitments but no specific adaptation target. Of the remaining institutions assessed in the report, over 50% do not have any form of climate commitment.

Executive Summary

INTRODUCTION

Climate change impacts globally have increased the urgency for ambitious action on adaptation. This is especially the case in the world's most vulnerable regions, including Africa. This report covers global status and trends of adaptation finance and provides a deeper analysis of Africa at a regional level, given the heightened adaptation needs and opportunities on the continent. Across the globe, and especially in Africa, climate smart and resilient development pathways offer enormous investment opportunities with a triple dividend of avoided losses, positive economic gains, and enhanced social and environmental benefits.

This report assesses the state of adaptation finance globally and in Africa as follows:

- **Section 1:** Provides the latest analysis on the adaptation funding gap.
- **Section 2:** Summarizes tracked adaptation finance flows in 2021–2022.
- **Section 3:** Maps and evaluates institutional adaptation finance commitments and statements.
- **Section 4:** Assesses the type and efficacy of financial instruments deployed in practice for adaptation.
- **Section 5:** Reviews the challenges and barriers to tracking adaptation finance.
- **Section 6:** Presents—for the first time—analysis of the intersection between adaptation finance and humanitarian assistance, including emergency response funding and post-disaster reconstruction funding.

ADAPTATION FINANCE NEEDS ARE RISING, THOUGH UNCERTAINTY REMAINS REGARDING THE SIZE OF THE GAP

The global adaptation funding gap continues to widen concerningly, driven by accelerating climate impacts and relatively slower growth in adaptation finance flows. All countries face increasing pressure to invest in adaptation as they experience accelerating climate-related risks and impacts. Developing countries will especially be hard pressed to meet their anticipated investments needs, the estimation for which is between USD 130–415 billion per year by 2030, if they are to bridge the adaptation funding gap.

At the same time, much is still not known about the adaptation finance gap. Estimating adaptation finance needs requires robust data, effective modeling, and strong technical capacity. In the absence of these elements, needs assessments are likely to substantially underestimate the true cost of adaptation measures. The challenges in costing adaptation needs include uncertainty regarding future risk, disagreement on objectives, and variation in geographic and sectoral coverage of analysis. Though the precise volume of adaptation finance needs remains challenging to calculate, it is clear that current adaptation finance flows are several orders of magnitude below the lower boundary of adaptation cost estimates advanced. Immense collective ambition is required to bridge the gap.

ADAPTATION FINANCE FLOWS INCREASED IN 2021–2022 FROM PREVIOUS YEARS, BUT DECLINED AS A PROPORTION OF TOTAL CLIMATE FINANCE

While mitigation finance has accelerated dramatically in the last two years to USD 1.2 trillion annually in 2021–2022, adaptation finance saw a more modest increase. Only 5% of total climate finance (USD 63 billion) flowed specifically to adaptation finance annually in 2021–2022 (down from 7% in 2019–2020). This marks a 28% year-on-year increase in adaptation finance flows compared to 2019–2020, but the growth rate in global mitigation financing has significantly outpaced the growth rate of global adaptation finance. Estimates for the costs of adaptation in developing countries are, on average, approximately 4 times higher than the USD 56 billion of tracked adaptation finance to those countries in 2021–2022.

About 45% of global adaptation finance flows went to the East Asia and Pacific region, followed by 20% to Africa and about 10% each to Latin America and the Caribbean and South Asia. Africa received USD 13 billion on average in adaptation finance in 2021–2022, a modest 14% increase compared to 2019–2020. Adaptation finance was approximately 36% of total tracked climate finance to Africa in 2021–2022, a slight decrease in proportional terms from 39% in 2019–2020. From 2019–2022, the private sector has consistently financed less than 3% of adaptation activities globally and in Africa, mostly from large investors and channeled as grants, primarily to the agriculture sector.

INSTITUTIONAL PUBLIC COMMITMENTS TO ADAPTATION FINANCE CAN CREATE IMPORTANT MOMENTUM, BUT ARE CURRENTLY LACKING

Progress on global climate negotiations is intrinsically connected to the delivery of adaptation finance and increasingly linked to progress on loss and damage finance. Commitments made by institutions in developed countries continue to be insufficient, opaque, and lack clear delivery timelines. By developing institutional adaptation finance commitments that are ambitious, specific, credible, and measurable—public and private institutions can increase momentum towards climate adaptation finance mobilization at scale.

An effective climate adaptation commitment is not merely a statement of intent but a clear, actionable, and transparent promise of action. It necessitates a public declaration concerning both direct investment and mobilization of climate finance and, more specifically, climate adaptation finance. For this report, the following categories are used to evaluate the robustness of a commitment: 1) quantum, 2) milestones, 3) specificity, and 4) tracking.

This report finds that very few of the public financial institutions evaluated have public institutional adaptation finance commitments. Many of the commitments that do exist are not robust, as evaluated against metrics of quantum, milestones, specificity, and tracking. In a selection (based on their adaptation impact) of 60 public financial institutions reviewed, only 13 had public adaptation-specific commitments. A handful of institutions are leaders in goal setting and commitments to adaptation finance globally, but dedicated and comprehensive institutional commitments remain lacking. Collaborations can help create momentum for commitment standards that are credible, ambitious, and holistic.

DEBT REMAINS THE PRIMARY FINANCIAL INSTRUMENT FOR ADAPTATION

To close the gap between current adaptation flows and needs of countries, a wider range of financial approaches are required than are currently being deployed at scale. Globally and in Africa, debt continues to be the most utilized instrument to deliver adaptation finance, increasing globally in 2021–2022 to 80% of total adaptation finance from 70% of flows in 2019–2020. The volume of concessional finance (including concessional debt) to adaptation also increased modestly, but its proportion relative to other financial sources diminished between the 2019–2020 and 2021–2022 periods. Given the substantial debt burdens of many countries facing severe climate risks, particularly those in regions like Africa, over-reliance on debt for climate adaptation activities introduces significant risks. To avoid increasing the debt burdens of already vulnerable countries, funders should deploy a much wider range

of financial instruments towards adaptation activities including guarantees, local currency swaps, and results-based finance.

This report assesses a range of financial instruments and evaluates the potential for debt-for-climate adaptation swaps, which have emerged as an alternative to bridge adaptation finance gaps and tackle debt distress. These swaps hold promise, but there are a range of barriers impeding their widespread adoption including: complex creditor-debtor dynamics; time-consuming structuring and negotiation needs; and questions of effectiveness in resolving debt distress, as swaps have historically covered a minimal fraction of a country's total debt. To overcome these barriers, the intervention of major financial institutions, like the World Bank and the International Monetary Fund (IMF), is essential.

ADAPTATION FINANCE TRACKING FACES PERSISTENT CHALLENGES, BUT THERE ARE EMERGING OPPORTUNITIES TO IMPROVE OUR UNDERSTANDING OF THE STATE OF PLAY

Adaptation finance tracking is significantly constrained by data gaps, methodological inconsistencies, and reporting issues at both domestic and international levels. Useful progress has been made by a handful of international development financial institutions but much more needs to be done to standardize, harmonize, and disclose granular, consistent, and comparable information on adaptation finance. The challenges are amplified for private financial institutions where there is lack of regulatory pressure, market demand, and incentives to report data on private adaptation financing.

There is real opportunity for governments and regulators to strengthen climate finance tracking systems, for development financial institutions to provide transparent leadership, and for civil society organizations to coordinate and develop simplified adaptation finance tracking methodologies for the private sector to adopt in an easy, effective, and efficient manner. If all stakeholders take ambitious collective action to improve the enabling environment for tracking—collective understanding of current flows and needs could be substantially enhanced.

ADAPTATION IS INTERTWINED WITH HUMANITARIAN AID, AND COORDINATED ACTION ON BOTH WILL BE MOST EFFECTIVE

As incidences of climate-related disasters escalate globally, it is important to increase coordination and collaboration between actors working on humanitarian aid and climate change adaptation. This will help maximize possible synergies, minimize duplicate action, and deploy limited financing as efficiently and effectively as possible. Section 6 provides a first-time analysis of the overlap between international humanitarian funding (emergency response funding and post-disaster reconstruction funding) and tracked international adaptation finance. It indicates that just over 1% of international emergency response funding, and 8% of international post-disaster reconstruction funding, is also tagged as adaptation finance.

An overlap between the two separate funding buckets may indicate that humanitarian aid is being delivered with climate resilience objectives in mind, and that funders are consciously working to build back better. However, as the frequency and severity of climate-related disasters increases in the coming years, it will be essential to ensure accurate tracking and accounting of each funding category to avoid double-counting or simply re-labelling funds at the expense of additional funding. A deep dive into the funding flows for Africa indicates that the most fragile African countries currently struggle to access international adaptation finance and are instead dependent on emergency response funding to cope with climate impacts and hazards.

The analysis emphasizes the opportunities for actors to spearhead ex-ante, proactive adaptation action to avoid or minimize spending on humanitarian aid later. Where adaptation efforts fall short—and climate risks cannot, or will not, be avoided—it is important to learn from the experience of humanitarian actors in deploying rapid-response funding to address the unavoidable losses and damages associated with climate change.

1 Context Setting – Assessing the Adaptation Funding Gap

Key Messages

- All countries already face significant pressure to invest in adaptation as they experience accelerating climate-related risks and impacts.
- Developing countries, especially in Africa, will be hard pressed to meet their anticipated investment needs, the range of estimation for which is between USD 130–415 billion per year by 2030, if they are to bridge the adaptation funding gap.
- The global adaptation funding gap continues to widen concerningly, driven by accelerating climate impacts and relatively slower growth in adaptation finance flows.
- Per analysis to date, Africa alone urgently requires more than USD 50 billion annually, approximately 2.5% of its GDP, for adaptation finance to meet its NDC commitments by 2035. However, this amount is likely to be an underestimate of the actual needs, as only 28 African countries provided cost estimates for adaptation in their NDCs.

1.1. GLOBAL ADAPTATION COSTS

The 2023 Global Landscape of Climate Finance indicates that developing countries will need USD 212 billion per year in adaptation finance up to 2030, and USD 239 billion per year between 2031 and 2050.[10] The UNEP Adaptation Gap Report 2023, which informs CPI's analysis, estimates a similar range: that adaptation costs for developing countries in this decade are likely to be between USD 130–415 billion annually, and projected to rise significantly by 2050.[11,12] Recent analysis by the IPCC suggests similar ranges for adaptation costs: USD 127 billion and USD 295 billion per year for developing countries by 2030 and 2050, respectively. Likewise, analysis from the LSE Grantham Institute indicates an adaptation investment requirement for emerging markets and developing economies (excluding China) of USD 180 billion by 2025 and USD 325 billion by 2030.[13] Though the precise values vary, the key emerging theme is that by 2030, in developing countries alone, adaptation finance needs will be in the hundreds of billions of US dollars annually, and will increase in the years that follow.

The estimated volume of finance required in Nationally Determined Contributions (NDCs) for adaptation between 2021–2030 is nearly USD 1.1 trillion per year globally, though the quality of adaptation component analysis in NDCs is highly variable. As of October 2022, 144 out of 160 countries that submitted new or updated NDCs have mentioned adaptation components.[14] However, only 62 countries have outlined their adaptation finance needs, suggesting that global adaptation finance needs are underestimated.[15]

Countries face differential costs of adaptation relative to income levels. The UNEP Adaptation Gap Report 2023 highlights that annual per capita adaptation needs are high in upper-middle- and high-income countries (averaging USD 81), while lower-middle- and low- income countries see per capita annual needs of USD 51 and USD 22, respectively. However, as a percentage of Gross Domestic Product

(GDP), adaptation finance needs in low-income countries is the highest of any income group—at 3.1% of GDP[16]—a significant factor when considering where, how much, and which types of adaptation finance to deploy, discussed further in Section 4.

1.2. REGIONAL AND SECTORAL ADAPTATION NEEDS

Our analysis estimates Africa's adaptation finance needs to be roughly USD 579 billion by 2030, extrapolated to USD 845 billion by 2035, the highest of any global region. Adaptation needs make up about 24% of the total climate finance needs identified in African NDCs. These adaptation needs translate into USD 52.7 billion per year between 2020–2035, or 2.5% of Africa's GDP, though they are likely undercounted given limitations in methodology and a lack of clarity from certain countries.[17]

Unpacking global sectoral and sub-regional adaptation finance needs remains challenging. For example, in Africa, more than 70% of the total needs reported in African NDCs (USD 408 billion) are not allocated to any adaptation sector. Countries that provided sector-specific data mainly reported adaptation needs for agriculture (25%), water (17%), infrastructure and building (12%), disaster prevention and preparedness (10%), and health (8%). Data availability on adaptation finance needs varies significantly across African regions. Central Africa and Western Africa reported the most complete information on adaptation needs. Southern Africa and Eastern Africa have high adaptation needs but current data does not specify where this finance is needed.

The UNEP Adaptation Gap Report 2023 finds that global adaptation costs are concentrated on a few key sectors linked to water, agriculture, and ecosystems. As per the literature review, captured in the Report, the highest sectoral adaptation costs for developing countries include riverine flood protection, coastal protection, and infrastructure resilience. Further details are available in Table 1 below that captures a summary of the UNEP Adaptation Gap Report 2023 analysis.

Table 1. Sectoral Adaptation Costs – Per UNEP Adaptation Gap Report 2023

Sector and Cost Type	Estimated Adaptation Costs for Developing Countries
Infrastructure: Resilience building in energy and transport sectors	USD 56 billion/year, with costs increasing significantly towards 2050
Coastal zones: Coastal protection and beach nourishment	USD 56 billion/year 2020–2030
River floods: Riverine flood protection	USD 54 billion/year 2010–2050
Early warning and social protection: Universal early warning systems	USD 16 billion/year
Agriculture: Addressing climate impact on chronic hunger	USD 16 billion/year 2015–2050
Health: Controlling climate-related disease and heat-related mortality	USD 11 billion/year
Fisheries and oceans: Addressing changes in fish catch potential	USD 5 billion/year in the 2020s, rising towards 2050s

1.3. GAPS IN KNOWLEDGE

Estimating adaptation finance needs necessitates robust data, modeling, and technical capacity. In the absence of these resources, needs assessments are likely to underestimate the true cost of adaptation measures substantially. For example, analysis from CPI and GCA predict that African countries' estimated adaptation finance needs—calculated based on NDC submissions—are likely to be less than half the required amount, given that only 28 African countries provided cost estimates for adaptation in their NDCs.[18] When compared with financial estimates from other national frameworks, Ethiopia's NDC cost estimate variance was particularly pronounced: using the NDC's proposed figure of USD 40.5 billion as the baseline and comparing it against the National Adaptation Plan (NAP) estimation of USD 90 billion, this report found that the NDC underestimated the needs by 122%.[19, 20]

The UNEP Adaptation Gap Report likewise highlights the challenges in costing adaptation needs across a number of dimensions including:

- **Disagreement on objectives:** Adaptation lacks a 'north star', a parallel to net zero around which all actors are aligning efforts. Because there is no single quantitative goal for adaptation, assessed costs of adaptation vary as they are calculated against varied baselines.
- **Uncertainty regarding future risks and impacts:** There is a dual uncertainty regarding future climate risks given the range of potential scenarios for future emissions trajectories and variation in predictive climate modeling of impacts. Limitations in understanding of future conditions make it very challenging to know how much adaptation is 'enough'.
- **Variation in geographic and sectoral coverage:** Global adaptation cost assessments cover variable geographies and sectors which makes comparability challenging.

Though the precise volume of adaptation finance needs remains challenging to calculate, assessments from UNEP, the IPCC, LSE Grantham Institute, and others make very clear that the scale of need is enormous. As captured in Section 2, current adaptation finance flows are several orders of magnitude below the lower boundary of adaptation cost estimates, thus immense collective ambition is required to bridge the gap.

2 Current Trends in Tracked Adaptation Finance Flows

Key Messages

- Climate finance globally crossed the mark of USD 1 trillion in annual commitments for the first time in 2021–2022 and both mitigation and adaptation finance commitments grew from prior periods.
- Adaptation finance grew by 28% year-on-year, reaching USD 63 billion in 2021–2022 compared to USD 49 billion in 2019–2020. Nevertheless, the global adaptation funding gap is widening. Estimates for the costs of adaptation in developing countries are, on average, approximately 4 times higher than the USD 56 billion of tracked adaptation finance flows to those countries in 2021–2022.
- Africa received USD 13 billion in adaptation finance in 2021–2022 (20% of global adaptation finance), a modest 14% increase from tracked finance flows in 2019–2020. Flows tracked in 2021–2022 represent just 15–30% of assessed adaptation needs on the continent annually.
- In 2021–2022, 48% (or USD 6.2 billion) of tracked adaptation finance commitments in Africa went towards cross-sectoral activities. Agriculture, forestry, and other land use saw the second highest commitments, accounting for roughly 26% or USD 3.4 billion in 2021–2022, followed by water and wastewater (USD 2 billion, 15%), and transport (USD 900 million, 7%).

2.1. GLOBAL TRENDS IN TRACKED ADAPTATION FINANCE

Climate finance crossed the mark of USD 1 trillion in annual commitments for the first time in 2021–2022. According to the 2023 Global Landscape of Climate Finance, an annual average of USD 1.3 trillion in climate finance was committed in those years globally by public, private, international, and domestic financial actors.[21] This reflects a nearly twofold increase compared to the USD 653 billion tracked on average in 2019–2020. This growth is largely the result of accelerated investment in clean energy in a handful of countries: China, the U.S., Japan, and India, which collectively received 90% of the increased funds.[22]

While mitigation finance has accelerated dramatically in the last two years, adaptation finance saw a more modest increase. Out of the USD 1.3 trillion tracked in annual climate finance in 2021–2022, only USD 63 billion[23] (5%) was earmarked specifically for adaptation finance (down from 7% in 2019–2020). This marks a 28% year-on-year increase in adaptation finance flows compared to 2019–2020, but the growth rate in global mitigation financing has significantly outpaced the growth rate of global adaptation finance in the last two years. These efforts to reduce GHG emissions should be lauded. However, global mean temperature rise is expected to reach 1.5 degrees Celsius in the near term,[24] which will result in cascading impacts affecting vulnerable communities and ecosystems across the globe. This demands a far more robust focus and rapid acceleration of adaptation finance efforts.

The global adaptation funding gap is widening. Analysis indicates that developing countries will need USD 212 billion per year in adaptation finance

up to 2030, and USD 239 billion per year between 2031 and 2050[25] (see Figure 1). Estimates for the costs of adaptation in developing countries are, therefore, approximately 4 times higher than the USD 56 billion tracked adaptation finance flows to those countries in 2021–2022. The gap between adaptation finance flows and needs is widening due to increasing costs of adaptation and relatively slow growth in adaptation flows globally.

Global tracked adaptation finance flows are concentrated in the East Asia and Pacific region. About 45% of global adaptation finance flows went to the East Asia and Pacific region, followed by 20% to Africa. Latin America and the Caribbean and South Asia received roughly 10% each (USD 6 billion) (see Figure 2). Almost 85% of adaptation finance in the East Asia and Pacific region was raised and spent domestically, primarily in China. There are several data and methodological challenges in adequately tracking domestic climate expenditure—faced in both developing and developed countries—which are likely to undercount the contributions made by national governments to domestic activities.

Figure 1. Estimated Adaptation Finance Flows and Needs in Developing Countries, 2021–2035

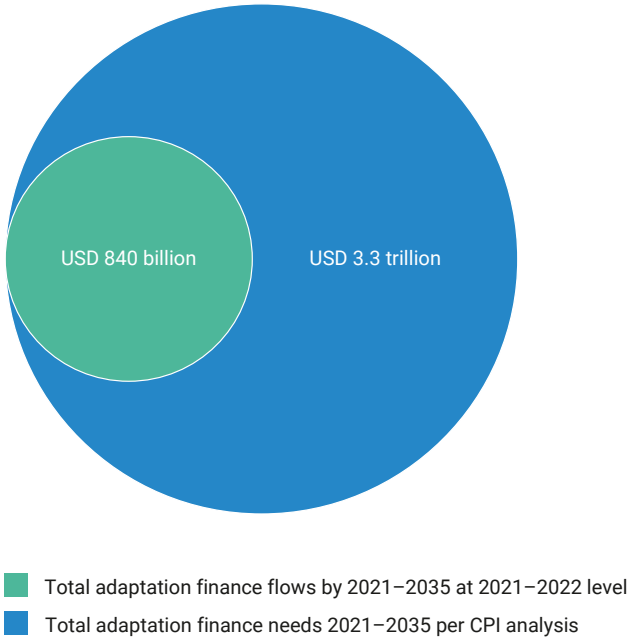
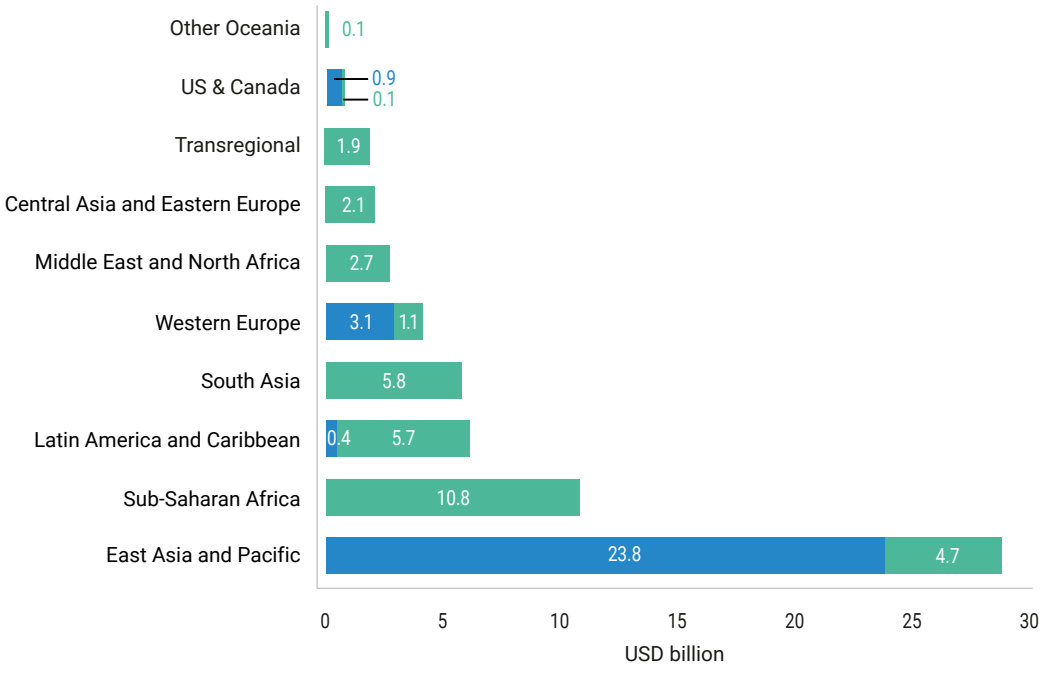


Figure 2. Global Adaptation Finance by Region and Sources (2021–2022, USD billion)



Box 1: Assessing the Universe of Tracked Adaptation Finance Flows

CPI's Global Landscape of Climate Finance (the Landscape) is the most comprehensive overview of global climate-related primary investment. The Landscape tracks climate finance flows by domestic, international, public, and private financial actors. Such data is aggregated annually from more than 20 data sources including primary sources, open access and subscription databases, and research organizations. However, despite its coverage, tracking adaptation finance faces substantial challenges in obtaining high-quality data, which hinders CPI's ability to comprehensively record global adaptation finance flows.

As shown in the Figure 3, data from international public financial sources such as multilateral development banks, climate funds, as well as bilateral and regional development financial institutions is relatively well documented. The Landscape relies on the following sources to retrieve this data:

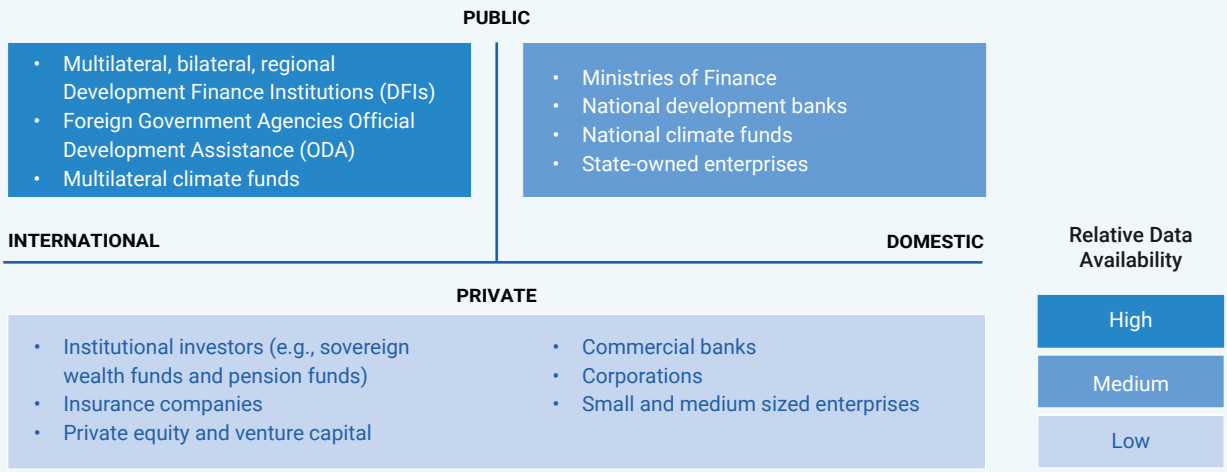
- The members of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC)—data is publicly available through the Creditor Reporting System (CRS) database.
- The group of multilateral development banks (MDB) and members of the International Development Finance Club (IDFC) reporting on climate finance.
- The group of Multilateral Climate Funds, as reported through Climate Funds Update.

The data collection from national public sources, such as national development banks—for example, China Development Bank, French Development Agency etc., which raise and spend the climate funding domestically—is also made available, in limited granularity, to the IDFC.

Reporting in the form of domestic budgetary expenditures and annual reports (for both OECD and non-OECD countries) on adaptation finance flows and projects from national ministries, national climate funds, and state-owned enterprises (including banks) remains severely fragmented or missing. This means that the information is challenging to aggregate in a comprehensive, comparable, and consistent manner. In particular, there is a lack of clear commitments and contributions by developed country providers of adaptation finance. This fragmentation makes quantitative assessment of progress against the Glasgow Climate Pact—which "urges developed country Parties to at least double their collective provision of climate finance for adaptation to developing country Parties from 2019 levels by 2025"—extremely challenging. Limitations in tracking progress against global adaptation finance commitments substantially limit the credibility of those commitments. CPI urges that transparent reporting be quickly improved, with a strengthened role for the OECD on collating and publishing this information as a priority.

The issues are even more pronounced for private adaptation finance actors, which is likely to result in significant undercounting of private flows, which presently represent less than 2% of tracked adaptation finance being contributed from private actors. Several categories of private adaptation financing such as internal funding of resilient supply chains, corporate social responsibility, SME financing, insurance, etc., are hard to report, track, and aggregate. See Section 5 for more detailed analysis.

Figure 3. Overview of Financial Actors and Adaptation Finance Data Availability

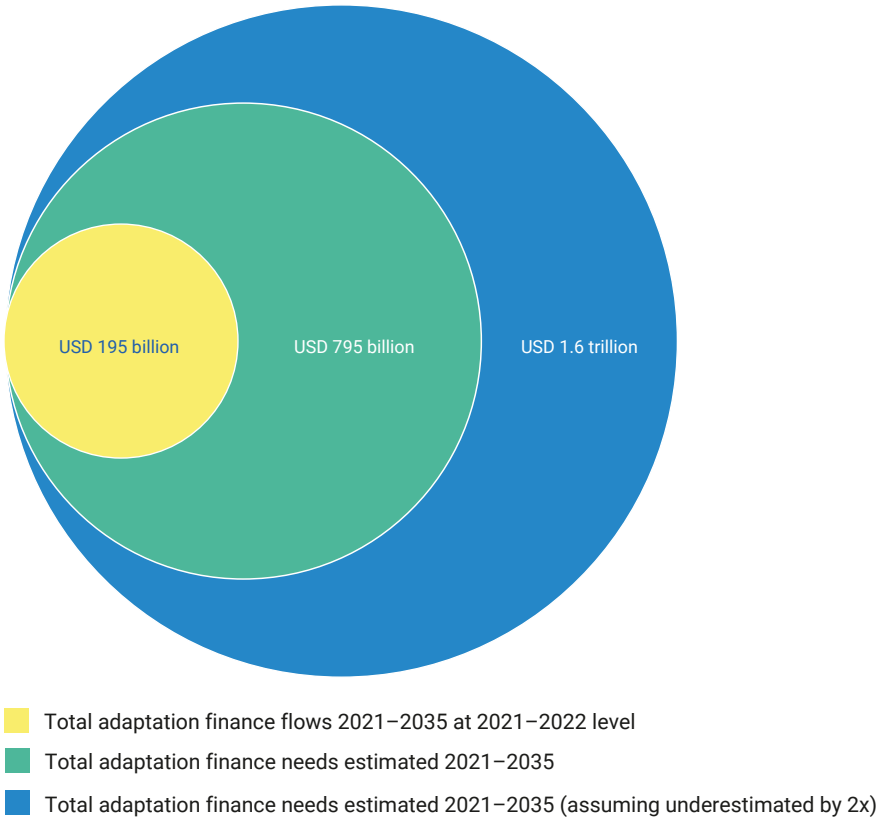


2.2. REGIONAL SNAPSHOT: AFRICA

Africa received USD 13 billion on average in adaptation finance in 2021–2022, a modest 14% increase compared to 2019–2020[26]. Adaptation finance was approximately 36% of total tracked climate finance to Africa in 2021–2022, a slight decrease in proportional terms from 39% in 2019–2020. The share of adaptation finance continues to be more in Africa than any other region. In contrast, 13% and 12% of total climate finance to South Asia and Latin America and the Caribbean, respectively, was directed to adaptation activities in 2021–2022. Globally, less than 5% of tracked climate finance was dedicated specifically to adaptation projects.

The adaptation finance gap is very stark in Africa, as assessed against Nationally Determined Contributions and UNEP estimates. African NDCs indicate that the continent needs USD 53 billion per year for adaptation or 2.5% of Africa's GDP, though CPI analysis suggests this may actually be an underestimation by as much as 100%.[27, 28] At the lower-end USD 53 billion estimate, current flows are less than 25% of the necessary volume of adaptation finance to Africa, while at the upper-end USD 106 billion estimate, flows are currently less than 15%.

Figure 4. Estimated Adaptation Finance Flows and Needs in Africa, 2021–2035



The private sector can play a significant role in bridging the adaptation funding gap in Africa. The private sector contributes 12% of total climate finance going to Africa, which trails behind other regions like South Asia (55%) and East Asia and Pacific (52%), where commercial markets are more robust.[29] The share of private financing for mitigation in South Asia increased from 48% in 2019–2020 to 65% in 2021–2022. In contrast, private mitigation finance share in Sub-Saharan Africa decreased from 30% to 19% in the same period.

The need for private participation is evident for adaptation efforts in Africa, where the private sector continues to contribute a very minor portion of total finance to adaptation (less than 3%). About 90% of this finance comes from large institutions and is channeled as grants, primarily to the agriculture sector. Enhanced multi-stakeholder collaboration is essential to improve tracking and transparency in private adaptation finance.

Figure 5. Tracked Climate Finance by Region and Source (2021–2022)

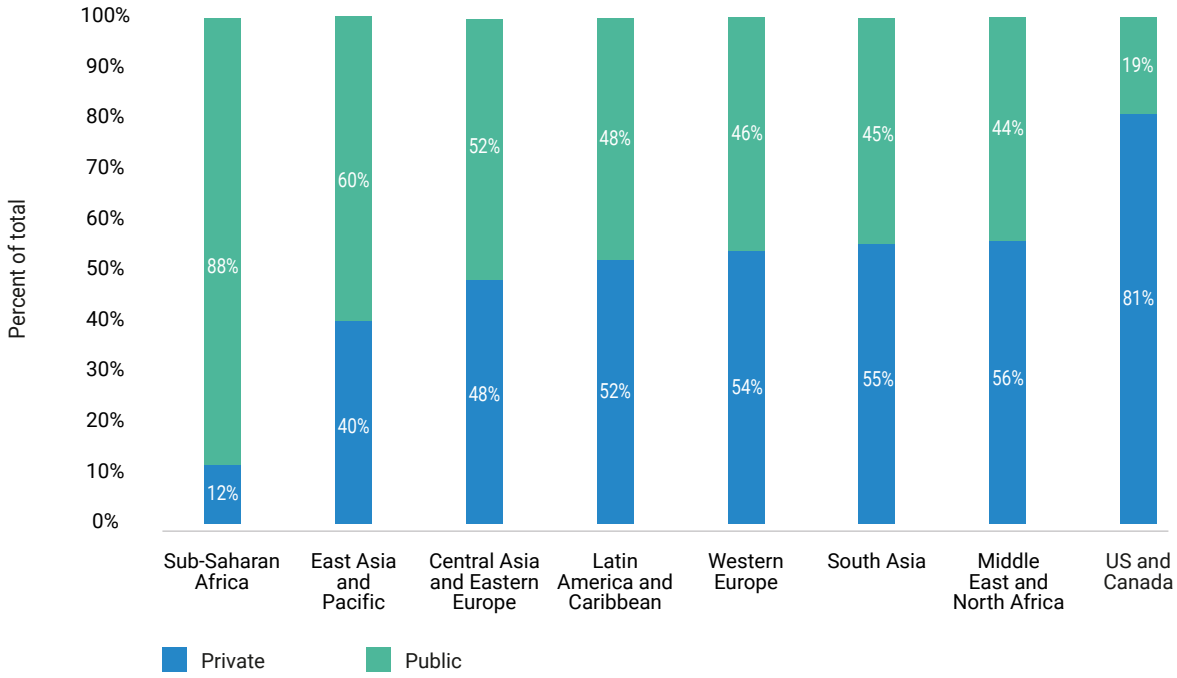
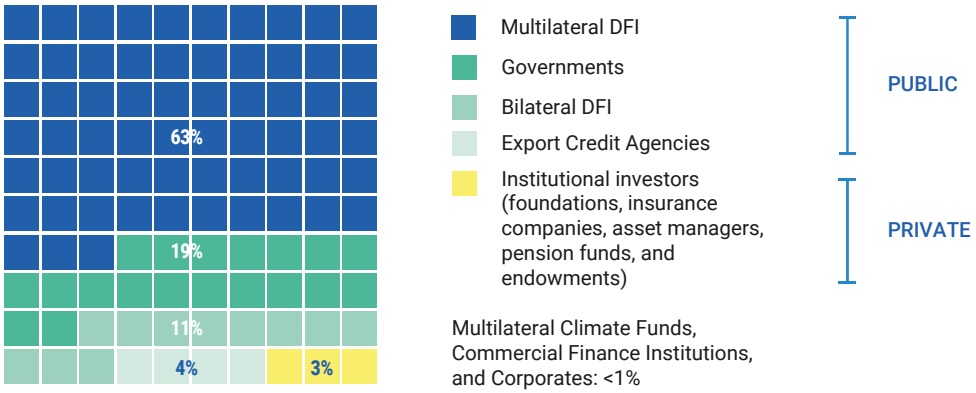


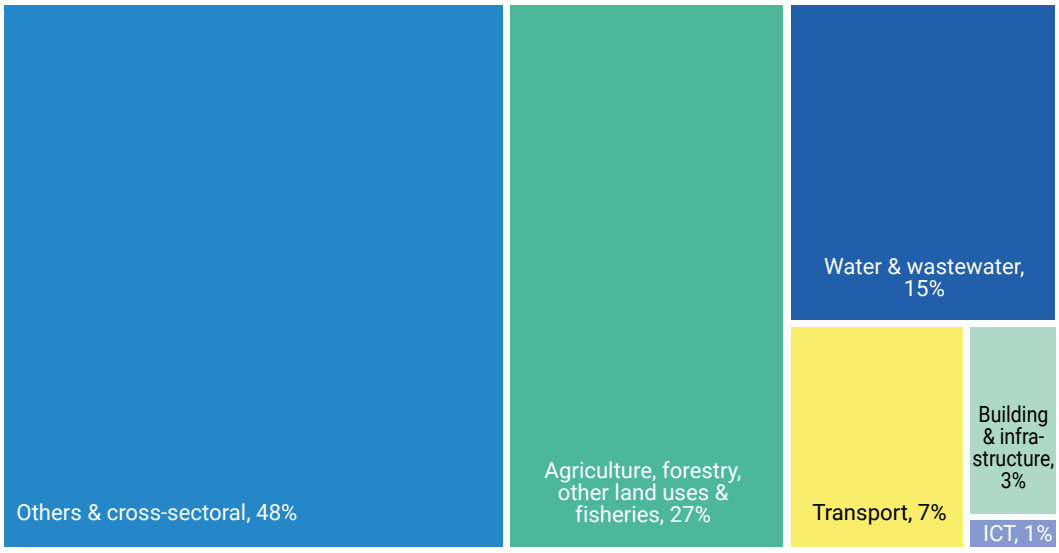
Figure 6. Adaptation Finance Flows in Africa, by Actors (2021–2022, USD billion)



Africa's adaptation projects deliver multiple benefits across sectors, aligning with its developmental priorities. In 2021–2022, 48% (or USD 6.2 billion) of tracked adaptation finance commitments in Africa went toward the category of cross-sectoral activities (see Figure 7). This included support for national-level policy and capacity building, disaster management activities, urban issues, biodiversity, and social security. This may be a result of the cross-sectoral nature of adaptation finance projects and the need to bring a variety of technical experts and stakeholders to deliver projects with maximum adaptation benefits.[30] Agriculture, forestry, and other land use (AFOLU) saw the second highest category of commitments, accounting for roughly 26% or USD 3.4 billion in 2021–2022,[31] followed by water and wastewater (USD 2 billion, 15%), transport (USD 900 million, 7%) and the buildings and infrastructure sector and information technology sector, which received 3% collectively (USD 350 million).[32]

Funding for adaptation of the AFOLU sector in Africa must increase substantially to ensure food security. The AFOLU sector has the highest adaptation finance needs in Africa and requires at least USD 49 billion between 2021–2030, with the majority of need coming from Central and West Africa.[33] Our analysis suggests that these estimates could be underestimated by a factor of two compared to the actual needs of the continent.[34] AFOLU stands as the second-largest source of GHG emissions on the African continent, while simultaneously being one of the sectors most susceptible to climate change impacts. Resilient agricultural systems play a vital role in ensuring food security for all African citizens and demand a need for higher climate financing.

Figure 7. Adaptation Finance Flows in Africa, by Sector (2021–2022)

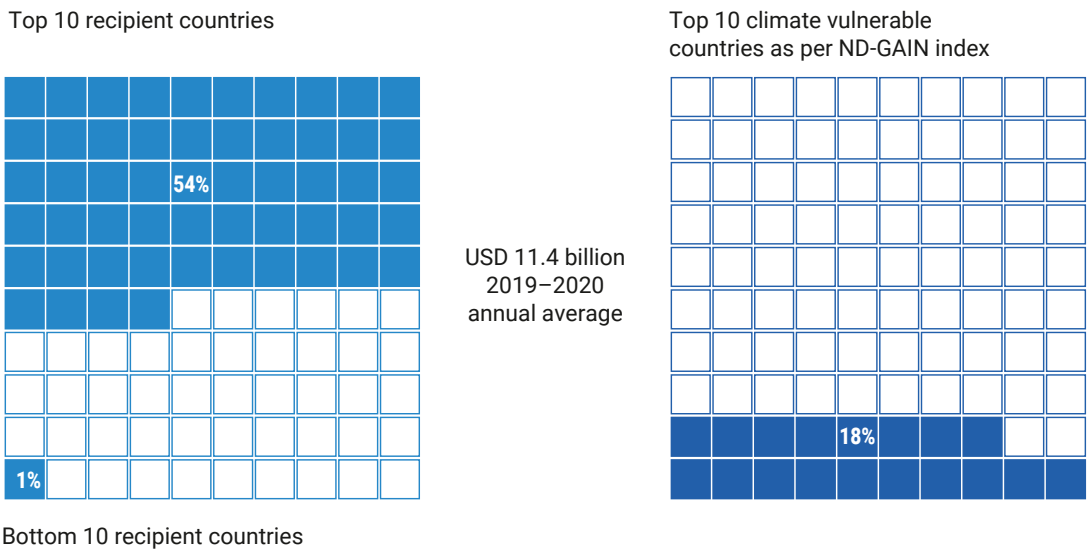


Of the total USD 3.4 billion to AFOLU, the agriculture sub-sector saw the largest share of AFOLU adaptation finance (40% or USD 1.4 billion), followed by policy, national budget support, and capacity building activities relevant to AFOLU (14%, USD 500 million) and forestry (8% or USD 270 million). More than 37% of the adaptation finance for AFOLU in Africa, USD 1.3 billion, could not be allocated to a specific sub-sector due to limited granular information underscoring the need for better tracking practices (see Chapter 5 for challenges in tracking adaptation finance).

Africa's climate finance flows are concentrated in too few countries. Within Africa, data indicates that ten nations[35] received over half of the continent's climate finance in 2019–2020.[36] Various factors, including perceived and real risks, likely influence this allocation, as investors often exhibit caution when considering broader distribution to the most vulnerable regions. Moreover, in the same period, 20 countries identified as being in fragile and conflict-affected situations (FCS) received a combined 35% of the continent's adaptation finance.[37, 38]

Recent GCA analysis suggests that only seven countries in Africa today have all the key strategic and planning elements for adaptation action in place: clear institutional mandates, priority sectors identified, adaptation costs estimated, and specific adaptation goals stated. These countries are ready to absorb financing and implement adaptation programs at scale. Strengthening strategic planning, adaptation priority programs, and institutions is a critical task for most African countries.[39]

Figure 8. Adaptation Finance Flows in Africa (2019–2020), by Recipient Countries



3 Assessment of Public and Private Finance Institution Adaptation Commitments

Key Messages

- Progress on global climate negotiations is intrinsically linked to the delivery of adaptation finance and increasing loss and damage finance. Commitments made by institutions in developed countries continue to be insufficient, unclear, and lack well-defined delivery timelines.
- By developing adaptation finance commitments that are ambitious, specific, credible, and measurable—public and private institutions can increase momentum towards climate adaptation finance mobilization at scale.
- Public financial institutions have a critical role to play in helping to bridge adaptation funding gaps through deploying their own capital and via mobilization of the private sector and other funders (including philanthropies).
- Significant limitations currently persist in definition, comparability, and ambition of institutional (both public and private) commitments focused on adaptation finance.

3.1. INTRODUCTION AND CONTEXT

In 2015, the Paris Agreement established, for the first time, a process to agree on a global goal on adaptation and in 2021, at COP26, the Glasgow Climate Pact urged country Parties to double adaptation finance flows from 2019 levels by 2025 to roughly USD 40 billion. COP28 will focus on the Global Goal on Adaptation (GGA) and the establishment of a New Collective Quantified Goal (NCQG), both of which highlight the urgency for higher ambition on climate finance, especially for adaptation. These COP-initiated processes are instrumental to channeling more finance to adaptation activities globally.

In connection with the global processes, since the Paris Agreement, many public and private financial institutions have released statements concerning their goals and commitments related to climate change finance and portfolio emissions.[40] To date, the majority of commitments have centered on mitigation objectives, while adaptation commitments are much less common.[41] While these statements vary drastically in their content and context, collectively they signal an impetus for financial institutions to play a more active role in defining and mobilizing finance to climate mitigation and adaptation activities.

This section sets out to evaluate specific institutional climate adaptation finance commitments in order to advance recommendations to increase the ambition and integrity of commitments from all financial institutions. The recommendations are informed by the range of potential benefits that ensue from setting a high-quality institutional commitment (for public and private institutions alike) including:

1. **Catalyzing structured organization-wide analysis of adaptation finance.** Although there are various ways to organize the creation of a commitment, they all require boards, leadership, and staff (who may not usually think about adaptation) to consider adaptation finance in their daily operations.

2. **Influencing key decision-makers to consider adaptation when making investment decisions.** High quality commitments require mainstreaming throughout the institution to ensure proper alignment through all operations. Those involved in commitment-making will be able to view current and future investments through an adaptation lens, integrating an adaptation-sensitive approach into organization-wide investment decisions and portfolio construction.
3. **In theory, publishing a commitment sets the foundation for an institution to be held accountable for its stated actions.** For this to hold true, it requires the commitment to be clear; to detail quantitative figures, and to be consistently reported upon.

This section defines an institutional climate adaptation commitment as a publicly available declaration of an entity's intent and strategy to invest in, and mobilize financing for, climate adaptation activities. This research also captures climate adaptation statements, which are higher level and less advanced than commitments. Crucially, statements fall short of describing a clearly articulated strategy to achieve climate goals—rather, they publicize a more basic recognition of the necessity of climate action at the institutional level when it comes to adaptation. Though there is no universal consensus on the necessary components of a high-quality climate adaptation commitment, this paper advances the theory that a high-quality commitment will have explicit and comprehensive content across four categories: quantum, milestones, specificity, and tracking—each defined further below.

The dataset includes commitments from public financial institutions (FIs) that are members of the following groups: the International Finance Development Club (IDFC), multilateral development banks (MDBs), African national development banks (NDBs) and sub-regional development banks (SRDBs),[42] and Middle Eastern or North African NDBs and regional development banks.[43] While this dataset is not globally comprehensive, it aims to capture a set of public financial institutions that are critical to mobilizing of adaptation finance for the key high climate risk regions of Sub-Saharan Africa, the Middle East, and North Africa. The focus on these regions is determined by their high vulnerability to climate change impacts and significant need for adaptation finance. This focus also aligns with major climate dialogues, such as the Africa Climate Summit and COP28. Furthermore, the selection of these public financial institutions is based on the availability of funding and the availability of public information.

To form a dataset of climate commitments and statements, it was necessary to collect qualitative and quantitative data from various sources, such as institutions' websites, annual reports, sustainability reports, and news articles. For each commitment and statement, the dataset contains funding amounts, geographic origin, and relevant start and end dates, where available.[44] Notably, the dataset includes declarations that do not relate to climate adaptation—primarily for the purpose of understanding how declarations are distributed across adaptation, mitigation, and general climate finance.

3.2. EVALUATION APPROACH

An effective climate adaptation commitment is not merely a statement of intent but a clear, actionable, and transparent promise of action. It necessitates a public declaration concerning both direct investment and mobilization of climate finance and, more specifically, climate adaptation finance. For this report, the following categories are used to evaluate the robustness of a commitment: 1) quantum, 2) milestones, 3) specificity, and 4) tracking.

A commitment scoring high on all four categories would include: one or a set of quantitative adaptation finance goals accounting for at least 50% of total climate finance pledged; distinct dates for deadlines and a time-bound approach to realizing objectives; and a detailed approach for reporting against, and monitoring progress on, the commitments to ensure accountability and transparency in realizing the adaptation finance objectives. Further details on each of the criteria used to evaluate commitments on a low to high quality scale are presented in Table 2.

It is important to note that this evaluation is not meant to assess how likely an institution is to follow through with its commitment or how serious an institution is about adaptation interventions. Rather, this report aims to use tailored metrics to assess how complete a commitment is in relation to four primary characteristics. By doing so, it illuminates new pathways for future research on structuring and implementing high-quality adaptation finance commitments.

Table 2. Proposed Evaluation Metrics and Indicators for Institutional Commitments

Indicator	Quantum[45]	Milestones	Specificity	Tracking
Low	Does not indicate a numerical value for adaptation finance over any period.	Does not include any specific dates to which commitments are attached.	Does not offer any details on sectoral[46] or geographic targets of commitment or on implementation planning.	No articulated strategy for reporting against, or tracking progress on, commitment.
Medium	Indicates at least one numerical value for adaptation finance but below a balance of mitigation and adaptation finance.	Includes at least one date to which adaptation finance commitments are attached, with the target date being no later than the end of 2025.	Includes at least some mention of sectoral or geographic targets of commitment and/or on implementation planning (e.g., identified partners, activities, etc.).	Limited detail provided on strategy for reporting against, or tracking progress on, commitment.
High	Indicates at least one numerical value for adaptation finance and that value constitutes at least 50% of total climate finance committed.	Includes one near-term target (within 5 years) or two long-term targets (5 years or more) with specific dates to which adaptation finance commitments are attached.	Includes details on both sectoral and geographic targets of commitment and on implementation planning (e.g., identified partners, activities, etc.).	Highly detailed approach outlined for reporting against, and tracking progress on, commitment.

When interpreting the analysis of commitments, it is crucial to contextualize the challenges and opportunities faced by institutions, particularly those in developing economies. Many financial institutions, especially in developing countries, grapple with a set of challenges, such as the necessity for improved data sharing and sectoral benchmarking, which limit the mobilization of capital.[47] Simultaneously, the complexity of establishing concrete climate adaptation interventions, and thereby a cohesive consensus on precise needs, complicates the formulating and evaluation of robust, quantifiable pledges.

3.3. CURRENT STATUS OF PUBLIC INSTITUTIONAL COMMITMENTS

Very few public financial institutions have made public adaptation finance-specific commitments, and many of the commitments that do exist are not robust, as evaluated against the criteria advanced above. Of the 60 public financial institutions reviewed, only 13 have made public adaptation-specific commitments.[48] Of these, multilateral climate funds are the clear leaders, unsurprisingly given the inherently climate-relevant nature of the funds' mandates (which often explicitly cover adaptation). MDBs follow—five have advanced adaptation finance specific commitments, while an additional two have climate finance commitments that mention adaptation finance but do not call it out separately, and four have broader climate finance commitments that do not mention adaptation. Of the remaining institutions assessed in the report, over 50% do not have any form of climate commitment.

A detailed list of these institutions is provided in Annex 2. Further analysis of institutional commitments to adaptation finance and climate finance more broadly by institution type is available in Table 3.

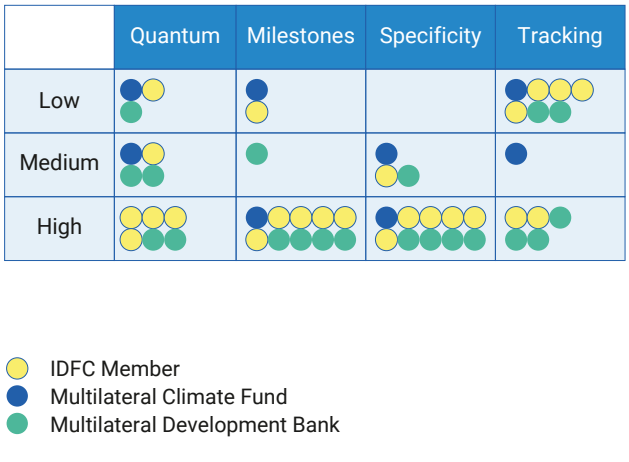
Even many institutions with adaptation commitments have significant room for improvement in the quality of those commitments. In analysis of the 13 institutions with commitments identified that include adaptation-specific mentions, we found significant limitations across the four categories of analysis proposed: quantum, key milestone, level of specificity, and robustness of tracking measures. Figure 9 summarizes the evaluated quality of commitments against those categories.

Table 3. Evaluation of Institutional Commitments by Institution Type[49]

Institution Type	Number of Institutions Evaluated	Institutions Evaluated by Most Ambitious Commitment:			
		Adaptation Finance Specific	Climate Finance (w/ non-specific adaptation mention)	General Green/ Climate Finance Commitment	No Climate-Related Commitment
IDFC Member[50]	19	2	4	3	10
Multilateral Development Bank	11	5	2	3	1
Sub-Saharan African NDB/SRDB	15	0	1	1	13
Multilateral Climate Fund	6	6	0	0	0
MENA NDB/SRDB	9	0	0	1	8
Total	60	13	7	8	32

- **Quantum:** Of the 13 institutions with adaptation finance commitments, six have high quality commitments as assessed against quantum—meaning that the commitment has at least one numerical value for adaptation finance and that value constitutes at least 50% of total climate finance. There is nevertheless a widespread lack of comprehensive description of quantum across commitments: most commitments that detail quantum do not discriminate between mitigation and adaptation, meaning that the portion of adaptation finance is not quantifiable. Some institutions opt to describe commitments through percentages of projects, which limits aggregability and comparability of adaptation finance commitments across institutions.
- **Milestones:** Eleven of the institutions evaluated have included at least one temporal milestone within their commitment. The inclusion of milestones is promising, though many commitments still lack an articulated strategy for progress in adaptation finance commitments over time. The relative strength of quantum and milestones criteria may reflect the public relations character that some climate commitments have taken on since the Paris Agreement; the international community has continuously emphasized volume and timelines of climate financing.
- **Specificity:** Institutional commitments evaluated for specificity rank extremely high when compared to other categories. No institution with an adaptation commitment scores low, while just three score medium. The majority provide content of varying levels of granularity, from discrete project-level investments to priority sectors for adaptation interventions.
- **Tracking:** Few institutions indicate a strategy for tracking the components of their commitment over time. Just one-third of the group articulate a specific tracking approach. Seven institutions do not address details of tracking in their commitments. In stark contrast to other categories, the group scores notably low on average in tracking. Generally, MDBs involved in the 2022 Joint Report on Multilateral Development Banks' Climate Finance fare better on tracking, with four out of five in the dataset scoring high.

Figure 9. Institutional Adaptation Finance Commitments Evaluated Against Criteria



3.4. EVALUATING ADAPTATION FINANCE COMMITMENTS OF AFRICAN FIS

SRDBs have a substantial opportunity to play a leading role in advancing climate adaptation across Africa, but their effectiveness may be limited without clear and ambitious adaptation commitments. SRDBs have a mandate to contribute to regional integration and regional infrastructure development projects, financial stability, and relationships with stakeholders. They collectively have at least USD 6.2 billion assets under management.[51] To date, however, none of the four African SRDBs have made public adaptation-specific commitments. Below captures the climate finance commitments of these institutions to date:

- **ECOWAS:** In 2021, the Economic Community of West African States (ECOWAS) led the development of a regional climate strategy to support member states in implementing their respective NDCs and NAPs. Notably, the financial institution established by ECOWAS—ECOWAS Bank for Investment and Development (EBID)—deferred to member states' commitments, rather than declaring its own.
- **East African Development Bank (EADB)**: In 2018, EADB committed to carbon neutrality using a two-pronged approach: reduction of electricity consumption or renewable energy alternatives and purchase of Carbon Emission Reductions (CERs) to offset emissions.
- **West African Development Bank (BOAD)**: BOAD lacks adaptation commitments, although it was listed as a financier of specific actions under the regional climate strategy.
- **Eastern and Southern African Trade Development Bank (TDB)**: TDB and the French Development Agency (AFD) signed a USD 150 million credit line to support the development of green infrastructure in member states, further encouraging alignment with NDCs.

Public financial institutions in Africa and the Middle East have extremely limited adaptation finance commitments. While some of these institutions are beginning to incorporate climate change into their strategic planning efforts, there are significant strides to be made in formulating their own commitments as potential regional leaders on climate adaptation. This analysis finds no adaptation finance-specific commitments across the 24 public financial institutions in Sub-Saharan Africa and MENA.

This section is largely focused on public financial institution commitments to climate adaptation because these institutions to date have been more likely to make public commitments given their mandates and regulatory conditions. Private institutions, however, also have a critical role to play in adaptation finance flows and are increasingly announcing climate commitments to align with the goals of the Paris Agreement, which advances an aim to make finance flows consistent with a low-emissions and climate-resilient pathway.

In practice, commitments made to date by the private sector have been almost entirely focused on the low emissions component of the Paris Agreement while commitments towards alignment of private finance flows with a climate-resilient pathway have been limited. Corporations, institutional investors, and commercial banks each must play a role in financing adaptation activities and aligning their commitments with a climate-resilient future, and all three have significant room for growth in articulating commitments to this end.

- **Corporations:** Though two-thirds of Fortune Global 500 companies have a climate commitment, very few of these commitments speak materially to climate adaptation and resilience.[52]
- **Institutional investors:** There is growing coordination among institutional investors on climate adaptation, as evidenced by a recent publication by the Institutional Investors Group on Climate Change of a discussion paper to support the development of a Climate Resilience Investment Framework.[53] There is still significant work to be done to advance adaptation specific institutional commitments. For example, the Paris Aligned Asset Owners have published an institutional statement related to Paris alignment, but none of the 10 commitment elements cover the climate-resilient pathway element of the Paris Agreement.[54]
- **Commercial banks:** Commercial banks are increasingly making climate commitments—as of 2022, 128 had made a commitment to net zero. As with institutional investors, commercial banks' climate commitments to date are almost entirely focused on the mitigation side

of the Paris Agreement, with little attention to climate-resilient pathways.

- **Central banks and financial regulators:** Central banks and financial regulators are also playing an increasingly important role in the incorporation of climate resilience in strategic planning efforts. They are progressively integrating climate-related risks into their supervisory frameworks, recognizing that climate change affects the financial system through physical risk to assets and transition risks during the shift to a lower-carbon economy.[55] This shift has been influenced by the potential disruption of central banks' primary mandates, such as price and financial stability, and banking supervision. In line with its mandate, the IMF is also increasingly incorporating climate change risk into its macro-financial policy advice and stress testing frameworks.[56] The IMF recently joined the Network of Central Banks and Supervisors for Greening the Financial System (NGFS)[57] and is developing a framework for assessing climate-related risks.

3.5. LESSONS LEARNED AND RECOMMENDATIONS

A handful of institutions are leaders in goal setting and commitments to adaptation finance globally, notably MDBs, multilateral climate funds (MCFs), and individual bilateral development finance institutions (DFIs), as evidenced by the Joint Framework—but dedicated and comprehensive institutional commitments remain lacking. By defining and disclosing adaptation commitments, more public financial institutions can signal intent to respond to growing calls for action in this space. While a useful first step, simply setting an adaptation finance goal is insufficient; the commitment must have a high quantum of finance, be specific and contain delineated timelines for action, and must advance a strategy for evaluation of progress over time.

National, regional, and sub-regional institutions lag behind multilateral institutions in quality and number of adaptation finance commitments. Regrettably, there is limited evidence of interaction between these institutions and MDBs on adaptation finance commitments or tracking. The lack of guidance from, and alignment between, MDBs can act as a considerable barrier for smaller public FIs to progress on adaptation finance. If MCFs and MDBs are excluded, the data starkly reveals that adaptation finance is not a focus of institutions making climate commitments. Furthermore, the remaining institutions that have adaptation finance commitments, consisting of Sub-Saharan African SRDBs and IDFC members, have significantly lower quality commitments.

Collaborations can help create quality commitments that are more ambitious and holistic. The commitment evaluation finds the AfDB to have the most comprehensive commitment in the dataset, aiming to mobilize USD 25 billion by 2025 to scale climate adaptation across Africa. In collaboration with the GCA, the AfDB developed the Africa Adaptation Acceleration Program (AAAP),[58] a program that supports improvements in climate resilience across four pillars. This program enables AfDB to invest in adaptation through its execution of the commitment as its primary goal and support from technical expertise through GCA. In this regard, the AAAP acts as a catalyst for the AfDB to make more ambitious, comprehensive, and expert-guided climate adaptation commitments.

4 Analysis of Instruments Deployed for Adaptation Finance

Key Messages

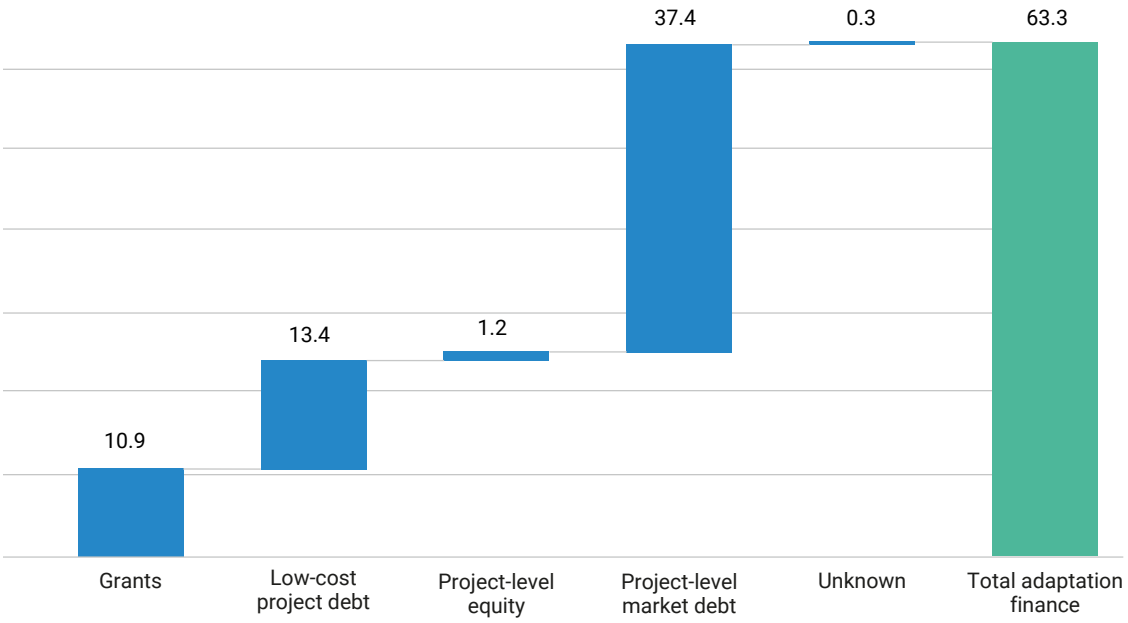
- Globally, debt continues to be the most utilized instrument to deliver adaptation finance, increasing in 2021–2022 to 80% of total adaptation finance from 70% of flows in 2019–2020. The remaining share consists predominantly of grants with a minor proportion of equity investment.
- To close the gap between current adaptation flows and the needs of countries, a wider range of financial approaches are required. Given the substantial debt burdens of many countries, especially those facing severe climate risks, financial instruments beyond traditional debt approaches should be deployed, including debt-for-climate swaps, results-based finance, local currency swaps, and guarantees.
- To scale private adaptation funding effectively, innovative approaches and partnerships are essential in addressing and overcoming investment barriers. Based on currently available data, private actors, including corporations and philanthropies, have committed limited volumes of finance to date to adaptation. Overcoming barriers to private adaptation finance can be accelerated by increased collaboration with public actors and the greater use of blended finance to mitigate risks and incentivize greater investment.

4.1. INTRODUCTION

Market-based debt is currently the most common instrument used to mobilize adaptation finance globally. The latest data from CPI indicate that in 2021–2022, project-level market rate debt[59] constituted USD 37.5 billion (or 59%) of average annual adaptation flows. This represents an increase from 2019–2020 when project-level market rate debt accounted for USD 24.2 billion (or 46%). Notably, equity investments represent a small fraction of the global landscape of adaptation finance. In the context of adaptation finance, traditional instruments such as debt are set to remain pivotal for future delivery. Nonetheless, diversifying the utilization of financial tools and addressing challenges like debt stress, through the Common Framework[60] and debt negotiations, are imperative. Refer to Annex 1 for an existing IMF strategy to address financing challenges faced by countries with high climate risk and debt burdens.

The volume of concessional finance flowing to adaptation increased modestly, but its proportion relative to other financial sources diminished between 2019–2020 and 2021–2022. In 2019–2020, grants accounted for about 19% of total utilization, and low-cost debt was at 24%; these figures dropped to 17% and 21% in 2021–2022, respectively. Non-market rate instruments are essential for enabling investments in countries where high risks prevent market rate capital investments. Concessional capital is also critical for leveraging private sector investments.

Figure 10. Average Annual Adaptation Finance Flows by Instrument (USD billion, 2021–2022)



4.2. PUBLIC SECTOR ADAPTATION INSTRUMENTS LANDSCAPE

Market-based debt also emerged as the predominant instrument for adaptation finance from public institutions in 2021–2022. According to CPI's recent analysis, market-level debt accounted for USD 36.8 billion (or 60%) of the total public finance channeled for adaptation. This was followed by concessional (low-cost) project debt, which contributed USD 13.4 billion (or 22%), and grants which contributed USD 10.5 billion (or 17%).[61] Other instruments, such as project-level equity and unspecified instruments, accounted for USD 0.9 billion (or 1%).[62]

Increased debt utilization was largely driven by national DFIs and multilateral DFIs. National DFIs increased debt utilization compared to 2019–2020 by 58%, and multilateral DFIs by 51%. The utilization of much-needed concessional instruments by the public sector remained virtually the same between periods.

Governments remained the primary providers of grants, with their utilization seeing only a marginal increase between 2019–2020 and 2021–2022. Although national DFIs increased the overall amount of finance delivered using low-cost project debt, the volume provided by multilateral and bilateral DFIs decreased.

In the African context, concessional instruments dominated the deployment of public adaptation finance. Concessional instruments were used to deploy 77% of the adaptation finance in Africa, with grants dominating the flows with approximately USD 5.3 billion (or 43% of all flows), and low-cost project debt following with USD 4.2 billion (or 34%).[63] Project-level market rate debt amounted to USD 2.8 billion (23% of the flows). Multilateral DFIs emerged as the main source of adaptation finance in the African context. Governments followed, providing adaptation finance mostly with grants.

Figure 11. Average Annual Public Adaptation Finance Flows by Instrument (USD billion, 2021–2022)[64,65]

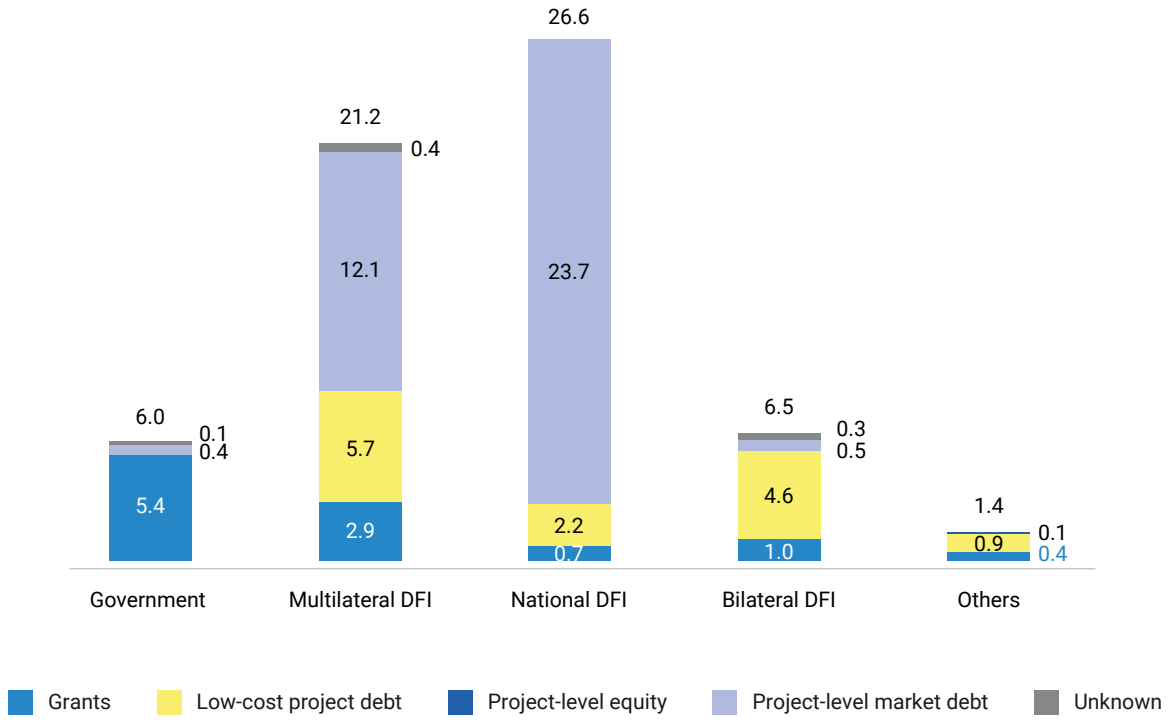
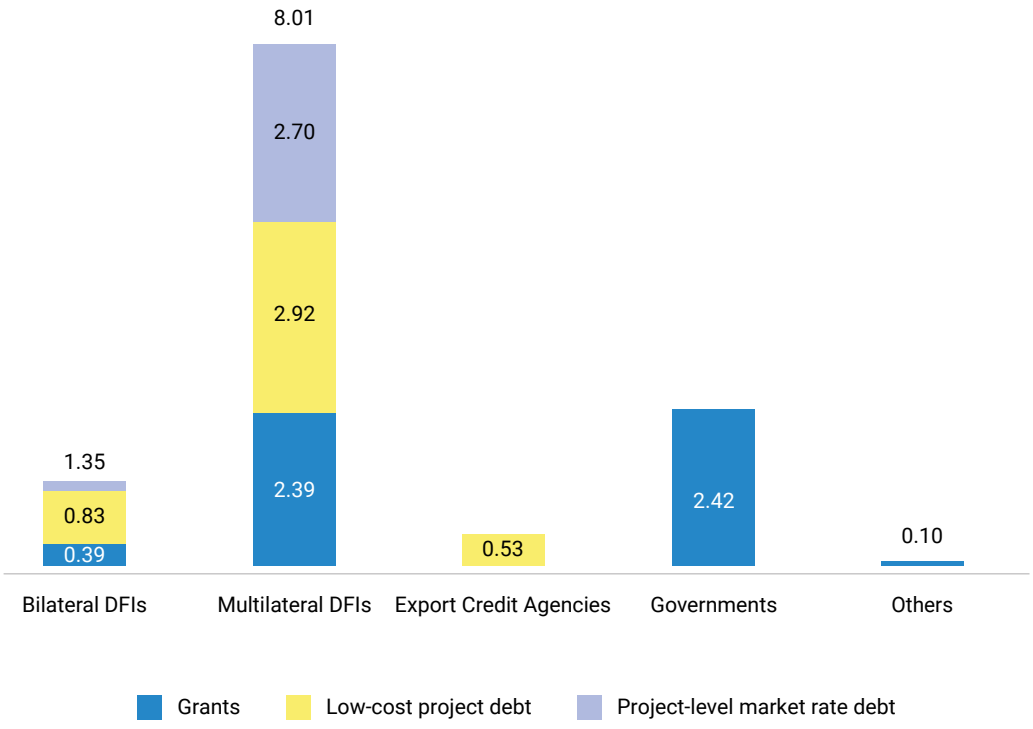


Figure 12. Average Annual Public Adaptation Finance Flows by Instrument in Africa (USD billion, 2021–2022)[66]



Adaptation finance for developing countries should be delivered through a diverse array of innovative instruments to prevent exacerbating their debt burdens. Increased demand for public health initiatives and stimulus spending, coupled with a dramatic reduction in tax revenues during the COVID-19 pandemic, placed immense financial pressure on low- and middle-income countries, resulting in rising debt-to-GDP ratios.[67,68] Recent reporting by the IMF identified that by the end of 2022, global public debt reached 92% of GDP—and that 60% of low-income countries and 25% of emerging economies are either in or at risk of debt distress.[69]

Data from the Notre Dame Global Adaptation Initiative (ND-GAIN) Index and the IMF's World Economic Outlook reveals that almost all low-income countries facing high sovereign debt levels are highly vulnerable to climate change.[70] As a result of the fiscal burden, these nations prioritize debt repayment over much-needed adaptation investments. Furthermore, climate vulnerability itself has compounding financial repercussions: one study found that climate vulnerability raised the average borrowing cost by 1.2%.[71]

To reduce the gap between existing adaptation finance and global adaptation finance needs, various financial instruments beyond traditional debt approaches are needed to unlock and scale investments. Though traditional instruments are needed to spur and bridge the gap of public adaptation investments, instruments beyond market-based debt are required to balance and scale the finance flows without further aggravating debt burden, especially on already vulnerable and severely indebted countries. Table 4 provides a compilation of various financial instruments available for adaptation.

Box 2: Deep Dive – Evaluating Debt-for-Adaptation-Swaps [72,73,74]

Debt-for-adaptation swaps have emerged as an alternative to bridge adaptation finance gaps and tackle debt distress, yet they face several barriers impeding their widespread adoption. Creditor-debtor dynamics introduce complexities, as some creditors hesitate to adjust or cancel debts, and debtors may resist due to perceptions of sovereignty infringement or fears of adverse economic and social implications. Moreover, establishing these swaps demands intricate, prolonged negotiations among diverse stakeholders, sometimes taking years to finalize—and they are susceptible to evolving external dynamics. Lastly, the effectiveness of these swaps is often questioned; will they only cover a minimal fraction of a country's total debt, possibly failing to provide meaningful debt relief or adequate funding for environmental programs?

To overcome the barriers of debt-for-adaptation swaps, the intervention of major financial institutions, like the World Bank and the IMF, is essential. These entities could reform debt relief programs, such as the World Bank's Debt Service Suspension Initiative and the IMF's Catastrophe Containment and Relief Trust, to promote these swaps. Additionally, they should collaborate with lenders to standardize swap practices and strategically design programs that target the most suitable loans and countries.

Table 4. Financial Instruments Available for Adaptation Finance[75, 76, 77]

Category	Description	Typical Use Case	Example
Debt-for-Climate Swaps	Debt swap in which the debtor nation, instead of continuing to make external debt payments in a foreign currency, makes payments in local currency to finance domestic climate projects.	Countries with high climate vulnerability, and significant but manageable debt levels,[78] and no imminent liquidity crisis. Institutional capacity is required to execute.	**Belize and The Nature Conservancy (TNC) debt-for-nature swap** (2021). The Nature Conservancy (TNC) and the Belize Government finalized a USD 364 million marine conservation debt conversion, reducing Belize's debt by 12% of GDP.[79]
Financing Facilities	Debt or equity funding for a pool of projects, companies, or individuals at various levels of concessionally including subordinated debt and equity, private equity funds, and other debt facilities.	Wide ranging: Can support investment which requires aggregation and coordination.	**Catalyst Climate Resilience Fund** (2015–present). The Catalyst Climate Resilience Fund (CCRF) is the leading impact fund and accelerator supporting pre-seed tech startups that are building a climate resilient future in Africa.[80]
Grants	Non-repayable or no interest rate reimbursable funding. Can include development grants, Technical Assistance funding, and Project Preparation Facility.	For projects that serve a critical development objective, but where the commercial potential is low, or funding is needed to make the effort 'investment ready'.	**West Africa Coastal Areas Resilience Investment Project (WACA)** (2018–2023). The WACA program is aimed at strengthening the resilience of targeted communities and areas in coastal Western Africa through bilateral support with traditional development partners for concessional and grant financing.[81]
Guarantees	A financial safeguard where a third-party guarantor commits to repaying part or all of a loan to the lender if the borrower defaults.	When a project requires a credibility boost to secure loans acting as a de-risking mechanism provided by a third party.	**USDA Water and Waste Disposal Loan Guarantees:** (2020–present). The USDA Water and Waste Disposal Loan program guarantees 80% of loans for rural water and waste projects, spurring private investment in essential public utility infrastructure.
Insurance	The most common form of risk transfer. Can include catastrophe bonds, parametric insurance, index insurance.	Cases with high climate risk. Most effective when climate data is robust, regulatory conditions are workable, and there is trust in insurance payouts.	**Quintana Roo Reef Protection Parametric Insurance:** (2018–present). Swiss Re and The Nature Conservancy collaborated to deploy the first insurance that funds reef restoration immediately after hurricanes, based on wind speed.[82]
Liquidity Instruments	Grant or debt facilities that are designed to provide immediate access to capital. Most frequently shock-responsive cash transfers, liquidity support, and domestic budget reallocations.	In response to insufficient financial and technical capacity in the face of emergency situations.	**IMF Catastrophe Containment and Relief Trust (CCRT)** (2015–present). The CCRT offers debt relief grants to the poorest countries affected by major natural or public health disasters.[83]
Local Currency Swaps	Long-term finance options in local currency through fixed and inflation-linked swaps designed to mitigate the dual risks of currency and interest rate fluctuations for climate investments.	Commonly deployed to support investments in emerging markets, to hedge against currency and interest rate volatility.	**Long-term FX Risk Management (TCX)** (2013–present). TCX specializes in mitigating currency and interest risks for energy investments in developing nations, enabling long-term, local currency financing. It has supported the de-risking of more than USD 8 billion in loans since its inception.
Project Finance	Direct debt or equity investments into a single/set of project(s) across commercial or concessional finance including first-loss debt, off-taker guarantees, direct infrastructure investments, and Public–Private Partnerships financing.	Direct development and investment in an infrastructure project or for financing based on a government contract.	**Patong Desalination Investment** (2020–present). The project's primary objective is producing safe drinking water in regions with seasonal water scarcity using seawater desalination. Funded by Climate Investor Two (CI2).[84]
Results-Based Finance	Debt or grant capital for a project or portfolio of projects that is contingent on the achievement of certain outcomes. Can include impact notes, climate bonds, and conservation trusts.	Blended finance approach: Involving favorable repayment terms or bonuses for achieving policy outcomes. Can support insufficiently bankable projects.	**European Bank for Reconstruction and Development Climate Resilience Bond** (2019). EBRD launched the first ever dedicated climate resilience bond, raising USD 700 million with the issuance.[85]

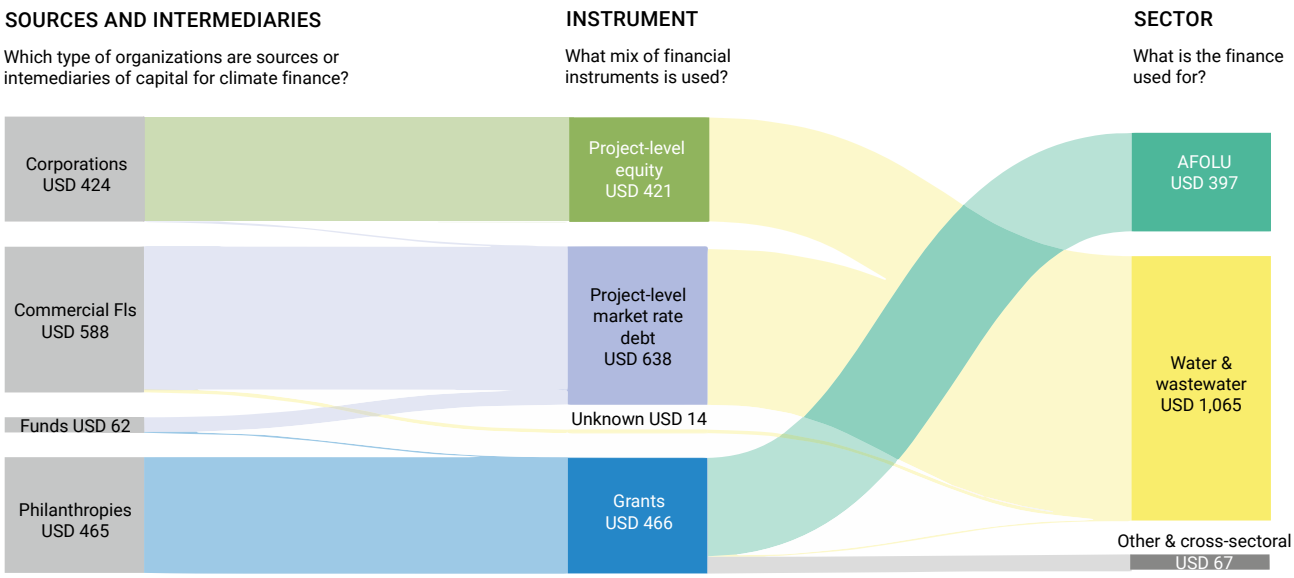
4.3. PRIVATE SECTOR ADAPTATION INSTRUMENTS LANDSCAPE

The tracked flows of private sector institutions lag considerably in total volume of adaptation investments. Within these flows, project-level debt has emerged as the primary instrument deployed by the private sector towards adaptation. Market-level debt financing accounted for USD 638 million (or 41% of the total private finance for adaptation). This was followed by grants, which contributed USD 466 million (or 30%), and project-level equity with USD 421 million (or 27%). Unknown instruments accounted for the remaining USD 13 million (2%). Tracked project-level equity and market rate debt from the private sector flowed almost entirely to water and wastewater projects while grants from the private sector (largely from philanthropies) flowed almost entirely to AFOLU and other & cross-sectoral activities (see Figure 13).

Tracking the flows and instruments used by private entities to mobilize adaptation funding is challenging. A lack of common definitions and established tracking mechanisms leads to limited or incomplete information regarding the funders, administrators, and recipients of adaptation financing. Thus, reporting conducted by private actors rarely identifies investments as 'adaptation', and rather focus on outcomes, or categorizes these investments under other terms like 'resilience' or 'risk management'.[87,88] Limited tracking also hinders the identification of instrument use.

Private sector actors encounter several barriers that inhibit them from engaging with adaptation investment opportunities. Adaptation investments are often considered as high-risk due to their perceived and, at times, actual low returns—as well as the challenges associated with monetizing their benefits.[89] Additionally, the inherent long-term nature of many adaptation projects often conflicts with the private sector's short-to-mid-term business horizons. This discrepancy makes it difficult for them to justify the up-front costs, particularly when future paybacks remain uncertain.[90] Moreover, the lack of information regarding climate risks makes it challenging to price the risks accurately and identify where investments are most required. This is compounded by the lack of

Figure 13. Overview of Tracked Private Adaptation Finance Flows (USD million, 2021–2022)[86]



clarity regarding the full environmental and social benefits of these investments.

The increasing recognition of climate change as a key risk management issue is driving several corporates to enhance the resilience of their supply chains and operations. Financing instruments, such as green bonds and sustainability-linked loans, are now being explored as mechanisms to address these challenges.[91] More specifically, resilience bonds, a subset of green bonds, are emerging as an innovative financial instrument to unlock private finance for resilience projects.[92] Public actors can play a crucial role to leverage private investments by issuing these resilience bonds; these bonds can pay for adaptation projects, with repayments funded by user fees from the benefiting private sector entities—successfully leveraging private investment in adaptation and resilience.[93]

Enhancing blended finance solutions poses an opportunity to leverage the private sector's adaptation investments.[94] Combining concessional public funds with private capital can prove instrumental in catalyzing private investments for climate and green growth projects, especially in emerging markets. By mitigating both real and perceived risks, the blended approach can enable greater private capital involvement, particularly in crucial sectors like infrastructure.[95]

Blended finance usually employs various instruments, such as bonds and notes (which can take the form of privately placed securities or public issuances), facilities like private equity funds and funds-of-funds structured with concessional capital in the stack, as well as specific projects. Furthermore, companies with 'blended' financial structures, as direct recipients, are another significant instrument, leveraging the benefits of this dual concessional market level approach.[96]

Adaptation blended finance lags in the blended finance market, securing only USD 7.5 billion in total over the past decade. In contrast, mitigation has dominated the space, attracting an approximate USD 64.2 billion since 2013.[97] Hybrid transactions—those which address both mitigation and adaptation activities—are emerging as an opportunity area for private actors to invest in, and have impact on, adaptation goals. These types of transactions accounted for USD 18.5 billion in the last decade.[98] The agricultural sector received the majority of the hybrid transaction deals (27%).

5 Challenges and Recommendations

Key Messages

- Adaptation finance tracking is significantly constrained by data gaps, methodological inconsistencies, and reporting issues at both domestic and international levels.
- Useful progress has been made by a handful of international development financial institutions but much more needs to be done to standardize, harmonize, and disclose granular, consistent, and comparable information on adaptation finance.
- The challenges are amplified for private financial institutions where there is lack of regulatory pressure, market demand, and incentives to report data on private adaptation financing.
- There is real opportunity for governments and regulators to strengthen climate finance tracking systems, for development financial institutions to provide transparent leadership, and for civil society organizations to coordinate and develop simplified adaptation finance tracking methodologies for the private sector to adopt in an easy, effective, and efficient manner.

5.1. INTRODUCTION

Improved higher quality adaptation finance tracking is key to measuring progress. Tracking helps in identifying gaps and barriers in financing adaptation and resilience solutions globally and in Africa—effectively scaling up financing flows. This enables better insight into the relative effectiveness of different solutions and their associated financing. It plays a crucial role in measuring progress, and ensuring the scaling is at the required pace and meets the identified needs.

Comprehensive adaptation finance tracking should cover all actors across the financial value chain and at different levels. Climate finance refers to local, national, or international financing—drawn from public, private, and alternative sources of financing—that seeks to support mitigation and adaptation actions that will address the impacts of climate change.[99] A robust and comprehensive adaptation finance tracking exercise must collect adaptation finance data from a range of financial actors across public, private, domestic, and international levels which vary significantly in their size, operations, and geographical contexts. Table 5 lists the major challenges related to data, reporting, and methodologies in tracking adaptation finance.

Despite these challenges, adaptation financing from international public financial institutions is relatively well documented. As discussed in Section 2, the MDBs and the group of DFIs that are the members of the IDFC, have committed to the MDB-IDFC Common Principles for Tracking Adaptation Finance which outline a rigorous three-step process to identify adaptation projects and track adaptation finance. The adaptation finance contributions from these financial institutions are relatively well documented and publicly available through the OECD-CRS database and annual reports such as the Joint Report on Multilateral Development Banks' Climate Finance. While this is progress, many of these institutions still experience challenges in tracking adaptation finance as captured in Table 5. The continuation of their joint efforts to collaborate and work through the challenges is crucial for helping catalyze wider progress.

Table 5. Challenges in Tracking Adaptation Finance Flows

Methodological Challenges	
Definitional	There is currently no common definition of adaptation finance that can be easily adopted by all stakeholders. There is a wide spectrum of potential solutions that could be used across sectors to ensure that communities, systems, and infrastructure are adapted to climate change. This constrains comparability and transparency.
Variation in disclosure requirements and incentives	Particularly in the private sector, disclosure of resilient investments is limited.[100] A lack of standards and reporting requirements limit private sector actors' incentives to report adaptation finance and many institutions simply do not have the tools to identify investment as adaptation or resilience. At present, private sector finance to adaptation is very difficult to compare to public finance in light of the inconsistent definitions and methodologies. Gaps in tracking private sector adaptation finance create significant uncertainty regarding current overall progress towards financing adaptation.
Lack of domestic budget tagging	The lack of comprehensive climate tracking of domestic budget expenditures leads to significant data gaps in tracking domestic public climate finance.
Mix of incremental and total tracking	The MDB and IDFC recommend the use of incremental or proportional cost of adaptation to report adaptation finance—capturing a share of finance dedicated to adaptation activities.[101] However, in practice, only the MDBs are following the incremental/proportional approach while other DFIs, climate funds, and governments largely report the total cost of the projects and all institutions report the full amount for mitigation finance, which yields comparability challenges between adaptation and mitigation finance.[102]
Different capacities to deploy use of methodologies	Adaptation finance tracking methodologies used by MDBs and large DFIs which are members of the International Development Finance Club (IDFC) are often quite robust and resource intensive. Smaller DFIs, as well as other public and private financial institutions and governments, might not have the required technical, institutional, and financial capacity to implement these methodologies (and may not receive transparent information about the approaches of larger institutions). This leads to varied levels of practical implementation, incomparability in reporting, and difficulty in aggregating data from different institutions.
Context dependency	Climate adaptation is highly context specific. Whether an investment has adaptation and resilience outcomes depends on specific regional or local vulnerabilities. It can thus be difficult to define and tag the expected outcomes of a financial flow.
Lack of impact metrics	As the amount of adaptation finance grows, it is important that tracking of adaptation finance goes beyond measuring financing volume to capturing impact, results, benefits, and outcomes. Climate adaptation does not have a central impact metric equivalent to the tons of CO_2 emissions that is commonly used for mitigation. This often leads to multiple impact metrics being used by different actors to evaluate the project performance—making it harder to identify, aggregate, and compare financing flows and associated impact.
Limited understanding of adaptation end goals	There is a lack of collective understanding of what needs to be done to scale up adaptation financing and what are the intended objectives of combined adaptation efforts.
Institutional Challenges	
Confidentiality issues	Several DFIs and private financial institutions have strict client confidentiality, commercial sensitivity, and data protection concerns. This may make them reluctant (and legally constrained) to publicly disclose granular information about adaptation projects, such as intended objectives, achieved outcomes, and associated adaptation finance flows.
Fragmented data and processes	As many adaptation projects are cross-sectoral, there are several operational teams (besides dedicated strategy, policy, finance, monitoring and evaluation, research and communications teams) that are involved in the data collection and reporting process. Despite progress in engagement and collaboration, different teams often use disparate data collection methods and tools, leading to fragmentation of data. This can make it difficult to have a unified view of the information across different platforms and processes.
Limited agility and delay in responses	Integrating data from different sources and teams can be a complex task. This may cause organizations to either respond slowly or provide limited data in the given timeframe without high granularity and consistency. Complex data collection processes also hinder the organization's ability to implement new methodologies rapidly and track adaptation finance flows efficiently.

Box 3: Lessons Learned from the Implementation of the MDB–IDFC Common Principles for Tracking Adaptation Finance

MDBs and members of the IDFC adopted the Common Principles for Tracking Adaptation Finance in 2015. Since then, these Principles have been the guiding methodology for developing adaptation-relevant projects and reporting adaptation finance. In 2023 alone, MDBs and the IDFC members financed USD 25 billion and USD 31.6 billion worth of adaptation projects respectively.[103,104] These institutions vary significantly in their organization size, mandates, and geographical presence. Therefore, implementation of the Common Principles for the past eight years in mainstreaming adaptation in the investment decisions and operations of these institutions has generated several lessons, some of them are listed as follows:

1. **Mainstreaming adaptation-development nexus**: Adaptation is no longer considered a mere supplement to development investments; instead, it is seen as a necessity to steer development toward resilience. Consequently, support for adaptation has broadened its scope beyond conventional infrastructure sectors to encompass various areas, including education, health, social protection, financial services, and research and innovation for adaptive solutions.[105]
2. **Distinguishing adaptation from non-adaptation activities**: The MDB adaptation finance tracking methodology requires project activities that contribute to adaptation to be disaggregated from activities that do not. In turn, the entire cost of adaptation-relevant projects does not automatically get counted as adaptation finance. However, a range of methods and approaches are undertaken to reflect the variety of mandates, business models, vulnerability context, data and resource availability. They must be applied consistently within the organization and adhere to the principle of conservativeness.[106]
3. **Improving management practices in adaptation projects**: Integrating adaptation management practices in the design and delivery of effective adaptation projects is of significant importance. These may include, among others, the introduction of better management practices for climate resilience, improved use of climate information, and policy or regulatory reforms that incentivize more climate-resilient practices and behaviors.[107]

Domestic public climate finance data availability in Africa is increasing but still remains fragmented for adaptation. Many African nations have been actively working to enhance budget planning processes, integrating climate finance into their existing development strategies. Since 2012, 14 African countries, have engaged in Climate Public Expenditures and Institutional Review (CPEIRs) to analyze international support, and domestic climate-related expenditures.[108] Despite these efforts, implementing climate budget tagging systems (CBT) or similar exercises has proved challenging and resource intensive. Currently, countries like Ethiopia, Eswatini, Mauritius, Namibia, Nigeria, South Africa, and Uganda are in various stages of developing or piloting similar climate coding systems within their Public Financial Management (PFM) frameworks. Publicly available information for such analysis lacks detailed breakdowns of climate finance by use as mitigation and adaptation, by sectors, or project. They often have a time lag in reporting and are not conducted in a periodic manner.[109,110]

High-quality tracking of private investments in adaptation remains elusive globally. Private financial institutions face limited market demand and regulatory pressure for disclosing adaptation-related information, which poses additional challenges to tracking private adaptation finance. Private actors have limited incentives to provide granular, accurate, and comprehensive information due to confidentiality and competition concerns. For example, the Common Principles for tracking adaptation finance, adopted by the MDBs, account for incremental costs of specific adaptation-related activities in a project which is often a complex and resource-intensive methodology. In contrast, accounting for full cost data is more practical and accessible for the private sector.[111] Private sector actors often do not define activities as adaptation finance if they are a function of business continuity or supply chain optimization.[112]

Addressing these challenges will require multi-stakeholder collaboration to track, report, and monitor adaptation finance data in a way that is comprehensive, consistent, and comparable.

5.2. ADAPTATION FINANCE TRACKING RECOMMENDATIONS

A. Governments and regulators:

i. Agree upon a 'North Star' goal for adaptation

Climate adaptation does not have a comparative impact metric, equivalent to the tons of CO_2 emissions that is commonly used for mitigation. This often leads to multiple impact metrics being used by different actors to evaluate the project performance, making it harder to identify and aggregate financing flows. Stakeholders must collaboratively devise an accessible framework encompassing adaptation and resilience actions, technologies, policies, and financing. This framework will help in identifying a north star goal for adaptation finance that is the equivalent of the net zero goal for mitigation finance. Such a goal will clarify any ambiguity in intended objectives for adaptation finance and engage a broader audience from the public and private sectors, spurring investment, innovation, and targeted interventions where they are most essential.[113] The Glasgow-Sharm el-Sheikh (GlaSS) Work Program on the Global Goal on Adaptation (GGA) was established at COP26 in 2021. However, the progress on defining and operationalizing GGA has remained elusive.

In November 2022, at COP27, the Sharm-el-Sheikh Adaptation Agenda provided a valuable list of 30 aspirational, global adaptation outcomes by 2030. The list aimed to inform adaptation plans and strategies by defining simple, specific, measurable impact indicators which can be delivered by implementing specific high-impact adaptation solutions. This can serve as a step towards further synthesis and consolidation to a single or limited set of clear outcomes agreed by the Parties. Governments should also further regionalize, localize, and refine these adaptation outcomes to provide clarity on what adaptation outcomes should be tracked and prioritized.

ii Link national determined contributions and investment roadmaps with climate finance tracking systems

Across all geographies, converting NDCs and NAPs into adaptation investment plans with viable project pipelines is a crucial step. Many wealthier countries are already investing, in light of predicted climate impacts—often unlocking private resources to invest alongside public investment. This type of approach needs to be accelerated into emerging and developing economies. Led by governments, systems to track and evaluate progress must be established, updated, and strengthened.

At the regional level, Africa has made good progress in developing national strategies for adaptation embedded in the NDCs and NAPs. All African countries have submitted their NDCs, and close to one-third have finished their NAPs.[114] The next step now is to delineate priorities for adaptation investments, funding requirements, and strategies through dedicated adaptation investment roadmaps. These roadmaps can identify specific projects and programs to be funded by international and private financiers. These investment roadmaps must be linked to domestic climate finance tracking systems, including climate budget tagging to create a comprehensive system for domestic adaptation finance tracking.

Some countries have already started work in this direction, which needs to be further strengthened. For example, the NAP for Ethiopia identified 18 major adaptation options that will be implemented at all levels in the country and across different development sectors. These options reflect Ethiopia's strategic developmental priorities and optimize several factors such as cost-effectiveness, existing capacity, sensitivity to vulnerable groups, and potential to build adaptive capacity. However, the NAP mentions the need for capacity building to measure the financing and impact of these options in a consistent, coherent manner, so translating the options into an investment plan is not complete.

iii Advance regulatory alignment with recommendations of the TCFD

The recommendations of the Task Force on Climate Related Financial Disclosures (TCFD) have been transformative in advancing momentum towards standard, credible, and decision-useful voluntary disclosures on climate risks at the portfolio level. In 2021, the United Kingdom was the first G7 country to mandate that all listed companies and large asset owners align reporting with the recommendations of the TCFD. Globally, governments must further advance disclosure regulation informed by the TCFD and must ensure that disclosure standards

increasingly integrate physical climate risk considerations.

B. Development financial institutions:

i Provide transparent leadership

MDBs, multilateral climate funds, and bilateral DFIs that are relatively advanced in their tracking of adaptation finance can and should offer ambitious and transparent leadership on adaptation finance tracking which includes:

- Setting public, measurable, and ambitious climate adaptation finance goals.
- Openly sharing information about the criteria and methodology used to identify and quantify adaptation finance and the data, models, and scenarios that are relevant in the context of tracking adaptation action.

C. Private financial institutions:

i Invest in reporting and disclosure practices for adaptation

Private FIs should support enhanced disclosure and reporting of critical information related to physical climate risks and opportunities. Public disclosure of adaptation finance data promotes transparency within the financial industry and ensures that climate-related financial information is accessible, comparable, and reliable, reducing information asymmetry and enabling investors to make more informed decisions.

According to the 2023 status report on the implementation of the TCFD, acute physical risk was the most frequently identified risk type by investors driving decreased revenues from decreased production capacity, decreased asset value or useful life, and increased capital expenditure.[115] However, less than 20% of the banks that conducted a form of physical risk scenario analysis had assessed the impact of scenarios on their business.[116] There are significant data gaps in assessments which require detailed information on the location of company assets, their nature (type, vulnerability, adaptations), the use of localized or regional climate models, and challenges with acute event attribution to climate change which are not provided by investee companies. Investing in filling these data gaps is critical to improve the uptake and reporting of physical risk management practices via TCFD.

Private FIs should make appropriate climate commitments and join one of the coalitions representing their investor category. Specific institutions and coalitions are paying increased attention to the challenges and implications of adaptation. Entities should participate proactively, forming internal teams to develop their own responses. The United Nations Environment Programme Finance Initiative (UNEP-FI) and Principles of Responsible Banking (PRB) both have existing initiatives on integrating and progressing adaptation and resilience financing—these must go further, quicker.

ii Raise awareness and build capacity within finance and operations teams

There is a need to raise awareness within private sector institutions on the benefits of reporting adaptation finance externally, during engagements with investee companies. Sector-level experts should be trained on climate adaptation concepts and terminology so that they can be comfortable reporting and tracking activities that build resilience. When sector specialists within financial institutions have a better understanding of climate vulnerability, resilience building, and climate adaptation finance, it will improve documentation efforts.

D. Civil society and international organizations:

i Develop, harmonize, and simplify adaptation finance methodologies

Currently there are different adaptation finance methodologies being adopted by the public and private sectors. The recommendations of the TCFD have had a positive impact on the physical climate risk disclosure ecosystem. Many other reporting frameworks and bodies such as the International Financial Reporting Standards (IFRS), CDP (formerly Carbon Disclosure Project), GRESB (Global Real Estate Sustainability Benchmark), IOSCO (International Organization of Securities Commissions), and UN Principles for Responsible Investment (PRI), are increasingly aligning with the TCFD recommendations and are including physical climate risk related indicators.[117] Further progress to develop, harmonize, and simplify adaptation-relevant reporting standards will be critical to increasing efficiency across disclosure.

Box 4: Emerging Solutions to Respond to Adaptation Finance Tracking Challenges

Per analysis in this report and in prior work[118] advanced by GCA and CPI on adaptation finance, it is clear that **high-quality adaptation finance** tracking is critical to identify trends and gaps, monitor commitments, support stakeholders in their reporting, and ensure that adaptation finance scales at the required pace to meet growing needs.

As noted throughout Section 5, we have found that while headway has been made by a handful of public financial institutions to resolve data gaps, methodological inconsistencies, and reporting issues, much more must be done to standardize, harmonize, and disclose granular, consistent, and comparable information on adaptation finance.

GCA and CPI are developing a cohesive work program of activities for an **adaptation finance tracking platform** with the following key aims:

1. Increasing clarity on, and integrity of, adaptation finance commitments and implementation.
2. Progressing on challenges identified in work to date, notably variation in disclosure requirements and incentives, lack of coherent and usable adaptation impact metrics, and limited understanding of adaptation end goals.
3. Increasing country-level action and capacity in adaptation finance tracking. The adaptation finance tracking platform's work program will progressively include:
   - Development of an online platform for adaptation finance tracking, initially populated with information from existing analyses to create a central repository of information.
   - Research and convenings focused on international public financial institutions in order to capture and further disseminate current approaches to setting adaptation finance targets and tracking flows and to advance recommendations towards the creation of consistency among MDBs, bilateral DFIs, and regional DFIs.
   - Activities focused on improving tracking of public domestic climate adaptation finance through the development jointly with stakeholders of each category of methodologies to track and report climate adaptation finance. The key categories of stakeholders will include (i) bilateral agencies and DFIs; (ii) regional DFIs; (iii) NDBs; (iv) Ministries of Finance; and (v) other financial institutions. This pillar of work will also include capacity-building activities to support the improved accounting of adaptation investment flows that are already happening and the decision-making processes to expand and accurately reflect new adaptation financing. This will involve engagement at the regional and country level.
   - Development of a suite of additional knowledge products on adaptation finance tracking, including landscape(s) of regional and national adaptation finance, a landscape of adaptation finance addressing specific sectors or groups of countries (e.g., water-stressed countries, FCV countries, SIDS), and landscape reports by financial institution categories.

6 Intersection of Adaptation Finance and Humanitarian Assistance

Key Messages

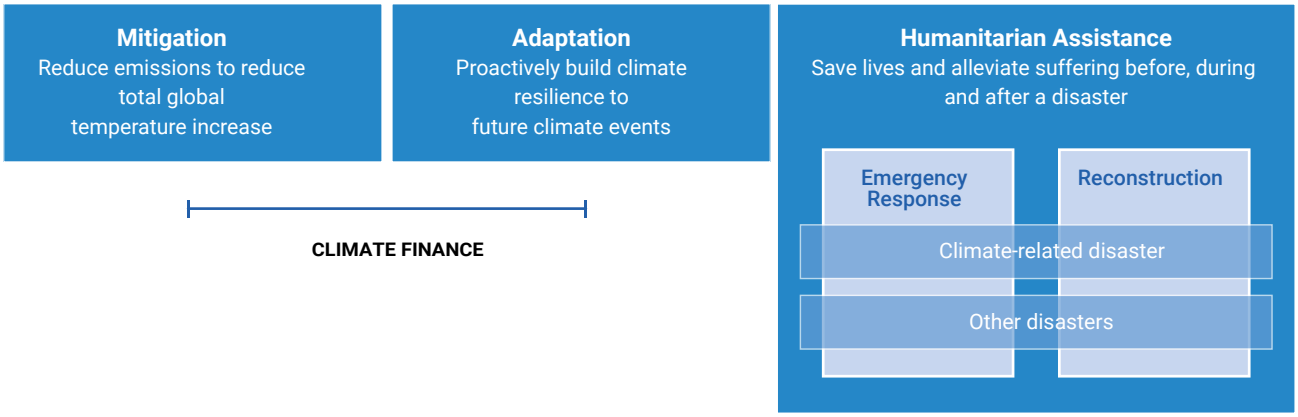
- As climate-related disasters increase, the need for emergency response funding is growing. The importance of accurately tracking and accounting for both adaptation finance and humanitarian assistance funding to avoid double counting or re-labelling of funds will be paramount.
- The most fragile African countries struggle to access adaptation finance and are instead dependent on emergency response funding to cope with hazards. Re-evaluating eligibility requirements for accessing international adaptation funding could help to unlock much-needed finance for these highly vulnerable states.
- Only one-in-ten post-disaster reconstruction projects are reported as being designed and delivered with adaptation and resilience objectives in mind. However, a commitment to build back better should be mainstreamed across all reconstruction projects, ensuring resilience is embedded and maladaptation is avoided.
- Stakeholders in the emerging Loss & Damage finance agenda can learn from experience in the humanitarian sector for deploying rapid response funding following the onset of a climate-related disaster.

6.1. INTRODUCTION

Humanitarian assistance is intended to save lives and alleviate suffering, both during and after a disaster.[119] It is generally provided on a needs basis, giving priority to the most urgent cases, irrespective of cause.[120] The severity and frequency of climate-related humanitarian crises have increased in recent years,[121] with those in need of humanitarian assistance often facing multiple, cascading risks in relation to conflict, food security, health and climate change, among others.[122] Establishing climate attribution is certainly complex, however, there is a consensus that climate change is driving new, and compounding existing, crises. It is putting the humanitarian system—as well as limited finance—under further strain.[123] Indeed, with insufficient mitigation, and inadequate adaptation, the losses and damages associated with climate change—and the concurrent humanitarian need—will continue to spiral.

As is the case with international adaptation finance (Section 2), though international[124] humanitarian assistance funding has been growing in recent years, it continues to fall far short of estimated needs and funding appeals.[125] This section compares international public humanitarian assistance funding (defined here as 'emergency response funding'[126] and 'reconstruction funding,'[127] as reported by donors to OECD CRS) with international public adaptation finance committed between 2019–2021.[128] A deep dive on emergency response funding specifically committed to African countries, as compared to their adaptation finance, is also provided.

Figure 14. Depiction of Different Funding Categories



The aim of this new analysis is to:

1. Better understand the nature and magnitude of each funding category depicted in Figure 14.
2. Explore the implications of the overlaps between these funding buckets.
3. Provide key messages for actors working in the humanitarian sector and on climate change adaptation.

This first-time analysis provides an exploratory assessment of the intersection between adaptation finance and humanitarian assistance funding, and is limited to international public funding flows in the period 2019–2021 for comparative purposes. A wider universe of humanitarian assistance funding—beyond that reported to the OECD CRS—could also overlap with adaptation finance.[129] Given the escalation of climate-related disasters, both now and anticipated, there is a need to rapidly increase coordination and collaboration between actors working on these topics to maximize possible synergies, minimize duplicate action, and deploy limited resources as efficiently and effectively as possible.

6.2. ADAPTATION FINANCE AND EMERGENCY RESPONSE FUNDING

The total volume of international emergency response funding is on par with the magnitude of international adaptation finance flows. Between 2019–2021, USD 94 billion was committed by international donors as emergency response funding in developing countries prior to, or during, crises relating to food insecurity, health, conflict, and adverse weather events, among others. This funding bucket is of the same magnitude as the international adaptation finance flows tracked over the same period (USD 91 billion).

Of the tracked USD 94 billion in emergency response funding, 1.4% (or USD 1.3 billion) was also tagged as adaptation finance. This funding overlap includes projects that increase capacity to prepare for, respond to, and recover from climate-related disasters—that is, ex-ante anticipatory action (see Box 5)—as well as ex-post response projects with resilience objectives built into project design and delivery. In addition to this explicit tagging, which indicates the overlap between emergency response and adaptation, various emergency flows that were not explicitly tagged as adaptation nevertheless responded to drought, flooding, and food insecurity (for a total of USD 8.5 billion). Increased frequency and severity of all three event types is highly correlated with climate change, thus we consider these flows to be potentially climate-related.[130] The wider bucket of non-climate-related funding largely responds to conflict- and health-related emergencies.

Box 5: Anticipatory Action in Somalia

Anticipatory action—a topic that has long commanded the attention of actors in the humanitarian sector—refers to activities taken in the expectation of a crisis, whether by aid actors, government officials, service providers, or affected populations themselves.[131] Anticipatory action is supported by pre-agreed finance, which is triggered (and therefore disbursed) subject to crossing some pre-defined threshold, often in relation to weather forecasts or risk analyses.[132]

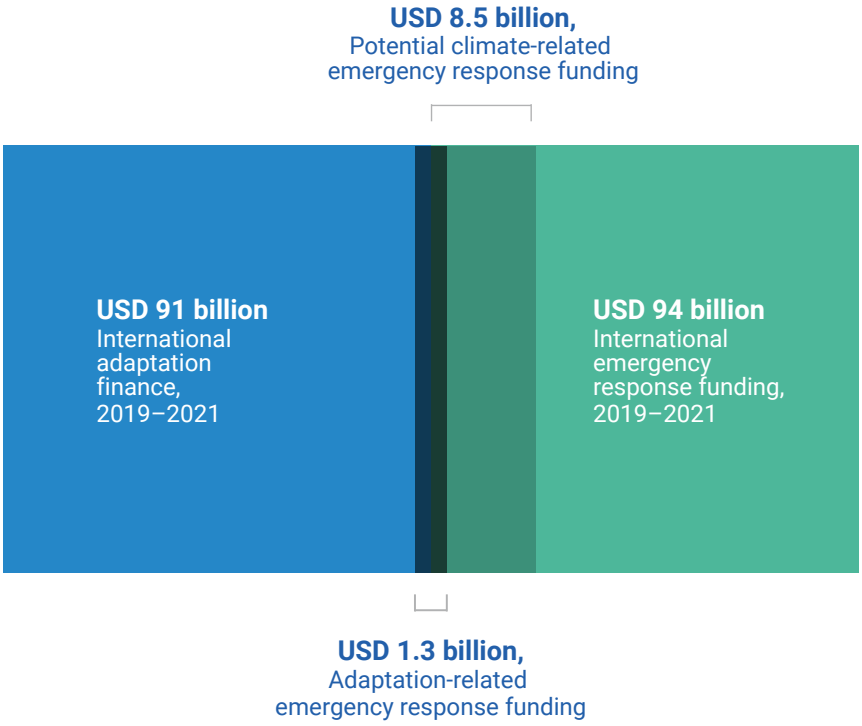
In recent years, Somalia has been suffering from a prolonged humanitarian crisis, enduring recurrent climate shocks—including drought, flooding and tropical storms—compounded by conflict and food insecurity.[133] Since 2020, the World Food Programme (WFP) has piloted anticipatory action in the country, supported by the Central Emergency Response Fund (CERF). CERF has established itself as one of the fastest, most predictable, and most flexible ways of delivering humanitarian assistance—filling temporal funding gaps which bilateral donors often struggle to address.[134] Following previous, and responding to further anticipated, rainy seasons in Somalia, the WFP leveraged an existing national safety net platform to deliver early cash transfers to vulnerable populations, thereby mitigating the adverse impact of predicted failed rains. This monetary assistance was complemented by early warning messaging and investments in community-level infrastructure and soil and water conservation.[135] The WFP's work in Somalia has demonstrated the effectiveness of implementing anticipatory action through safety nets, as well as illustrating the importance of disseminating early warning systems throughout affected communities.[136]

Indeed, more broadly, a study on anticipatory action in the agricultural context emphasized the importance of providing vulnerable populations with information on: weather and climate; how the crisis is expected to evolve; as well as agricultural practices and livestock health.[137] All these actions and activities overlap with the purview of adaptation actors, therefore, anticipatory action is, or could be, a focal point for overlap between the climate adaptation and humanitarian sector, ensuring the preparedness of communities to withstand, and recover from, the adverse impacts of climate change. Anticipatory action yielding heightened preparedness is a relatively low-cost but effective measure, with one study estimating that every USD 1 invested in early response and building resilience (in the context of drought) can save approximately USD 3 in humanitarian aid.[138]

As climate-related disasters increase, the need for emergency response funding will grow, as will the importance of accurately tracking and accounting for each funding category to avoid double-counting or re-labelling of funds. As shown in Figure 15, USD 1.3 billion or 1.4% of total international adaptation finance committed between 2019–2021 was also counted as international emergency response funding. This represents the explicit tracked overlap, as reported by donors, however, the extent of the overlap could be larger in reality. The overlap between international adaptation finance and emergency response funding is promising if it indicates humanitarian aid is also being made climate-resilient,[139] but as the frequency and severity of climate-related disasters escalate, donors will need to ensure that they are both increasing the pool of each respective funding category and improving coordination between, or shared objectives for, each pool. Greater scrutiny will help prevent double-counting or re-labelling of funds, at the expense of additional finance.[140] Ultimately, placing the emphasis on anticipatory adaptation action to avoid or minimize prospective losses and damages now, could help to save billions in humanitarian aid later.[141]

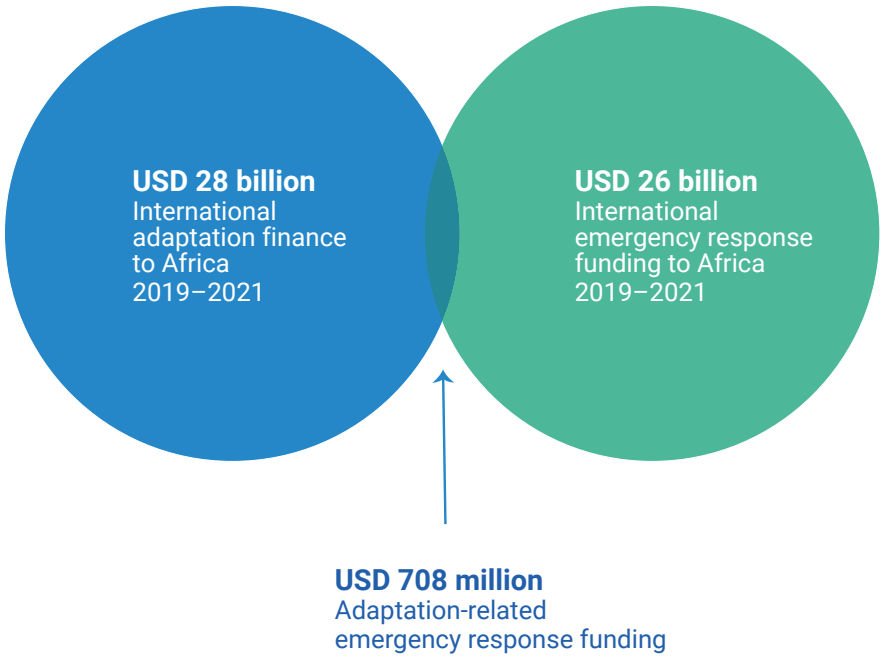
Between 2019–2021, USD 708 million or 3% of international emergency response funding to Africa was also tagged as adaptation finance. It is now well-established that climate change poses a grave threat to the African continent, with fragile and conflict-affected states particularly at risk.[142]

Figure 15. Interlinkages between Tracked Funding Buckets, 2019–2021



This is because climate shocks worsen existing fragilities.[143] As such, the argument for ensuring climate finance is additional to emergency response funding—as opposed to re-labelling or redirecting funds—takes on even greater importance in this regional context. Overall, international public adaptation finance to Africa (USD 28 billion) was of a similar magnitude to international public emergency response funding (USD 26 billion) committed to the continent between 2019–2021 (see Figure 16).

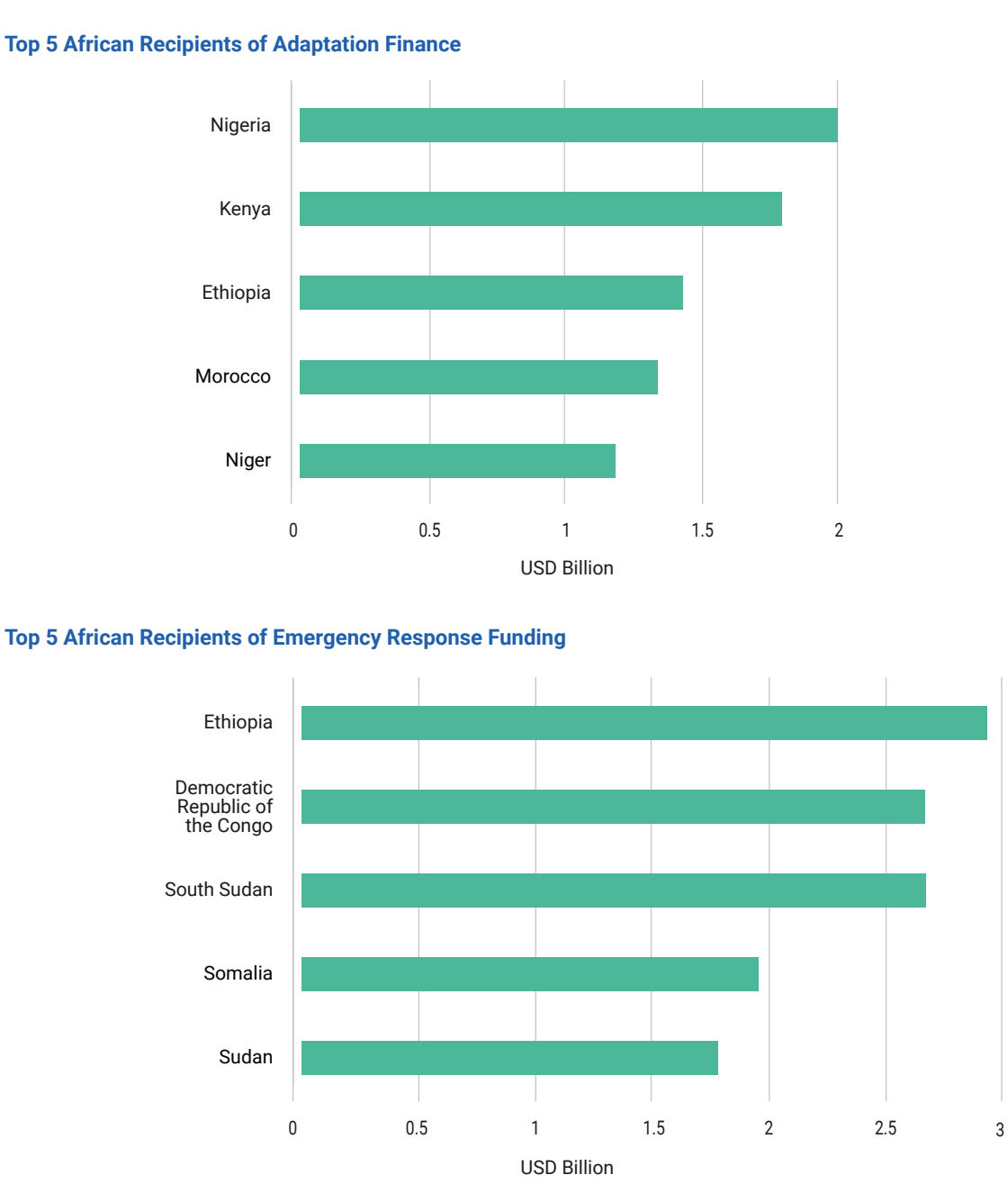
Figure 16. Interlinkages between Tracked Funding Buckets, 2019–2021



The most fragile African countries struggle to access adaptation finance and are instead dependent on emergency response funding to cope with hazards. The top 5 African recipients of international emergency response funding between 2019–2021 were all ranked as some of the most fragile states globally, either on 'high' or 'very high' alert.[144] However, only Ethiopia surfaced among the top 5 African recipients of international adaptation finance in the same period (see Figure 17). This reflects the challenges that highly fragile and conflict-affected states face in trying to access climate finance.

Accessing international adaptation finance is dependent upon achieving certain enabling conditions domestically—rather than distributing funding purely based on vulnerability considerations[145]—a requirement often at odds with the realities of fragile, conflict-affected states. Re-evaluating eligibility requirements for accessing international funding could, then, help to unlock adaptation finance for these highly vulnerable states, otherwise constricted to, or dependent on, emergency response funding flows.

Figure 17. Interlinkages between Tracked Funding Buckets, 2019–2021



6.3. ADAPTATION FINANCE AND POST-DISASTER RECONSTRUCTION FUNDING

Between 2019–2021, USD 271 million or 8% of international reconstruction funding was also counted as adaptation finance. The bucket of international post-disaster reconstruction funding (USD 3.4 billion) is much smaller than that of emergency response funding, however, its overlap with adaptation finance is proportionally larger (8%) (see Figure 18). This is positive in that it suggests almost one-in-ten post-disaster reconstruction projects are being designed and delivered with adaptation and resilience objectives in mind. However, arguably that overlap should—and could—be much larger, if resilience was to be mainstreamed into all post-disaster reconstruction, ensuring that recipients build back better with the next emergency in mind (Figure 18).

Those advancing the emerging Loss & Damage (L&D) finance agenda can learn from experience in the humanitarian sector for deploying rapid response funding following the onset of a climate-related disaster. Where adaptation is inadequate, or anticipatory action falls short, L&D finance will be needed to facilitate vital reconstruction and rehabilitation in the wake of a climate-related disaster. Indeed, the post-disaster period is critical to ensure that already vulnerable communities receive the support they need to recover and rebuild, and to avoid falling into cycles of crises, thus the speed with which L&D funding can be deployed will be critical.[146] Humanitarian aid models can, then, provide learnings on the potential for rapid disbursement, for example, through the use of pooled funds or forecast-based funding (see Box 6).[147]

Figure 19 summarizes the tracked funding flows in this chapter, illustrating the difference in magnitude between international adaptation finance and emergency response funding, on the one hand, and post-disaster reconstruction funding on the other. The analysis is specific to international public funding and should not, therefore, be considered an exhaustive picture of all humanitarian assistance funding committed in the period 2019–2021.

Figure 18. Summary of Tracked Funding Flows (USD billion), 2019–2021

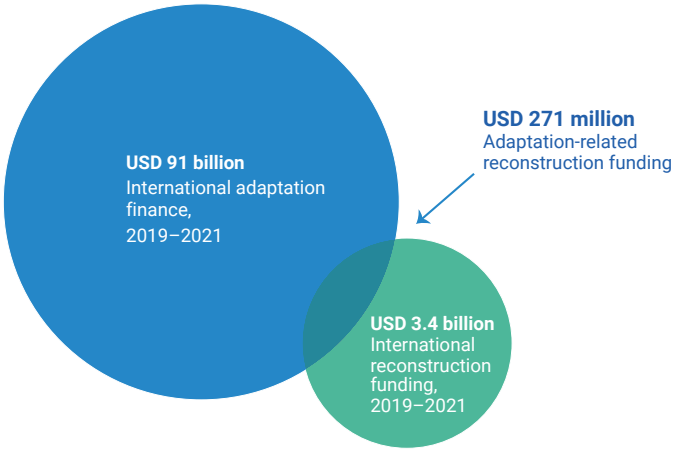
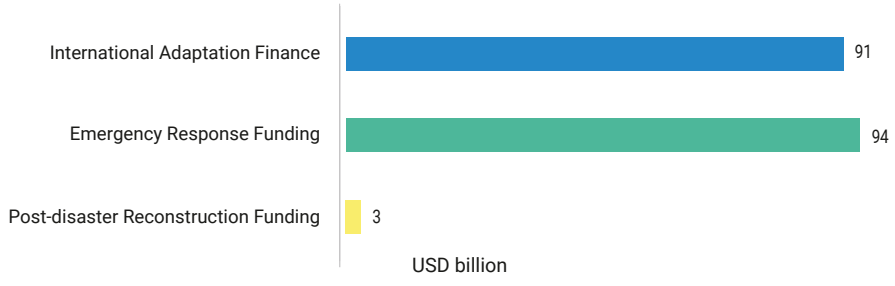


Figure 19. Summary of Tracked Funding Flows (USD billion), 2019–2021



Box 6: Financial Mechanisms for Rapid Disbursement

Given the time-sensitive nature of emergency response and reconstruction, the humanitarian sector has established various financial mechanisms that could offer essential guidance and learnings for actors working on the emerging loss and damage agenda. Some particularly relevant examples include:

Country-Based Pooled Funds (CBPFs): These funds are managed by the Office for the United Nations Coordination of Humanitarian Affairs (OCHA) taking contributions from public donors, as well as some private sector actors, and collecting them into a single fund to later support high-priority projects as set out in Humanitarian Response Plans.[148] CBPFs are leading sources of funding to promote early response ahead of predictable hazards (i.e. anticipatory action) with early contributions and multi-year funding agreements enabling the deployment of assistance to those most in need, leveraging existing local networks and local actors. With allocation decisions taking place close to the affected population, these funds facilitate an agile response in rapidly changing contexts.[149]

Forecast-based Financing (FbF): This funding mechanism enables early access to humanitarian funding based on in-depth forecast information and risk analysis, a key feature of which involves agreeing on financial allocations in advance of a shock or crisis, together with the specific threshold that needs to be breached for then releasing those financial resources.[150] For example, based on a forecast of a major cyclone in Bangladesh in 2023, the Red Cross was able to disburse affected populations with cash grants prior to the storm hitting, providing them also with infrastructure to protect their belongings and in which to store clean water for later use.[151]

Humanitarian Insurance: While this funding mechanism is still novel within the humanitarian sector, actors are increasingly exploring the design, purchase, and implementation of insurance-like instruments for risk transfer.[152] Using such mechanisms to pre-arrange funds ahead of crises is, in fact, a novel way of working for many in the humanitarian sector, however, analyses demonstrate the justification for applying an insurance model to humanitarian aid; often, it is more cost-efficient to purchase insurance to cover large unpredictable costs, that do not occur often, than to hold funds back in reserve for such an occasion, thereby forgoing the use of these substantial reserve funds.[153]

All of these funding mechanisms are predicated on pre-arranging finance prior to the onset of a crisis, thereby creating the conditions to plan for, and design, better humanitarian outcomes. Actors working on Loss & Damage can, therefore, learn from these established funding mechanisms with a view towards replicating them in a climate finance context.

Annex 1: Building Resilience to External Shocks and Ensuring Sustainable Growth: IMF's Resilience and Sustainability Trust

Given the increasing impact of climate change on macroeconomic stability, the IMF is expected to play a critical role in innovating new financing mechanisms to enhance climate resilience while addressing other long-term development issues. For instance, the Bridgetown Initiative, led by the Prime Minister of Barbados and representing a significant effort in reshaping global development finance, identifies the IMF as having a central role due to its existing financing facilities and its efforts to facilitate the rechanneling of Special Drawing Rights (SDRs) to nations in need, such as the Resilience and Sustainability Trust (RST).[154]

The relatively recent RST introduced by IMF in 2022, aims to enhance economic resilience and foster long-term sustainable growth, especially for low- and vulnerable middle-income countries facing challenges such as inflation, high debt burdens, geopolitical threats, along with climate change and pandemic preparedness.[155] This trust represents a strategic shift from the IMF's traditional tools like the General Resources Account (GRA) and the Poverty Reduction and Growth Trust (PRGT), focusing instead on longer-term financing.

The RST offers longer-term financing designed to support economic resilience and promote sustainable growth, extending beyond traditional Overseas Development Assistance (ODA) eligibility.[156] It is available for 143 eligible countries, including all low-income countries (LICs), vulnerable small states, and lower middle-income countries (LMICs). The financing terms include a 20-year maturity and a 10½-year grace period.[157] Notably, the RST allows for the channeling of funds from wealthier IMF members to countries with greater needs.

As of September 15, several countries, including Australia, Canada, China, France, Italy, Japan, Korea, Lithuania, Luxembourg, Netherlands, Oman, Spain, the United Kingdom, Estonia, and Germany, have recycled part of their Special Drawing Rights (SDRs) to the RST, and five countries have been approved for RST assistance: Bangladesh, Barbados, Costa Rica, Jamaica, and Rwanda.[158]

Annex 2: Assessment of Finance Institution Adaptation Commitments – Methodology

The dataset includes commitments from 60 public financial institutions that are members of the following groups: the International Finance Development Club (IDFC), multilateral development banks (MDBs), African national development banks (NDBs) and sub-regional development banks (SRDBs), and Middle Eastern or North African NDBs and regional development banks.

Institution Type	Institution
African NDB	▪ Caisse des Dépôts et Consignations Benin ▪ Caisse des Dépôts et Consignations Cameroon ▪ Caisse des Dépôts et Consignations Gabon ▪ Development Bank of Angola ▪ Development Bank of Ethiopia ▪ Development Bank of Namibia ▪ Development Bank of Nigeria ▪ National Development Bank of Zambia ▪ National Investment Bank (Cote d'Ivoire) ▪ TIB Development Bank ▪ Uganda Development Bank
African SRDB	▪ East African Development Bank ▪ ECOWAS Bank for Investment and Development (EBID) ▪ Trade and Development Bank (TDB) ▪ West African Development Bank (BOAD)
IDFC member	▪ Africa Finance Corporation (AFC) ▪ Agence Française de Développement (AFD) ▪ Banco Industrial y de Comercio Exterior (BICE) ▪ Bancoldex ▪ Black Sea Trade and Development Bank (BSTDB) ▪ Brazilian Development Bank (BNDES) ▪ Cassa Depositi e Prestiti (CDP) ▪ Central American Bank for Economic Integration (CABEI) ▪ China Development Bank ▪ Corporacion Financiera de Desarrollo S.A. (COFIDE) ▪ Croatian Bank for Reconstruction and Development (HBOR). ▪ Development Bank of Latin America and the Caribbean (CAF) ▪ Development Bank of Southern Africa (DBSA) ▪ Industrial Development Bank of Turkey (TSKB) ▪ Korea Development Bank ▪ Kreditanstalt für Wiederaufbau (KfW) ▪ Nacional Financiera ▪ PT Sarana Multi Infrastruktur (PT SMI) ▪ Small Industries Development Bank of India (SIDBI)

Institution Type	Institution
MENA NDBs and RDBs	▪ Bank of Industry & Mine ▪ Caisse de Dépôt et de Gestion (CDG) ▪ Caisse des Dépôts et Consignations Tunisia ▪ Emirates Development Bank ▪ National Development Fund of Saudi Arabia ▪ National Investment Bank of Egypt ▪ National Investment Fund (Algeria) ▪ Qatar Development Bank ▪ Arab Fund for Economic and Social Development
Multilateral Climate Fund	▪ Adaptation Fund ▪ Global Climate Change Alliance ▪ Global Environment Facility ▪ Green Climate Fund ▪ Least Developed Countries Fund ▪ Pilot Program for Climate Resilience
Multilateral Development Bank	▪ African Development Bank ▪ Asian Development Bank ▪ Asian Infrastructure Investment Bank ▪ European Bank for Reconstruction and Development ▪ European Investment Bank ▪ Inter-American Development Bank ▪ Islamic Corporation for the Development of Private Sector ▪ Islamic Development Bank ▪ Japan International Cooperation Agency (JICA) ▪ New Development Bank ▪ World Bank Group

Part 3
Strategy and Planning to Redouble Adaptation in Africa

Key Findings and Messages

- Finance for adaptation is critical but it is not enough to protect the continent. Knowing what to do first, and having the institutions with the capacity to take adaptation actions at scale, is equally important.
- Africa has made good progress in developing national strategies for adaptation embedded in the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). All but one country have completed their NDCs, and close to one-third have finished their NAPs.
- The breadth and depth of these strategic documents and the quality of the enabling environment to support adaptation investments varies across the continent. About half of African nations have a good or better environment for adaptation investments.
- Seven countries in Africa have all the key strategic and planning elements for adaptation action in place: clear institutional mandates, priority sectors identified, adaptation costs estimated, and specific adaptation goals stated. These countries are ready to absorb financing and implement adaptation programs at scale.
- Notably, low-income countries in Africa are more likely to have a favorable environment for adaptation investments. Many of them have done the homework needed to attract global and regional public and private investors in adaptation.
- There is much work ahead to analyze the adaptation needs of economic sectors and calculate financing needs. A total of 31 African countries have not undertaken this calculation.
- Agriculture, water, and health are priority sectors for most African countries. However, some important economic sectors that are vulnerable to climate change have not yet received sufficient attention and prioritization. One-third of African coastal nations have not prioritized adaptation actions in their blue economies. Only 15 countries in the region identify tourism as a priority sector in adaptation actions. Youth, jobs, and locally led adaptation are themes that need more attention in Africa's adaptation strategies.
- Disaster risk reduction and climate adaptation must work hand in hand. Less than 40 percent of countries make this important connection in adaptation strategies. The institutional arrangements and priority investments are rarely integrated.
- The GCA report offers four key recommendations. First, the ministries of finance and planning need to play a central role in the strategic directions and priorities for adaptation action at scale. Second, adaptation is not only the government's responsibility—choices and priorities for adaptation action require involvement from all stakeholders in African societies. Third, adaptation plans need to be more specific, with clear goals, financing plans, and monitoring systems. Fourth, adaptation plans need to be continuously improved by considering all key vulnerable economic sectors—such as tourism and the blue economy—and by strengthening the linkages with disaster risk reduction.
- New tools—such as the Resilience and Sustainability Trust of the IMF, the Country Climate and Development Reports of the World Bank, and the recommendations of this GCA report—provide deep analysis, recommendations, and financial resources to support institutional and policy reforms and strengthen the capacities of African countries to make their economies more resilient and adapted to a changing climate.

Acronyms

AFD	Agence Française de Développement
AfDB	African Development Bank
BRD	Development Bank of Rwanda
CAEP	Climate Action Enhancement Package
CCA	climate change adaptation
CCDR	Country Climate and Development Report
CGE	computable general equilibrium
CMP	Coastal Management Plan
COP	Conference of the Parties
CRM	Climate Risk Management
DRM	disaster risk management
DRR	disaster risk reduction
EIB	European Investment Bank
FAO	Food and Agriculture Organization of the United Nations
FONERWA	Rwanda Green Fund
GCA	Global Center on Adaptation
GCF	Green Climate Fund
GDP	gross domestic product
GHG	greenhouse gas
IFC	International Finance Corporation
IMF	International Monetary Fund
IT	information technology
IWRM	Integrated Water Resources Management
L&D	loss and damage
LDCs	Least Developed Countries
LTS	Long-Term Strategy
MRV	Measuring, Reporting, and Verification
NAP	National Adaptation Plans
NAPA	National Adaptation Programmes of Action
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NDCP	Nationally Determined Contributions Partnership
ND-GAIN	Notre Dame Global Adaptation Initiative
PFM	Public Finance Management
PRGT	Poverty Reduction and Growth Trust
RCP	Representative Concentration Pathway
RSF	Resilience and Sustainability Facility
RST	Resilience and Sustainability Trust
SDGs	Sustainable Development Goals
SDR	Special Drawing Right
SMSP	Seychelles' Marine Spatial Plan
SSA	Sub-Saharan Africa
SSP	Shared Socioeconomic Pathway
STA21	State and Trends in Adaptation 2021
STA22	State and Trends in Adaptation 2022
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism Organization
WASH	water, sanitation and hygiene
WRI	World Resources Institute

Executive Summary

Mounting evidence continues to show that Africa is the most vulnerable continent to the adverse impacts of climate change. According to the ND-GAIN vulnerability ratings Index, out of the world's top 10 most vulnerable countries worldwide, eight are in Africa.

Increased temperature has already contributed to an estimated 34 percent reduction in agricultural productivity in Africa since 1961—more than any other region in the world. According to the World Meteorological Organization, Africa has been losing between US$7 billion and US$15 billion every year since 2020 due to the devastating effects of climate change—predicted to rise to about US$50 billion per year by 2030. Extreme weather conditions are exacerbating existing inequalities in health, income, employment, and gender—affecting millions of people.

Ramping up climate finance flows for adaptation is critical to addressing the irreversible impacts of climate change, but this alone will not be enough to protect the continent. Having a clear set of priorities, with institutions that have the capacity to plan properly and take adaptation actions at scale, is equally important.

Planning is crucial when making strategic choices for policies and programs for climate adaptation, particularly in the face of constrained budgets. Climate change is a complex and multifaceted challenge that affects various sectors and all of society. Developing effective adaptation strategies requires careful consideration of these interconnections and potential trade-offs. Adaptation action likewise involves multiple levels of government and stakeholder engagement. Planning provides a structured approach to ensure that different policies are consistent and complementary, avoiding conflicts or duplication of efforts and ensuring coordination among actors.

For these reasons, the Global Center on Adaptation (GCA) completed a thorough review of all the national strategic adaptation documents prepared by governments in the African continent. This study provides a detailed review of the main characteristics of these strategic adaptation plans, their depth and coverage, and the degree to which these documents demonstrate a supportive environment (including policies, institutions, and programs) to implement the most critical adaptation programs at scale for each country.

This report has been prepared as an input to the Africa Climate Summit (Nairobi, September 2023). A parallel report reviews the adaptation finance flows to Africa and calculates the gap to meet the needs identified by countries in their strategic adaptation documents. These two reports will serve as input to the preparation of the Country Climate Adaptation Compacts that will build on each country's strategic adaptation documents and specify priority investment programs and projects ready for financing and scaling-up. All these activities are connected to the Africa Adaptation Acceleration Program, which is mobilizing US$25 billion for adaptation investments in the region.

This report reviews the adaptation components of: Nationally Determined Contributions (NDCs), the key documents that emerged from the Paris climate agreement; National Adaptation Plans (NAPs), a UNFCCC-led instrument to drive and coordinate national adaptation actions; and long-term strategies (LTSs), that help countries articulate a national vision for a climate-resilient society.

Many organizations have reviewed different aspects of these documents. For example, in 2018, the Africa NDC Hub in the Africa Development Bank released their NDC Gap Analysis Report of the 44 African NDCs submitted at that time. The World Resources Institute undertook an analysis of the

adaptation components of all countries' updated NDCs for the 2020–2021 submission cycle. The analysis highlights the need for improved guidance on including an adaptation component in NDCs, increased clarity of adaptation goals and objectives, and support for both investment and implementation plans for prioritized adaptation actions. The NDC Partnership's Climate Action Enhancement Package (CAEP) published a report summarizing lessons in developing implementation ready NDCs, across pillars of ambition, quality, and process. The United Nations Development Programme (UNDP) launched the Climate Promise Initiative in 2019, pledging to support at least 100 developing countries to enhance their NDCs. As of August 2023, over 120 countries are affiliated with the Climate Promise. In 2021, UNDP released a Global Outlook Report, "The State of Climate Ambition", which assessed global progression on climate ambition. Finally, the UNFCCC prepared an update on the progress of NAP formulation and implementation as of 2021. This GCA study builds on the excellent analysis of partner organizations in the climate area and focuses on complementary areas of review.

HOW PREPARED IS AFRICA WHEN IT COMES TO ADAPTATION PLANNING?

Africa has made good progress in developing national strategies for adaptation embedded in the NDCs and NAPs. All but one country have completed their NDCs, and close to one-third have finished their NAPs.

The breadth and depth of these strategic documents and the quality of the enabling environment to support adaptation investments varies. To analyze this variation and identify good practices, this study used five areas of analysis: institutional arrangements; development of sectoral plans; finance needs estimates; links between adaptation with disaster risk and reduction efforts; and monitoring and evaluation for adaptation goals. These are priority areas of governance and planning in forming an effective enabling environment for investment.

The analysis shows that African nations have done a good job in the preparation of their adaptation strategy. About half of African nations have a good or better environment for adaptation investments. Furthermore, seven of the 53 African countries included in the study can be classified as having best practices in the continent including: clear institutional mandates; priority sectors identified; adaptation costs estimated; timelines indicated; and specific adaptation goals stated. These countries are ready to absorb financing and implement adaptation programs at scale. Many other countries have good practices in some of the above elements. There are enough examples to support every country in the region in upgrading their adaptation strategies and planning.

Our analysis shows that low-income countries in Africa are more likely to have a favorable environment for adaptation investments. Close to half of them have higher-quality adaptation strategy documents. Many of them have the strategies and planning to absorb more resources.

UNPACKING THE ENVIRONMENT FOR ADAPTATION INVESTMENTS IN STRATEGIC PLANNING DOCUMENTS

The "Institutional Arrangements for Adaptation" chapter in the GCA's 2022 State and Trends in Adaptation report gave an overview of the importance of setting up an institutional framework for climate governance to plan, legislate, and manage the implementation of adaptation actions in a country. Close to one-third of African countries have a relatively mature institutional framework for climate adaptation action, that involves other ministries and branches of government. Another 11 countries have taken the initial step to designate a clear ministry or agency responsible for leading their climate-related initiatives.

For example, in Tanzania the Vice President's Office holds the responsibility for monitoring and evaluation of environmental aspects relating to NDC implementation. Additionally, the National Climate Change Steering Committee and Zanzibar Climate Change Steering Committee play a pivotal role in guiding the coordination and execution of the NDC. Their functions encompass providing policy guidance, ensuring action coordination, and facilitating cross-sectoral participation. Cameroon has incorporated religious and tribal chiefs into its climate institutional framework. This approach not only ensures the reach of adaptation readiness to the community level but also provides a more effective means of doing so.

One key finding is that countries should clearly outline their priority sectors in their strategic adaptation documents. By prioritizing specific sectors, countries can develop targeted adaptation strategies and measures that address specific vulnerabilities. Such tailored approaches ensure that adaptation investments are effectively utilized, maximizing their impact and promoting resilience in the areas that need it the most. Well-developed adaptation sectoral goals, which include financial estimates for implementing adaptation measures, provide a clear roadmap for action and effective utilization of resources.

Among the 50 countries with identified priority sectors in their strategic adaptation documents, 18 provide measurable goals to be achieved within their respective sectors. For example, Kenya and Madagascar have well-defined priority sectors and goals that are time-bound, demonstrate ownership, and include financial requirements. Senegal has adopted an interesting approach with flexible and adaptable goals based on a short-term warming horizon of 2°C and a long-term, more challenging 4°C temperature rise. With comprehensive plans for both scenarios, Senegal has mainstreamed these into short-, middle-, and long-term plans for adaptation and development.

Another critical finding is that the full power of adaptation goals and measures requires a well-functioning monitoring and evaluation system, but only 17 countries in Africa have a basic one. Kenya has successfully developed an integrated Measuring, Reporting, and Verification (MRV) system along with integrated MRV tools for adaptation actions, and a good alignment with the institutions and actors involved in adaptation efforts. Most importantly, the report generated for the MRV system is a collaborative effort, involving both state and non-state actors.

Including financial needs in NDCs and NAPs allows countries to strategically plan and prioritize their adaptation actions. This information is crucial for attracting support and mobilizing resources from international donors, development agencies, and financial institutions. In our analysis, 22 African countries excelled in providing detailed information regarding the financial resources needed to implement their specific adaptation goals. For example, Angola has outlined specific strategies for mobilizing the necessary resources, including domestic funding mechanisms and potential avenues for international cooperation.

LINKING ADAPTATION WITH DISASTER RISK REDUCTION

Climate and disaster risks are growing faster than our collective efforts to build resilience. The consequences of not anticipating, reducing, and managing disaster risks before they manifest as shocks can be dire for societies, livelihoods, and the ecosystems on which we depend. The climate change adaptation (CCA) and disaster risk reduction (DRR) agendas overlap in several ways. Risk reduction cannot occur without the use of climate data; equally, successful CCA depends on risk reduction. For this reason, it is crucial for countries to integrate DRR into their adaptation planning documents. Combining resources and efforts, rather than addressing disasters and climate change separately, can lead to greater efficiency and impact. Despite this, less than 40 percent of African countries in the study had tangible links between their DRR initiatives and their adaptation strategies.

Some good practices include South Sudan, which has outlined a strong institutional framework for DRR across its strategic adaptation documents, with an appointed ministerial focal point for the sector that is embedded within the greater institutional arrangements for adaptation. Lines of communication and coordination between stakeholders are outlined clearly. The NAP includes nine priority sectors, within which adaptation programs are outlined. These programs are expected to be linked to a monitoring and evaluation framework, as well as a budgeting plan to identify sources of funding for implementation.

PRIORITIZING SECTORS AND THEMES

Agriculture, water, and health are priority sectors for most African countries. However, some important economic sectors that are vulnerable to climate change have not yet received sufficient attention. For example, one-third of African coastal nations have not prioritized adaptation actions in their blue economies. Only 15 countries in the region identify tourism as a priority sector, even though it is an important economic sector for the region and it

is highly vulnerable to climate change. There is also a need to incorporate human settlements and infrastructure into adaptation planning.

Some good examples among the sectors that have received less attention include Mauritius, which has a mature institutional approach to the blue economy. Seychelles has a comprehensive coastal management plan with an integrated blue economy approach and incorporates Resilience to Blue Carbon Ecosystems as a priority sector in the NDC. Kenya has a specific goal of conducting risk and vulnerability assessments for its tourism sector. Lesotho has expressed its intention to increase the preparedness of tourism and recreational operations to tackle extreme weather conditions. Malawi takes a step further by actively working on the development of a comprehensive tourism crisis management strategy and plan.

Key cross-sectoral themes also require prioritization, such as youth, jobs, and inclusion. The study found that NDCs and NAPs generally included consultation processes with local communities for the formulation of documents but lacked clarity regarding participation in the planning and implementation phases of adaptation measures. Research shows that adaptation measures are more successful and sustainable in the long term if there is a sense of ownership among local communities and vulnerable populations.

NEW TOOLS TO HELP POLICYMAKERS

Alongside the recommendations in the GCA report, the World Bank and the IMF have developed new instruments that can support policymakers to strengthen institutions and policies on climate change.

The World Bank has developed a new core analytical tool called the Country Climate and Development Report (CCDR) that analyzes the macroeconomic and sectoral impacts of climate change on countries and provides specific recommendations on programs, policy reforms, and institutional strengthening measures to deal with climate change.

Thirteen African countries are currently covered by CCDRs, and 10 are forthcoming. The macroeconomic and sectoral assessments in CCDRs show that the direct impacts of climate-related shocks on African economies are context-specific but tend to be large and increasing over time. The first set of CCDRs provides country-specific recommendations for adaptation that are economy-wide or relate to the agriculture, water, health, and environment sectors. In terms of interventions and investments, the CCDRs focus on climate-smart agriculture, climate finance, governance, and urban planning as key policy issues for adaptation.

The IMF has developed the Resilience and Sustainability Trust to support policy reforms that reduce macro-critical risks associated with climate change and pandemic preparedness, and to augment the policy space and offer financial buffers to mitigate the risks arising from such longer-term structural challenges.

For example, in December 2022 the IMF Executive Board approved an arrangement for the Government of Rwanda to access US$319 million through the Resilience and Sustainability Facility (RSF), the first for an African country. The first review of Rwanda's program under the RSF was completed in May 2023, allowing for an immediate disbursement equivalent to about US$98.6 million for budget support. The reform areas for Rwanda include: strengthening and institutionalizing monitoring and reporting of climate-related spending; integrating climate risks into fiscal planning; improving the sensitivity of public investment management to climate-related issues; strengthening climate-related risk management for financial institutions; and strengthening the disaster risk reduction and management strategy and operations.

RECOMMENDATIONS

This report offers four main recommendations:

- **First, ministries of finance and planning need to play a central role in the strategic directions and priorities for adaptation action at scale.** While sectoral ministries and agencies have a critical policy and implementation role in adaptation, and the Ministry of Environment and/or Climate Change plays a principal role, it is essential to ensure that adaptation is a core theme in the deliberations and choices of the ministries of finance and planning.
- **Second, adaptation is not only the government's responsibility—choices and priorities for adaptation action require all stakeholders**

in African societies. The government plays a fundamental role in encouraging, supporting, and directing adaptation actions among all stakeholders—from households to communities, to the private sector and civil society. Planning and policies are at the core of an effective mobilization of all of society for adaptation action at scale. Conversely, a truly participatory process during the planning and policy formulation is indispensable to ensure all stakeholders take ownership of these changes toward more adapted societies.

- **Third, adaptation plans need to be more specific, with clear goals, financing plans, and monitoring systems**. The NDCs, NAPs, and LTSs provide helpful directions and priorities. Still, there is a gap between these strategic documents and specific sectoral investment programs, well-defined adaptation policies, and bankable adaptation investments.
- **Fourth, adaptation plans need to be continuously improved by considering all key vulnerable economic sectors and by strengthening the linkages with DRR.** This report offers specific areas for consideration by African governments in this continuous improvement process.

Other more detailed recommendations that African countries may consider in their strategic adaptation planning processes include the following.

- Assess how well-established the enabling environment is for adaptation investments in the country's planning process. This study offers a six-level scale that may be used for such assessment and for an improvement program using good practices from other African countries rated higher in this metric. Countries with higher income levels may learn from the excellent strategic work that several low-income, vulnerable countries have done in this area.
- In general, the institutional framework to plan, legislate, and manage the implementation of adaptation actions requires strengthening. This need is not uncommon, even in high-income countries. Having well-defined arrangements for leadership, coordination, prioritization, and funding of adaptation actions is key to success.
- While national cross-sectoral adaptation policies and programs are needed in most countries, achieving effective change in the resilience and adaptation capacities of communities, regions, businesses, and sectors requires more specific and targeted plans and programs at the sectoral and subnational levels. These plans and programs need well-defined goals, financial need estimates, implementation arrangements, and a comprehensive implementation roadmap.
- The monitoring and evaluation systems for adaptation policies and priorities are generally weak in Africa and require strengthening. This is an area of active research and learning in other regions, so there are no ready-made solutions to copy. African countries need to develop systems linked to their national institutions and processes instead of parallel approaches focused on adaptation.
- An effective implementation of the priorities and directions defined by national strategic adaptation documents requires a detailed estimate of funding needs. These estimates vary in quality and depth among the strategic documents reviewed. It is crucial to continuously improve these estimates and link them to the national budget and investment prioritization process.
- It is critical for the African region to enhance coordination between strategic adaptation documents and national disaster risk reduction policies. This could be done by merging initiatives and finding inter-agency coordination mechanisms to ensure the strongest possible leverage between these two areas of work that are, sometimes, not as integrated as they could be.
- African countries should consider gradually expanding the priority sectors for adaptation action to include the blue economy, tourism, infrastructure, and human settlements. Cross-sectoral issues such as inclusion, youth, and jobs should also be incorporated into future versions of adaptation strategies and plans.
- Finally, African countries could leverage further new tools developed by the World Bank and the IMF, such as the Country Climate and Development Reports and the Resilience and Sustainability Trust, respectively. These new instruments provide a robust analysis of policy and institutional reforms needed to strengthen the capacity of African nations to deal with the rapidly increasing impacts of climate change.

1 Introduction

1.1 The Urgency of Climate Adaptation Action in Africa

As worldwide impacts of climate change intensify, it has never been more urgent to scale up adaptation action. Over the past year there has been record-breaking extreme weather globally, with catastrophic floods, wildfires, heatwaves, and droughts on every continent. More frequent and intense extreme weather and climate-related events are creating new and increasing risks everywhere, but Africa is especially vulnerable.

Mounting evidence continues to show that Africa is the most vulnerable continent to the adverse impacts of climate change. According to one of the most credible vulnerability ratings (the ND-GAIN Index), out of the world's top 10 most vulnerable countries worldwide (Somalia, Chad, Niger, Guinea-Bissau, Micronesia, Tonga, Eritrea, the Sudan, Liberia, and Solomon Islands), eight are in Africa.[1] The most recent 2022 Climate Change Report of the Intergovernmental Panel on Climate Change on "Impacts, Adaptation, and Vulnerability"[2] confirmed that West Africa, East Africa, and Central Africa are among the global hotspots of human vulnerability to climate change.

Increased temperature has already contributed to an estimated 34 percent reduction in agricultural productivity in Africa since 1961—more than any other region in the world.[3] By 2030, some 108–116 million people are expected to be exposed to sea-level rise risks.[4] Droughts and floods are also a concern. Since 2020, Africa has been losing between US$7 billion and US$15 billion every year due to the devastating effects of climate change—predicted to rise to about US$50 billion per year by 2030.[5]

Extreme weather conditions are exacerbating existing inequalities in health, income, employment, and gender, particularly in Africa which is affecting millions of people.

Ramping up climate finance flows for adaptation is critical to addressing the irreversible impacts of climate change. Adaptation makes eminent economic and investment sense. Evidence shows that every US$1 invested in adaptation is estimated to generate a return between US$2 and US$10.[6] Yet, adaptation finance in Africa is nowhere close to the needs. In 2019–2020, Africa received US$11.4 billion on annual average in adaptation finance. In 2021–2022, this finance is likely to see a double-digit increase but will remain far below the annual financing need of US$52.7 billion or 2.5 percent of Africa's GDP.[7]

In addition, the fulfillment of climate finance commitments made by developed countries, which involve providing US$100 billion annually as climate finance and doubling their adaptation finance to developing countries from US$20 billion to US$40 billion by 2025, is yet to be fully realized.

With diverse investment conditions across the continent, the ability of African countries to attract climate finance is hugely disparate, with the least developed countries less likely to have the institutional and political infrastructure needed to attract climate financing. Countries receiving greater levels of financing, on the other hand, tend to have established well-defined national policies, investment regulations, national climate finance funds, multiple national accredited entities, coordinating authorities for the climate agenda, and green bonds, among various other initiatives.[8]

The strong political will of African Heads of State shows that the time is right for a global coalition of efforts around Africa to upscale adaptation investments. Through tailored support, there are huge opportunities for countries to increase their ability to mobilize and diversify financing by unlocking private finance in collaboration with Africa's real economy. Achieving this entails strengthening international, regional, and local institutions and engaging the private sector through the establishment of regional, subregional, national, and local technical programs that are tailored and adapted to the specific country's needs and circumstances.

In preparation for the Africa Climate Adaptation Summit to take place in September 2023 in Nairobi, African countries have been invited to prepare Climate Adaptation Country Compacts to strengthen their climate change adaptation agenda and allow them to meet their financial needs, as well as fill their adaptation funding gaps. The Compacts will give individual African countries a solid foundation for decision-making, resource allocation, and greater investments in their adaptation projects and programs. The main objective of the Climate Adaptation Country Compacts is to increase adaptation investments in Africa, in the current context of frequent and intense adverse impacts of climate change on national economies.

1.2 The Need for Strong Planning and Institutions

Planning is crucial for governments when making strategic choices for policies and programs for climate adaptation. Climate change is a complex and multifaceted challenge that affects various sectors and all of society. Developing effective adaptation strategies requires careful consideration of these interconnections and potential trade-offs. Adaptation action likewise involves multiple levels of government and stakeholder engagement. Planning provides a structured approach to ensure that different policies are consistent and complementary, avoiding conflicts or duplication of efforts, and ensuring coordination among actors.

By identifying priority areas and allocating resources based on the most pressing adaptation needs, governments can maximize the impact of their efforts and ensure the allocation of resources is efficient. This is particularly important when resources are limited.

Climate impacts can have significant economic consequences. Planning for adaptation allows governments to help prioritize the most important adaptation actions considering budget constraints and the multiple priorities countries face. Planning also allows countries to define and implement the preferred climate-adapted growth trajectory that reduces the negative economic effects of climate-related shocks.

Planning helps identify vulnerable areas, populations, and sectors that are most at risk from the impacts of climate change. By understanding these vulnerabilities, governments can develop targeted policies and programs to reduce risks and enhance resilience. Developing targeting adaptation action includes defining clear goals and indicators for measuring the effectiveness of efforts. This enables governments to track progress, identify areas where adjustments are needed, and demonstrate accountability to the public and to donors.

Strategic adaptation documents are a key planning tool used by governments to address the impacts of climate change. Africa has made significant progress in developing strategic adaptation documents, but challenges remain in attracting investment and translating these plans into action.

To understand the state of adaptation planning in Africa, the Global Center on Adaptation (GCA) has prepared this regional study.

1.3 The Objectives and Approach of this Paper

The Global Center on Adaptation analyzed the current state of strategic adaptation plans (National Adaptation Plans [NAPs], NDCs, and Long-Term Strategies [LTSs]) to identify the readiness of African countries to identify and implement priority adaptation investments. This study provides a detailed review of the main features of these strategic adaptation plans, their depth and coverage, and the degree to which these documents demonstrate a supportive environment (including policies, institutions, and programs) to implement the most critical adaptation programs at scale for each country.

The objectives of this report are to:

- Understand the progress of adaptation planning in Africa
- Highlight opportunities and ways to improve investment readiness
- Showcase best practice
- Highlight adaptation gaps and priorities in sectors
- Highlight the importance of the connection between disaster risk reduction and the Paris Agreement
- Showcase policies and approaches that are supported by the World Bank and the International Monetary Fund (IMF)
- Provide a list of recommendations.

The report begins by providing a summary of the history of strategic adaptation documents globally and in Africa. It follows with a brief overview of related work and analysis of these strategic adaptation documents to date by other institutions. The report then presents an original analysis of the current state of strategic adaptation plans in Africa—providing statistics of continental coverage and an in-depth discussion of findings. The report then analyzes in detail the depth and quality of sectoral adaptation programs in these plans and identifies gaps in sector prioritization. An important analysis in this report is the level of integration between climate change adaptation and disaster risk reduction management strategies at the country level, to understand whether and how countries leverage the synergies between these two agendas for resource and planning optimization. Finally, the paper reviews two new instruments by the World Bank and the IMF designed to support the institutional and policy reforms of countries in their fight against climate change. The findings are then synthesized to provide recommendations for improved planning and investment readiness at the national level.

This report is an essential first step in understanding the landscape of strategic adaptation documents and investment readiness in Africa. The Country Compacts will provide the next critical step. Meaningful engagement with ministries and other important stakeholders is essential to gain a true understanding of a country's vulnerabilities, priorities, governance structures, and enabling environment. Participatory discussion allows the integration of invaluable insights from leaders themselves into the analysis. The process of Country Compacts facilitates the co-development of optimal investment plans and pathways tailored to a country's specific context and needs.

2 Strategic Adaption Documents

This section provides an overview of the history of strategic adaptation documents, in the context of the Paris Agreement and the Sendai Framework. It then highlights the various assistance programs set up over the years to help countries enhance their NDCs.

2.1 A Brief History of Strategic Adaptation Documents: NDCs, NAPs, and LTSs

The year 2015 marked a historical moment when 196 countries signed the Paris Agreement, with the aim to hold global warming well below 2°C and limit it to 1.5°C above pre-industrial levels. The Paris Agreement also set out a global goal on adaptation—enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change—with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the global temperature goal.

It is important to note that climate documents were also produced prior to the Paris Agreement. The adoption of the Kyoto Protocol in 1997 was one of the earliest events that set the stage for addressing climate change on a global scale. Recognizing the impacts on Least Developed Countries (LDCs) led to the introduction of the National Adaptation Programmes of Action (NAPA) concept. The formal adoption of the NAPA framework in 2001 during the Seventh Conference of the Parties (COP7) in Marrakech solidified its role as a crucial mechanism to assist vulnerable countries in identifying and prioritizing their adaptation needs. The NAPA continues to play an essential role in supporting LDCs in their efforts to cope with the adverse impacts of climate change and build resilience for a more sustainable future.

Parallel to the Paris Agreement, the Sendai Framework was adopted in 2015 at the third UN World Conference on Disaster Risk Reduction—with the objective to reduce the risk of anthropogenic and natural hazards and designed to substantially reduce losses in lives, livelihoods, and health by 2030. The framework presents a universal vision for how societies may collaborate to identify, prevent, and reduce risks before they manifest as shocks or disasters, and to build resilience in the face of climate shocks and disasters. The disaster risk reduction (DRR) and climate change adaptation (CCA) agendas overlap in several ways. They both seek to reduce vulnerabilities to hazards and operate in the context of sustainable development and poverty reduction.

Box 1. Definitions Relating to Adaptation

Adaptive Capacity: The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

Resilience: The capacity of social, economic, and environmental systems to cope with a hazardous event, trend, or disturbance—responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.

Sustainable Development: Development that meets the needs of the present—without compromising the ability of future generations to meet their own needs—and balances social, economic, and environmental concerns.

Vulnerability: The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including susceptibility to harm and lack of capacity to cope and adapt.

Source: IPCC, 2022[9]

2.1.1 Nationally Determined Contributions

Nationally Determined Contributions (NDCs), submitted to the United Nations Framework Climate Change Convention (UNFCCC), are at the center of the Paris Agreement. NDCs embody each country's ambition and goals to reduce its national greenhouse gas emissions and adapt to the impacts of climate change, based on individual national circumstances and development priorities. Together, these documents indicate global progress on the long-term goals of the Paris Agreement.[10]

Under Article 4, paragraph 2, of the Paris Agreement, countries are obliged to submit NDCs every five years, and each successive NDC is expected to represent a progression beyond the previous one and reflect its highest possible ambition. Countries may opt to make additional submissions reflecting enhanced ambitions (Article 4, paragraph 11).

Under Article 7 of the Paris Agreement, Parties are invited to submit and periodically update adaptation communications which could describe adaptation priorities, plans, and actions, as well as implementation and support needs. These may be communicated through NDCs or any other document, including national adaptation plans (NAPs) or national communications.[11]

2.1.2 National Adaptation Plans

The process to formulate and implement National Adaptation Plans (NAPs) was established in 2010 under the UNFCCC. It is the main UNFCCC-led instrument for driving and coordinating national adaptation actions. The NAP process is continuous, progressive, and iterative, following a transparent country-driven, gender-sensitive, and participatory approach. See Boxes 2 and 3 for more on funding and support of the NAP process. The NAP facilitates the coordination of national and sectoral adaptation efforts among all actors and stakeholders, as well as the integration of climate change adaptation into relevant policies, programs, and activities. As a plan and document, the NAP (to be produced periodically) is to identify medium- and long-term adaptation needs and to develop and implement prioritized actions to address those needs. As such, NAPs are officially endorsed at the national level.[12]

2.1.3 Long-Term Strategies

Long-term strategies (LTSs) can help countries articulate a national vision for a climate-resilient society and discuss the opportunities for a more sustainable economic growth model that is cleaner, dynamic, and less carbon-intensive. This aligns with Article 4 of the Paris Agreement, which states that "Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 considering their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances".

2.2 A Snapshot of Previous Research and Findings

In this section we provide a brief overview of the work of partners and institutions which has offered valuable insights into the state and trends of strategic adaptation documents—both globally and in Africa—through original analysis and/or provision of support for the development and implementation of these plans.

A repeated point throughout this body of work is the funding gap for adaptation, highlighting the widespread and recognized need for accelerated financial flows. Findings also point to the benefit of a comprehensive planning process in order to produce high-quality documents that can be aligned, leveraged, and built upon in future strategic documents.

Further, consensus is that while strides have been made in the inclusion of prioritized actions in planning documents, there is a need for increased clarity and detail of objectives and goals—especially cost estimates of actions—to increase implementation and investment readiness.

Many of the institutions that have conducted research and studies in this field agree that transformative change requires a whole-of-society approach and that marginalized and vulnerable groups such as women, youth, the elderly, indigenous peoples, and people with disabilities must be included in the process to facilitate ownership of NDC actions.

The World Resources Institute (WRI) undertook an analysis of the adaptation components of all countries' updated NDCs for the 2020–2021 submission cycle.[13] The report presents a qualitative assessment framework through which updated NDCs are examined and compared to the first round of submissions. The analysis highlights the need for improved guidance on including an adaptation component in NDCs, increased clarity of adaptation goals and objectives, and support for both investment and implementation plans for prioritized adaptation actions.

Further, this analysis highlighted that despite the inclusion of more prioritized actions in updated NDCs overall, most of these actions are neither ready for investment nor implementation. Suggested areas for improvement are clarifying indications, estimating costs, and referencing the timeframe for actions. Improving links with related instruments, such as NDC implementation plans and the NAP process, could help countries advance implementation.

Box 2. NDC and NAP Assistance Programs

The NDC Partnership (NDCP), through their Climate Action Enhancement Package (CAEP) launched in 2019, supported countries in enhancing their Nationally Determined Contributions (NDCs) and in fast-tracking the implementation of these as part of the 2020 update process. By March 2022, NDCP support was delivered through the technical and financial contributions of 46 partners to enhance NDCs through the pillars of ambition, quality, and process. Forty-five countries globally enhanced their qualitative targets and measures and enhanced their long-term adaptation plans. For instance, NDCP supported the Sudan to revise and enhance its first NDC, including efforts to map hazards and climate change vulnerability through geospatial analysis, develop a country-specific dashboard to monitor and manage impacts, and assess groups vulnerable to climate risks, including identification of priority measures and capacity-building.[14] African member countries include Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, the Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eswatini, Ethiopia, Gabon, the Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, the Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. Members gain access to a global network of knowledge and resources to support their work in climate action.

Similarly, the NAP Global Network provides long-term technical support that helps countries advance their NAP processes. The Network helps to strengthen institutions by embedding technical advisors, developing adaptation plans for individual sectors, and fostering stakeholder collaboration through national assemblies and other forums. The Network was established in 2014 at COP20 in Peru, initiated by adaptation practitioners from 11 developing and developed countries, and has delivered direct support to more than 60 countries.[15] For Africa, the NAP Global Network has in-country programs in Burkina Faso, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Togo, and Uganda.

The United Nations Development Programme (UNDP) launched the Climate Promise Initiative in 2019, pledging to support at least 100 developing countries to enhance their NDCs. As of August 2023, over 120 countries are affiliated with the Climate Promise. In 2021, UNDP released a Global Outlook Report, "The State of Climate Ambition", which assessed global progression on climate ambition.[16]

UNDP has since released Regional Snapshots which explore global and regional trends using an updated analysis (as of June 2022) on NDC quality and NDC implementation readiness.[17] Across all regions, the implementation of adaptation actions (79 percent of countries) is less advanced than the implementation of mitigation actions (87 percent of countries).

The analysis showed that 40 percent of countries had successfully mobilized domestic public finance for NDC implementation. For mobilizing domestic private finance, this number is just 17 percent. While some countries are developing NDC finance strategies or investment plans, large gaps in finance planning across regions remain. Globally, only 15 percent of countries have a finance strategy or investment plan in place.

Based on experience and lessons learned through supporting the NDC cycle of developing countries, UNDP identified seven "building blocks" that facilitate effective implementation: coordination, implementation strategy, mainstreaming of targets, financing strategy, finance mobilization, implementation of actions, and transparency.

UNFCCC has reported on the progress of NAP formulation and implementation, as of 2021.[18] The report presents official data on the current state of NAPs and identifies four gaps: access to funding for formulating and implementing NAPs for many LDCs; a lack of timeframes for actions within some; a need to build capacity of national institutions to address climate change; and the absence of latest available science.

Box 3. National Adaptation Plans Support Through the Green Climate Fund (GCF)

The concept for the Green Climate Fund (GCF) as an institution dedicated to providing climate financing for developing countries was proposed at COP15 in Copenhagen, Denmark. A year later, GCF was established under the Cancún Agreements in 2010 and is currently serving as the Financial Mechanism of the UNFCCC and the Paris Agreement. GCF's project portfolio consists of 216 projects amounting to US$12 billion in committed funding. The nominal funding provided is 40 percent for adaptation and 60 percent for mitigation, for which different instruments are used (e.g., grants, loans, equity, results-based payments, and guarantees).

Through their Readiness Programme, the GCF supports the formulation of National Adaptation Plans (NAPs) and other adaptation processes. The support is given to developing countries, to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks toward a transformational long-term climate action agenda. The program grants funding up to US$3 million to support country-driven initiatives.

Using funding from the Readiness Programme, the United Nations Development Programme (UNDP) has engaged 35 countries in multi-year projects to advance their NAP processes. The African countries with current projects under implementation or completed are: Côte d'Ivoire, the Democratic Republic of the Congo, Guinea, Guinea-Bissau, Egypt, Morocco, Somalia, and Tanzania (in process); and Liberia, Madagascar, and the Niger (submitted to the UNFCCC).

Source: UNDP Climate Change Adaptation (2023) & Green Climate Fund (2023)[19]

A number of organizations have undertaken an analysis of strategic adaptation documents at the sectoral level. The Food and Agriculture Organization of the United Nations (FAO), for example, released an NDC global report providing a deep dive into agriculture and land-use sectoral plans, within both mitigation and adaptation contributions, of countries' second NDCs.[20] The Global Water Partnership undertook an in-depth analysis of adaptation components in 80 NDCs in 2018.[21]

The African Development Bank (AfDB) has established the Africa NDC Hub to foster long-term climate action, mobilize means for implementation, and promote coordination, advocacy, and partnerships.[22]

In 2018, The Africa NDC Hub released its African NDC Gap Analysis Report of the 44 African NDCs submitted at that time, capturing what countries had started doing well and identifying gaps.[23] The top three needs or constraints to successful

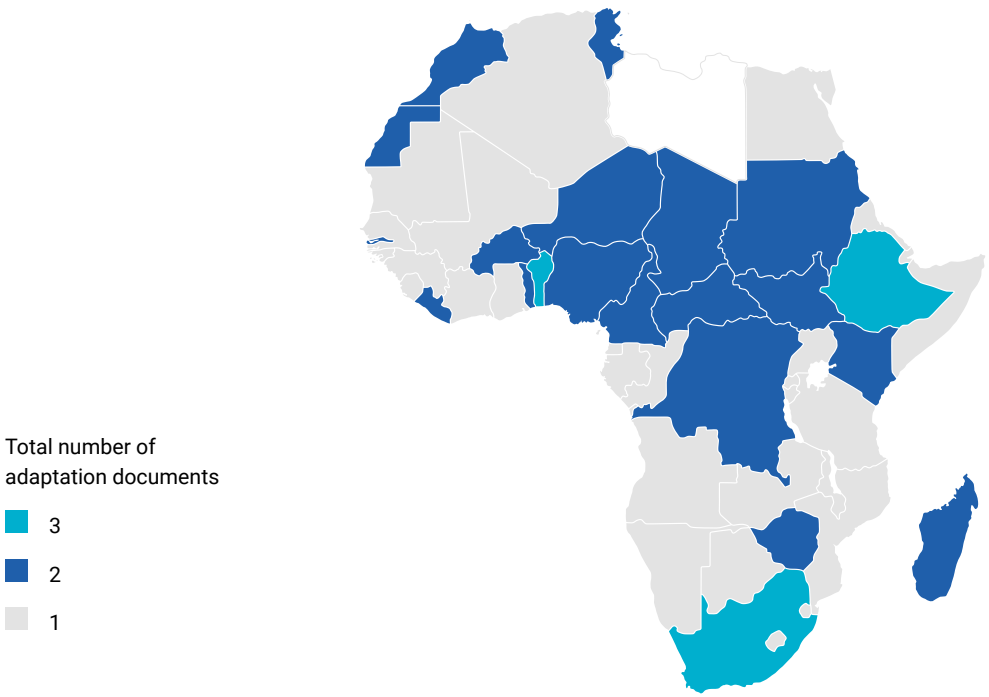
implementation of NDCs identified were external finance resources (mentioned in 100 percent of NDCs), technology (69 percent), and capacity building (58 percent). In 2019, the NDC Hub undertook an analysis of adaptation contributions across the 53 African NDCs submitted to date and the analysis reflected similar needs.[24] Six recommendations were given for improved implementation of African NDCs: build institutional capacity for adaptation action; align climate adaptation polices and strategies with mitigation and sustainable development goals; create policies aimed at generating and sharing high-quality climate data and information within and between governments; increase synergies and reduce silos between sectors, in both climate adaptation-related institutions and policies; channel international support toward translating NDCs into effective plans and projects; and enhance access to climate adaptation finance through various sources.

3 Current State of Strategic Adaptation Plans in Africa: GCA Analysis

3.1 Continental Coverage

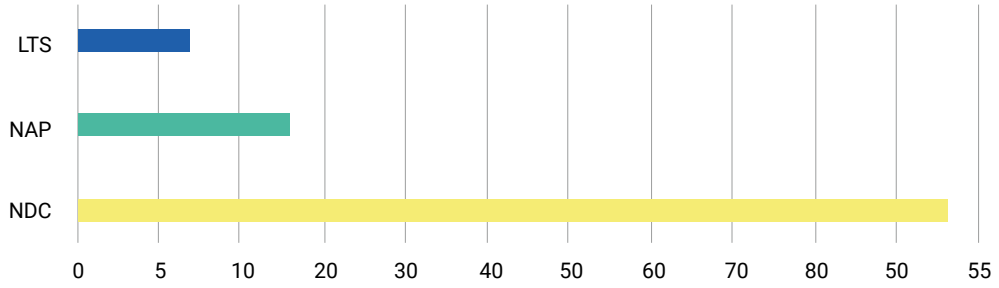
As of July 2023, all but one African country has submitted at least the first version of their NDC, underscoring the continent's commitment to global climate action in response to the climate crisis and in accordance with the Paris Agreement. The majority of these submissions were completed in 2021. Of these, six submissions are first NDCs and 47 are enhanced/updated versions. Thirty-five African countries have submitted a NAPA, 16 African countries have submitted a NAP, and seven have submitted LTSs (Figure 1b). The countries that have submitted LTSs are: Benin, Ethiopia, the Gambia, Morocco, Nigeria, South Africa, and Zimbabwe.

Figure 1a. Number of Strategic Adaptation Documents (NDCs, NAPs, or LTSs) Prepared by Each Country



* Libya has submitted zero adaptation documents. Of the African islands, Cabo Verde has submitted two plans and Comoros, Mauritius, and Seychelles have each submitted one plan.

Figure 1b. Number of Strategic Adaptation Documents by Type in Africa



Source: Authors

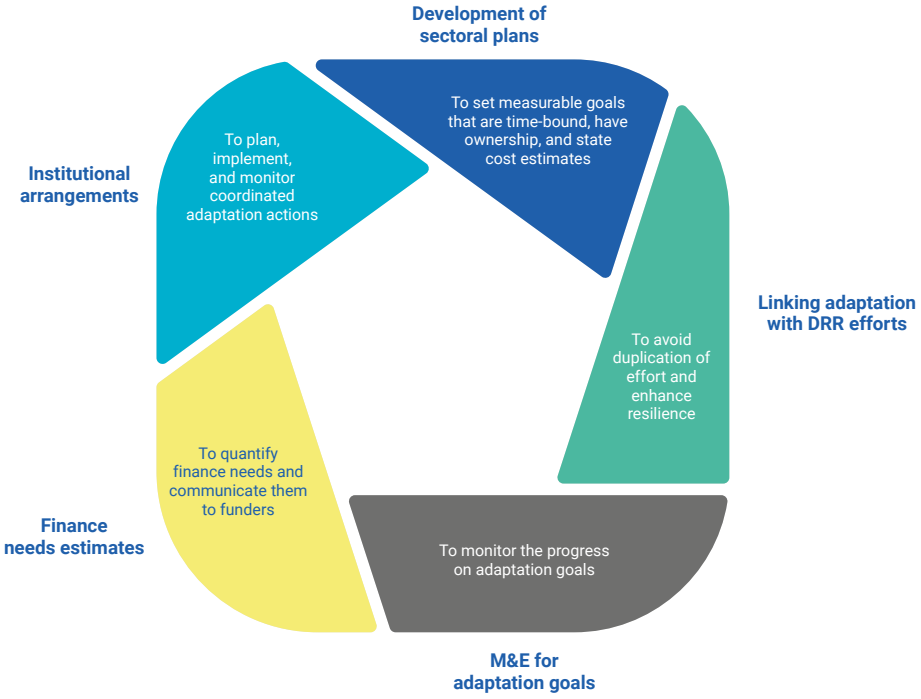
3.2 Analysis Methodology

The study's analysis of the status of **strategic adaptation plans** consisted of a critical literature review of the main UNFCCC-led instruments for driving and coordinating national climate actions, focusing on NAPs, NDCs, and LTSs.[25]

A methodological framework was developed for this study and used for evaluating the status of strategic adaptation plans across five main indicators: institutional arrangements; development of sectoral plans; finance needs estimates; linking adaptation with disaster risk and reduction efforts; monitoring and evaluation for adaptation goals. The indicators were identified as being top priority areas of governance and planning in forming an effective enabling environment for investment (Figure 2).

Based on the findings, a six-level scale was created to understand where the areas of opportunity might lie (Table 1).

Figure 2. The Five Indicators of Analysis of African Countries' NDCs, NAPs, and LTSs



Source: Authors

4 Results

4.1 General Findings

Results of the analysis revealed a wide variation in level of specificity provided across the chosen strategic adaptation documents. However, six clusters of countries with similar levels of enabling environments for adaptation investment emerged. These are presented in Table 1. Figure 3 presents the number of African countries that fell within each cluster.

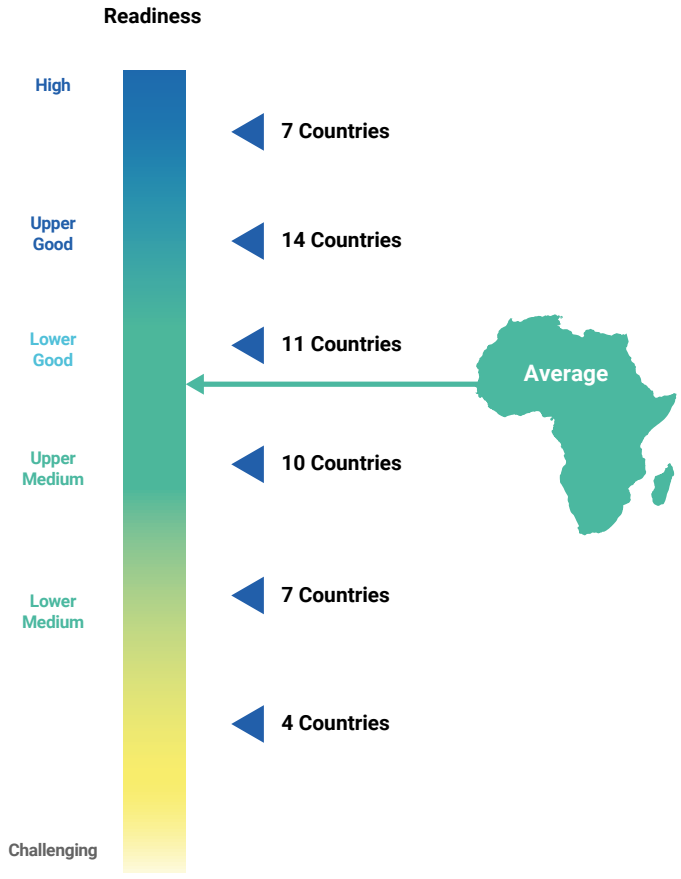
Table 1. Six-Level Rating Scale of the Enabling Environment for Investments in Strategic Adaptation Documents in Africa

Enabling Environment for Adaptation Investment	Description
High	▪ All countries have specialized institutions with branches in place to coordinate the climate agenda. ▪ DRR connections have been identified, with some countries making DRR a sector on its own and others identifying DRR measures within other sectors. ▪ Priority sectors have been identified, with all countries providing qualitative and quantitative goals, providing timeframes, and naming the responsible institutions to carry out the adaptation measures. ▪ Most countries calculated the conditional adaptation cost of their NDC or NAP measures or at least the total costs of implementing the NDC or NAP. ▪ All countries provided information on developing basic plans to implement a monitoring system for adaptation, with one signaling having a system already in place.
Upper Good	▪ Most countries have specialized institutions with branches in place to coordinate the climate agenda. ▪ DRR connections have been mostly identified, with some countries making it a sector on its own and others identifying DRR measures within other sectors. ▪ Priority sectors have been identified, with all countries providing qualitative goals and most providing quantitative goals. Most countries provided a timeframe for their sectoral adaptation measures, along with naming the responsible institutions. ▪ All countries calculated the total costs of implementing the NDC or NAP with some calculating the conditional adaptation cost of their NDC or NAP measures. ▪ All countries either provided information on developing basic plans to implement their monitoring systems or signaled the intention of developing it.
Lower Good	▪ Countries have at least some assigned specialized institutions or information on specialized institutions with branches in place to coordinate the climate agenda. ▪ DRR connections were usually identified, with some countries making it a sector on its own and others identifying DRR measures within other sectors. ▪ Priority sectors have been identified, with all countries providing qualitative or quantitative goals and some providing a timeframe. ▪ Most countries calculated the conditional adaptation cost of their NDC or NAP measures. ▪ Some countries signaled the intention of developing a monitoring system for adaptation and others have basic plans to develop them.

DRR, disaster risk reduction; NAP, National Adaptation Plan; NDC, Nationally Determined Contribution.

Enabling Environment for Adaptation Investment	Description
Upper Medium	▪ Most countries have specialized institutions with branches in place to coordinate the climate agenda. ▪ DRR has been made a sector within adaptation with clear goals. ▪ Priority sectors have been identified. All countries provided qualitative goals but few provided timeframes. ▪ Countries signaled a general need for finance, with few providing finance need estimates to implement the NDC or NAP. ▪ Few countries signaled an intention of developing a monitoring system for adaptation.
Lower Medium	▪ Some countries assigned specialized institutions to coordinate the climate agenda. ▪ Few countries identified synergies with DRR. ▪ Priority sectors have been identified by some countries, with qualitative goals that were not time-bound. ▪ Countries signaled a general need for finance. ▪ Countries showed an intention of developing a monitoring system for adaptation.
Challenging	▪ Institutional arrangements were generally not in place. ▪ No synergies with DRR identified. ▪ No sectoral goals given. ▪ Few countries signaled finance needs. ▪ No monitoring systems for adaptation were in place.

Figure 3. Countries' Level of Enabling Environment for Investment Readiness*



Source: Authors

*This showcases the level of enabling environment for adaptation investment that the countries reached based on the chosen indicators. On the left, a progress bar is shown indicating the number of countries in each rating category and Africa's average.

The assessment focused on evaluating the environment for adaptation investment in various African countries. To achieve this, the extent of detail presented in the adaptation plans outlined within a country's climate documents (NDCs, NAPs, and LTSs) was scrutinized. Countries were differentiated based on the planning and environment for successful adaptation investment (Table 1).

The study's comprehensive evaluation of 53 African countries' readiness for climate adaptation investment has yielded valuable insights. Seven countries stand out for creating a highly supportive environment that promotes successful adaptation investments ("high"); 14 countries are in the "upper good" category in terms of adaptation investment; 11 are in the "lower good" category; 10 are in the "upper medium" tier; and seven fall into the "lower medium" bracket. Notably, four countries face more significant challenges in creating an enabling environment for adaptation investment ("challenging").

These findings point to some promising takeaways. The majority of African nations show strong potential for successful adaptation investments. They demonstrate a strong commitment to taking ownership of adaptation strategies. However, it is important to recognize that substantial financial resources are required to implement these strategies effectively. While African countries have the potential to make the most of adaptation investments, securing adequate funding is a parallel priority. By leveraging their strengths and addressing financial needs, the global community can collaboratively contribute to enhancing climate adaptation in Africa.

By comparing the results of the study's framework with the University of Notre Dame's ND-GAIN Index and vulnerability scores and the World Bank's income level classification, we were able to establish a relationship between climate vulnerability, income level, and the status of adaptation planning in Africa.

The overall trend indicates that higher vulnerability and lower income often correspond with increased efforts in formulating comprehensive climate documents. These findings suggest that countries experiencing higher climate vulnerability are more motivated to develop robust climate documents, while those with lower vulnerability may face fewer immediate pressures to address adaptation challenges.

4.1.1 ND-GAIN Index Scores Analysis

The ND-GAIN Index[26] summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. The higher the score is, the less vulnerable a country is to the effects of climate change and the more ready it is to enhance its resilience.

The ND-GAIN Index is composed of the ND-GAIN vulnerability score, which measures a country's exposure, sensitivity, and ability to adapt to the negative impacts of climate change (lower scores mean lower vulnerability), and the ND-GAIN readiness score, which is a country's ability to leverage investments and convert them to adaptation actions considering three components—economic readiness, governance readiness, and social readiness (higher scores mean more readiness).

To put the scores into context, for Africa, the average ND-GAIN Index is 39.5, which indicates that the continent has a high vulnerability to climate change and other global challenges and low readiness to improve its resilience to them. Africa's average ND-GAIN Index indicates the importance of attracting adaptation finance flows into the continent to reduce vulnerability and increase resilience to climate change impacts. By enhancing countries' planning of adaptation actions and communicating through their NDCs, NAPs, and LTSs, countries can build a stronger foundation for adaptation action and attract more investment opportunities.

For this analysis, we can see that 24 (46 percent) of the 52 countries with a low ND-GAIN Index are between the lower good and high categories when it comes to their enabling environment for adaptation investment. This means that despite their high ND-GAIN vulnerability and low ND-GAIN readiness they have managed to set strong planning bases for adaptation action (Table 2a and 2b).

On the other hand, 13 (25 percent) of the 52 countries with a low ND-GAIN Index are between the upper medium and challenging status of their enabling environment for adaptation investment. Therefore, enhancing their NDCs, NAPs, and LTSs is crucial to start building a strong base for adaptation action and attracting investment.

The seven countries with a higher ND-GAIN Index (13 percent) rank between the lower good and high categories and eight countries rank in the upper medium to challenging categories when it comes to the status of their enabling environment for adaptation investment.

4.1.2 Income Level Groups Analysis

Overall, the study reveals a notable trend where low-income countries are more likely to have a favorable enabling environment for attracting adaptation investments. Five of the seven countries with the highest adaptation enabling environment were low-income countries. Additionally, out of the 14 countries

Table 2a. ND-GAIN Index Scores by Adaptation Investment Readiness Analysis Categories*

Investment Readiness Level	ND-GAIN Index Scores			
	57–49.25	49.25–41.50	41.50–33.75	33.75–26
High		2	4	1
Upper Good	2		8	3
Lower Good		3	6	2
Upper Medium	3		6	1
Lower Medium		2	4	1
Challenging		3	1	

Source: Authors

Table 2b. ND-GAIN Vulnerability Scores by Adaptation Investment Readiness Analysis Categories*

Investment Readiness Level	ND-GAIN Vulnerability Scores			
	0.39–0.46	0.46–0.53	0.53–0.60	0.60–0.68
High		3	4	
Upper Good	2	1	7	3
Lower Good	2	3	4	1
Upper Medium	2	5	2	1
Lower Medium		5	1	1
Challenging	3	1		

Source: Authors

*The table on top shows the data of 52 African countries and their ND-GAIN Country Index. It summarizes the countries' vulnerability to climate change and other global challenges in combination with its readiness to improve resilience (the lower the score, the higher the vulnerability). The table on the bottom shows the data of 52 African countries and their ND-GAIN vulnerability scores. It summarizes the countries' exposure, sensitivity, and ability to adapt to the negative impacts of climate change (lower scores mean lower vulnerability).

with an upper good adaptation enabling environment, 10 were low-income countries. Conversely, three out of the four countries facing challenging environments for adaptation were upper-middle-income countries. This relation between low-income countries scoring higher on the enabling environment for adaptation investment suggests that low-income countries may exert more effort in developing comprehensive climate documents to attract increased climate investments (Table 3).

The findings indicate that the range of adaptation documents, from lower good to high enabling environment for adaptation investment, encompasses 79 percent of low-income countries, 55 percent of lower-middle-income countries, and 29 percent of upper-middle and high-income countries. This means that most of these countries have provided at least basic information in all of the five indicators (Table 3). Among these 32 countries, seven present NDCs and/or NAPs with highly detailed information across the five indicators, of which five are from the low-income level, one from the upper, and one from lower-medium.

According to the analysis, 21 percent of low, 45 percent of lower-medium, and 29 percent of upper-medium and high-income countries are between the upper medium and low medium category. For these countries, institutional arrangements seem to be at least basic priority sectors identified with qualitative or quantitative goals, but with limited details provided relating to the estimated timeframe, costs, or institutions responsible for the adaptation actions.

Four countries have a challenging enabling environment for adaptation investment based on the status of their adaptation plans, of which three are upper-middle-income countries (50 percent), and one is a lower-middle-income country (4 percent).

The discussion, however, goes beyond the relationship of income levels and vulnerabilities. The findings shed light on a critical aspect; countries with both high vulnerability and low-income levels, where adaptation investments are most urgently required, also exhibit the highest potential for successful adaptation investments.

Table 3. Income Level Groups by Investment Readiness Analysis Categories

Investment Readiness Level	Income Level Groups			
	High	Upper Middle	Lower Middle	Low
High		1	1	5
Upper Good			5	10
Lower Good		1	6	4
Upper Medium	1	1	5	3
Lower Medium			5	2
Challenging		3	1	

Source: Authors

4.2 Findings by Indicator

This section discusses the results of the indicators we have identified (Figure 2). Firstly, the institutional arrangements of African countries are examined, followed by an assessment of the level of detail of their sectoral plans. Monitoring and evaluation efforts within African countries are then highlighted. The section then examines the financial aspects of fulfilling adaptation commitments and countries' identification of costs for implementing their adaptation actions or goals.

4.2.1 Institutional Arrangements

The "Institutional Arrangements for Adaptation" chapter in the State and Trends in Adaptation Report 2022 (STA22) gave an overview of the importance of setting up an institutional framework for climate governance to plan, legislate, and manage the implementation of adaptation actions in a country. Institutional arrangements can support the anticipation and preparation for climate change risks through the implementation of adaptive strategies and measures. A crucial aspect of adaptation readiness is the presence of a lead ministry or dedicated institution to serve as the driving force behind the country's adaptation efforts—coordinating and implementing strategies to address climate change impacts.

Furthermore, if subsidiary branches of this primary institution exist, they can provide crucial support. These branches act as key arms of the lead ministry, working in tandem to ensure the smooth execution of adaptation initiatives across various regions.

The involvement of other relevant ministries and institutions in the overarching institutional arrangements for climate adaptation is also imperative. Collaborative engagement among ministries—such as those responsible for the environment, agriculture, water resources, finance, and disaster management—enables a comprehensive and coordinated approach to adaptation planning and implementation.[27]

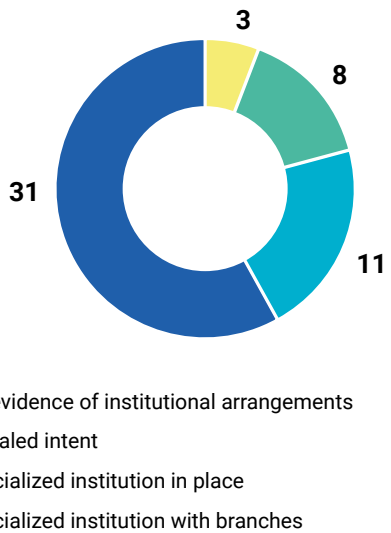
Such measures are crucial because climate adaptation inherently transcends boundaries and cuts across various sectors and areas. Its impact is far-reaching and interconnected, affecting multiple aspects simultaneously. Therefore, to effectively advance climate adaptation and be fully prepared to implement and attract adaptation investment, a country must possess a mature and comprehensive institutional framework.

Analysis of Institutional Arrangements

The study divided the countries into three groups for the analysis. The first group consisted of countries that have not set up a separate ministry or institution specifically for dealing with climate issues, but have indicated that there are efforts underway to establish one. The second covered countries where a dedicated climate-focused institution or ministry is already up and running. The third focused on countries where there is a climate ministry that works alongside other related ministries and at different levels of government. This categorization helped to assess the level of planning provided in NDCs and NAPs regarding institutional arrangements that were planned or in place to carry out climate action in Africa.

Thirty-one (58 percent) countries have established a mature institutional framework that involves other ministries and branches of government to effectively implement adaptation goals. Additionally, 11 countries have set up a dedicated ministry to lead their climate-related initiatives. Currently, eight countries are actively working on establishing their institutional framework to tackle climate challenges. Three countries have not mentioned any specific institution responsible for overseeing the execution of NDCs, NAPs, or LTSs (Figure 4).

Figure 4. Status of the Institutional Arrangements in Africa by Number of Countries



Source: Authors

Box 4. Togo and Tanzania: Heightening the Impact of Adaptation Investment Through Institutional Collaboration

In Togo, climate governance is led by the Ministry of Environment and Forestry. Furthermore, various other ministries, including the Ministry of Electricity and Dams, Ministry of Water Resources and Irrigation, Ministry of Transport, Ministry of Finance and Economic Planning, and Ministry of Humanitarian Affairs, among others, actively participate. The National Commission for Sustainable Development and the National Committee on Climate Change also play crucial roles in implementing adaptation investments, fostering a national climate paradigm, and monitoring the execution of adaptation projects. Through effective collaboration among these pertinent institutions, adaptation investments can achieve heightened impact and profitability.

In its NDC, Togo conducts a comprehensive assessment of the strengths and weaknesses within its institutional structure for NDC implementation. It sheds light on the coordination challenges encountered among its various ministries. This demonstrates the country's commitment to enhancing an already robust institutional structure, setting an example that all countries should strive to emulate.

Similarly, in Tanzania the Vice President's Office holds the responsibility for monitoring and evaluation of environmental aspects relating to NDC implementation. Additionally, the National Climate Change Steering Committee (NCCSC) and Zanzibar Climate Change Steering Committee (ZCCSC) play a pivotal role in guiding the coordination and execution of the NDC. Their functions encompass providing policy guidance, ensuring action coordination, and facilitating cross-sectoral participation. Complementing these efforts, the National Climate Change Technical Committee (NCCTC) and Zanzibar Climate Change Technical Committee (ZCCTC) assume the responsibility of offering technical advice to the National Designated Authority (NDA). This comprehensive framework of offices and committees collectively drives the effective execution of climate-related initiatives.

Despite the generally strong institutional arrangements displayed by most African countries to address adaptation investments, there is room for improvement in several countries (Figure 4). Twenty-two countries still need to commit to and enhance their institutional frameworks to increase the likelihood of successful adaptation investments. Among them, three countries must prioritize discussing their lead institution in their NDCs. Eight countries should enhance their NDCs by providing comprehensive explanations of the institutional measures they intend to undertake in developing their lead climate institution and its aiding branches. Furthermore, 11 countries should expand their institutional frameworks by adopting a decentralized approach for enhanced effectiveness. This can be achieved by clearly defining and distributing roles among departments for adaptation finance coordination.

By establishing a robust institutional framework, countries can harness greater donor confidence, leading to increased mobilization of financial resources. Concurrently, the investments made in adaptation also stand a greater chance of success. Furthermore, an institutional structure that permeates to the grassroots level not only fosters confidence but also bolsters local growth and involvement.

Spotlighting Good Practices

The institutional measures taken by most African countries reflect a serious commitment to addressing the climate crisis through the creation of advanced institutional frameworks. Our analysis uncovered interesting cases that are worth highlighting.

One such example is Cameroon, which has incorporated religious and tribal chiefs into its institutional framework. This approach not only ensures the reach of adaptation readiness at the community level but also provides a more effective means of doing so. In many African cultures, religion holds significant importance, and local religious leaders often wield influence. Incorporating them into the institutional framework creates a sense of ownership and adds legitimacy to the implementation of adaptation measures.

Similarly, the Niger has also incorporated the tribal chieftain system and its elders into its institutional

framework, aiming to foster greater trust. In Cabo Verde, an institutional setup has been established that extends to the municipal level, ensuring local engagement and participation in climate adaptation efforts. Uganda has developed an institutional framework that extends to the district level, recognizing the importance of localized decision-making and implementation in addressing climate challenges. Furthermore, in addition to incorporating various ministries, South Africa has established provincial units specifically tasked with leading the climate change response, thereby ensuring a coordinated and effective approach at the regional level.

4.2.2 Development of Sectoral Plans

It is crucial for countries to clearly outline their priority sectors in their NDCs and NAPs, as it serves as a strong signal of their commitment to efficiently allocate adaptation investments and allows them to identify roles and responsibilities across all levels of government.

By prioritizing specific sectors, countries gain a deeper understanding of the unique challenges and risks associated with each sector in the face of climate change—enabling them to develop targeted adaptation strategies and measures that address specific vulnerabilities. Such tailored approaches ensure that adaptation investments are utilized effectively—maximizing their impact and promoting resilience in the areas that need it the most.

Furthermore, laying out sectoral priorities in NDCs and NAPs encourages collaboration and coordination among various stakeholders. The involvement of relevant government agencies, private sector entities, civil society organizations, and local communities becomes essential for implementing effective climate actions within these priority sectors. The prioritization of sectors and involvement of various entities also contribute to fostering ownership.

Mature and well-developed sectoral goals, that include financial estimates for implementing adaptation measures, not only clarify the financial requirements of countries but also provide a clear roadmap for the effective utilization of resources. By clearly identifying the priorities, it becomes easier to determine what actions need to be taken and how external support can be leveraged for maximum impact.

Finally, grounding NDCs and NAPs in long-term, time-bound sectoral adaptation goals or visions is essential to signal a clear direction of the country's adaptation efforts.

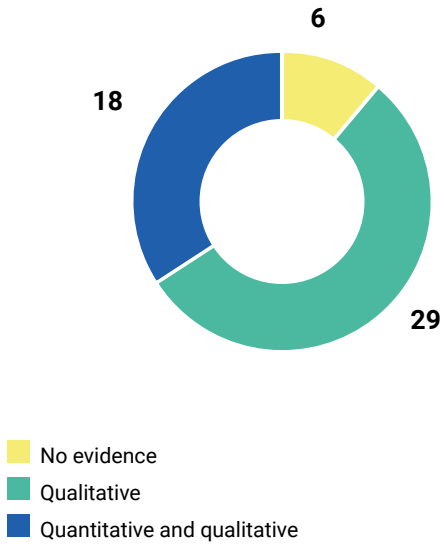
Analysis of Sectoral Priorities

The analysis of sectoral priorities involved searching for evidence of whether a country had identified any key priority sectors for adaptation, and then examining whether a country had established goals within these priority sectors. The types of goals (qualitative and quantitative) were then evaluated to assess their level of detail based on whether they were time-bound, had clear ownership, and provided financial estimates of adaptation investments.

Among the 50 countries with identified priority sectors, three do not set any goals for the priority sectors, while 29 mention goals that are non-measurable, consisting of general statements and trajectories. Encouragingly, 18 countries provide measurable goals to be achieved within their respective sectors (Figure 5a). For example, Ghana plans to implement integrated water resource management, as per the country's NDC. The document also mentions the number of beneficiaries and the number of job prospects to be created, thus making the goals more measurable.

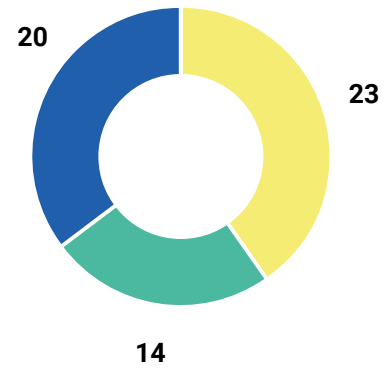
Among the analyzed countries, Kenya and Madagascar have stood out for having well-defined priority sectors and goals that are time-bound, demonstrate ownership, and include financial requirements. Similarly, Mali and the Sudan exhibit ownership-oriented goals and specify financial needs to achieve their objectives, yet there is an absence of timelines for the goals. Four countries have time-bound goals and elements of ownership, but they lack clear timelines (Figure 5b).

Figure 5a. Sectoral Adaptation Plans by Type of Goal



Source: Authors

Figure 5b. Sectoral Plans by Detail of Goal



Source: Authors

Box 5. Kenya, Madagascar, and Senegal: Clearly Defined Priority Sectors and Goals

Kenya and Madagascar have well-defined priority sectors and goals that are time-bound, demonstrate ownership, and include financial requirements. Others, like Senegal, provided a level of detail in their priority sectors that many countries did not consider by adding warming scenarios and proposed adaptation actions based on them.

Kenya sets goals for various sectors, such as infrastructure. In the short term, Kenya conducts risk and vulnerability studies, while in the long term, it aims to upgrade infrastructure to withstand climate shocks and utilize the latest technology. Moreover, Kenya allocates US$20 billion to achieve these goals and involves local governments, academia, civil society, and the private sector in the process.

Similarly, Madagascar has developed well-articulated plans for its agricultural sector that include comprehensive research into various climate-resilient crop varieties in order to address the issue of recurrent droughts. Furthermore, their approach includes the implementation of efficient irrigation practices. The plans not only outline a clear timeline for achieving these goals and the necessary financial resources, but also incorporate specific indicators such as "Number of households benefiting from improved self-organization and learning capacities", as well as the funding sources earmarked for the completion of goals.

On the other hand, Senegal has adopted an interesting approach in terms of establishing flexible and adaptable goals. The country has developed two distinct scenarios within its NDC. In the short term, with a horizon of 2025–2030, Senegal envisions a temperature increase of 2°C, while in the long term, with a horizon of 2040–2050, it envisions a more challenging 4°C temperature rise. Impressively, Senegal has provided comprehensive plans for both scenarios, mainstreaming them into short-, middle-, and long-term plans for adaptation and development. This underscores the country's commitment to robust and well-prepared strategies for a range of potential climate outcomes.

Setting clear quantitative goals in climate documents is essential for creating a roadmap to combat climate change effectively. These goals provide specific and quantifiable targets that offer insights into the trajectory a country is aiming to achieve in its efforts to combat climate change. Therefore, it is imperative for the 35 countries that are missing this level of detail to outline quantitative targets to combat climate change. Additionally, the analysis identified gaps in the maturity of the sectoral goals. To address these gaps effectively, countries should specify the institutions responsible for implementing these sectoral goals. By clearly designating the implementing institutions, international stakeholders and donors can easily engage and communicate with the appropriate entities.

A deeper dive into sectoral plans, to gain meaningful insights into their quality and uncover areas for opportunity, is presented in Section 5.

Spotlighting Good Practices

Countries like Rwanda, Burundi, and the Democratic Republic of the Congo take additional steps to enhance the measurability of their goals by introducing progress indicators or means of measuring progress for each adaptation intervention planned within their sectors. For example, Burundi adds "Number of WASH [water, sanitation, and hygiene] projects that consider climate risks" as an indicator for its irrigation plan in water resource goals (Table 4). This inclusion of progress indicators provides valuable insights into the success and effectiveness of adaptation investments.

4.2.3 Monitoring and Evaluation for Adaptation Goals

Addressing monitoring and evaluation in NAPs and NDCs is an important way that countries can meet their global reporting requirements under international agreements, such as the Paris Agreement.

The inclusion of monitoring and evaluation in NAPs and NDCs enhances the effectiveness of adaptation efforts because it enables transparent reporting, enhances trust among nations, and facilitates collaboration by allowing stakeholders to understand the efforts made and the outcomes achieved. By systematically collecting and analyzing data, countries can gain valuable insights into the outcomes of their adaptation strategies and policies. This process helps identify which actions are working well and which may need improvement. Monitoring and evaluation provides a transparent and credible way to assess the effectiveness of a country's climate change actions.

Table 4. Examples of Indicators Used by Country Per Sector

Country	Sector	Adaptation Measures	Indicators to Assess Progress
Rwanda	Agriculture	Develop climate resilient crops and promote climate resilient livestock.	Number of climate-resilient crop varieties developed. Percentage of farmers adopting resilient crop varieties. Percentage of crossbreed livestock at national herd by species.
Burundi	Water	Improve access to water through the development of water collection systems and enhance the resilience of water, sanitation, and hygiene (WASH) projects.	Percentage of communities or households that have access to an effective rainwater collection system. Number of WASH projects that consider climate risks.
Democratic Republic of the Congo	Coastal Areas	Strengthening of early warning systems for vulnerable coastal areas and hydro-climatic risk areas (floods, drought, soil erosion, [urban and agricultural] landslides, volcanic eruption, etc.).	Number of devices installed to alert vulnerable zones and hydro-climatic risk areas.

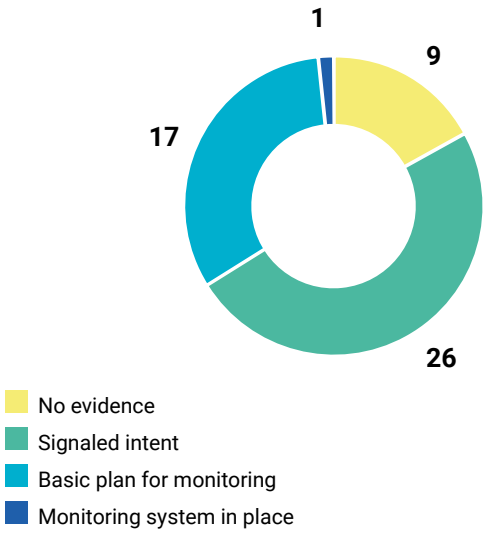
Analysis of Monitoring and Evaluation Frameworks

Three categories were identified for the analysis. The first comprised countries that do not currently have a monitoring and evaluation framework but have expressed an intention to plan one. The second comprised countries that have a basic plan for monitoring and evaluation. The third consisted of countries that have a highly developed and mature monitoring and evaluation framework in place or have integrated an adaptation component into an already established (primarily set up for monitoring and evaluating climate mitigation targets) Monitoring, Reporting, and Verification (MRV) system.

The analysis indicates that many countries need to prioritize plans to develop, strengthen, and implement their monitoring and evaluation frameworks (Figure 6). Nine African countries did not mention monitoring and evaluation in their climate documents and 26 countries expressed their intention to develop a monitoring and evaluation framework in the future. These countries recognize the importance of robust monitoring and evaluation mechanisms and intend to implement them; however, they currently lack a proper plan.

Seventeen countries had a basic plan for monitoring and evaluating adaptation measures. Within this category, some developing monitoring and evaluation system plans were highly detailed. For instance, some countries (the Democratic Republic of the Congo, Eritrea, and Madagascar) have included indicators in their NDCs and NAPs to measure progress, some countries have already established roles within the institutional arrangements with clear timelines, and some have even been close to implementing their monitoring and evaluation systems.

Figure 6. Status of the Monitoring and Evaluations Systems Stated on the NDCs, NAPs, and LTSs by Number of Countries



Source: Authors

Box 6. Kenya: Leading the Way with Measuring, Reporting, and Verification

Kenya has successfully developed an integrated Measuring, Reporting, and Verification (MRV) system along with integrated MRV tools for adaptation actions.

An MRV system is designed to track and assess the progress of climate adaptation measures. The purpose of an MRV system for climate adaptation is to support evidence-based decision-making, enhance accountability, and facilitate learning and knowledge-sharing among stakeholders.

Kenya's MRV system has been seamlessly connected with existing monitoring and reporting systems.

Moreover, the integrated MRV system is well-aligned with the institutions and actors involved in adaptation efforts, who are obligated to report on their respective activities.

Most importantly, the report generated for the MRV system is a collaborative effort, involving both state and non-state actors. This promotes transparency, reduces the potential for bias, and ensures a more inclusive and balanced approach to assessing and reporting on climate adaptation efforts.

Spotlighting Good Practices

Despite not having implemented a monitoring and evaluation framework, several countries have notable plans that deserve recognition. For instance, Malawi is integrating IT-based solutions to establish a stronger and more transparent monitoring and evaluation system. In the case of Burundi, indicators have been included in their framework for the NAP's monitoring and evaluation system, which can provide a quantitative perspective on the achieved results.

Madagascar has implemented a program aimed at improving access to clean drinking water in both urban and rural areas. To measure the effectiveness of this program, an indicator they have chosen is the "Number of water use conflicts". Tracking these conflicts provides valuable insights into the effectiveness of the program and helps to identify areas where interventions may be required to ensure equitable access to clean drinking water.

Eritrea, on the other hand, takes a collaborative approach by involving local communities, researchers, policymakers, and government institutions to develop a comprehensive monitoring and evaluation plan.

4.2.4 Finance Needs Estimates

Outlining the financial requirements of the NDCs and NAPs allows countries to effectively communicate the resources needed to implement their adaptation goals. This information is crucial for attracting support and mobilizing resources from international donors, development agencies, and financial institutions. Clearly stating the financial needs helps to bridge the gap between the available resources and the required funding, ensuring that countries can access the necessary financial support to implement their adaptation actions.

Adding conditional and unconditional financial needs in climate documents not only helps align funding priorities but can also encourage domestic resource mobilization. Conditional financial needs refer to the financial resources that a country requires to implement its climate change mitigation and adaptation actions—contingent upon receiving external support. Unconditional financial needs, on the other hand, represent the financial resources that a country requires to implement its climate change actions regardless of external support.

Box 7. Angola: MRV System Planning

A good example of how to set up an MRV system for adaptation can be given by looking at the case of Angola. Angola aims to establish an MRV system consisting of four subsystems: a greenhouse gas (GHG) inventory, mitigation measures, adaptation measures, and financial, technical, and technological support. This will allow the country to meet all of its transparency commitments to UNFCCC and serve as a tool to ensure an efficient implementation of climate policy in the country.

The Ministerial Department responsible for the environment will develop the MRV system and coordinate its implementation. This will include:

- A plan of methodologies and a database that defines the methodologies to be applied in the four subsystems.
- A knowledge management system that aggregates all the information collected by the various subsystems, allowing simple and systematic data entry and consultation.
- A capacity development plan that identifies the training needs for the implementation of the MRV system at different levels.
- A quality control and assurance system that ensures the effectiveness and credibility of the system.
- A legal and institutional framework that formalizes the implementation of the MRV system, and defines responsibilities and deadlines.

For the short term (up to 2025), it is planned that Angola will develop and implement an MRV system as part of the tracking process of the NDC. Finally, adaptation efforts will be assessed through indicators of resilience based on the implementation process and results and international indexes, such as the vulnerability to climate change and climate-related risk reduction.

Source: Angola's Updated NDC

Including financial needs in NDCs and NAPs allows countries to strategically plan and prioritize their adaptation actions. It provides a comprehensive understanding of the financial resources required for each goal and activity, enabling countries to allocate resources effectively. By aligning financial needs with specific adaptation goals, countries can ensure that they focus on securing the necessary financial support for priority interventions, maximizing the impact of their adaptation efforts.

Analysis of Financial Needs

For financial needs, the study grouped countries into three levels. The first level pertains to countries that have signaled a general need for financial investments to expedite their adaptation programs. These countries expressed a general acknowledgment of the importance of financial resources to carry out their adaptation activities without specifying detailed costs.

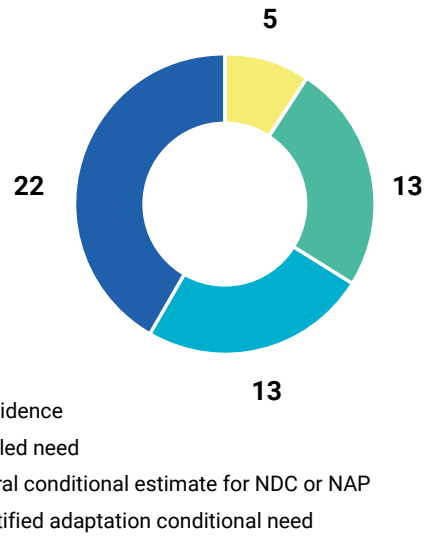
On the second level, countries outlined general financial needs to implement their NDC or NAP. At this level, countries identified general costs for mitigation and adaptation activities in their NDC or NAP commitments, without making a distinction between them.

The third level encompasses countries that articulated conditional and unconditional financial needs specific to adaptation requirements. These countries provided a comprehensive breakdown of the financial resources required to support their adaptation efforts, specifying the costs they are planning to cover and the ones they need international help with.

Out of the total number of countries assessed, only five countries did not mention any financial assistance or need in their documents (Figure 7). Thirteen countries provided a general statement acknowledging the requirement for financial assistance to implement their adaptation goals. While these countries acknowledged the need for funding, they did not specify the exact amounts or details. Thirteen countries went a step further and explicitly outlined the amount of funding they require to implement their NDC or NAP commitments. This includes financial needs for both mitigation and adaptation actions.

Notably, 22 countries excelled in providing detailed information regarding the financial resources needed to implement their specific adaptation goals. Within this indicator, some countries took the extra step of outlining the unconditional and conditional funds needed per sector or per adaptation activity. Providing conditional and unconditional finance needs per activity or sector can give investors more certainty about the country's commitments to advance the adaptation agenda.

Figure 7. Status of the Finance Needs Stated in the NDCs and NAPs by Number of Countries



Source: Authors

Box 8. Angola: Highlighting Conditional and Unconditional Funding Needs

Angola provides information on how they intend to fulfill financial needs, highlighting both conditional and unconditional ambitions. Angola has specified the need for US$76 million in unconditional financial support to implement adaptation measures, along with an additional US$67 million in conditional funding. The country outlines strategies for mobilizing the necessary resources, including domestic funding mechanisms and potential avenues for international cooperation. This not only demonstrates a stronger commitment to addressing the climate crisis, but also exemplifies country ownership by proactively taking measures without relying solely on international funding.

Spotlighting Good Practices

Many African countries provide a comprehensive justification for their specified financial needs by presenting a sectoral analysis, outlining the requirements for each specific sector. Examples include Angola, Burkina Faso, the Central African Republic, the Congo, Eritrea, Mauritania, Senegal, Sierra Leone, South Sudan, and Tunisia.

However, some countries go a step beyond and try to categorize the amount of financing between conditional and unconditional funding. Sierra Leone, for example, divides the financial needs of each of its projects into percentages of conditional and unconditional funding. Similarly, Mauritius also adopts a strategy asserting that 35 percent of the overall financial requirement will be met unconditionally through contributions from both the government and the private sector. This strategy demonstrates ownership of projects by allocating high percentages of unconditional financing to each project, showcasing these countries' dedication to building a more resilient future.

Several other noteworthy cases involve strategic approaches to bridge climate adaptation finances. For instance, Chad is actively pursuing the integration of adaptation planning within their fiscal framework. In Nigeria, a comprehensive assessment has been conducted to estimate potential GDP losses and sectoral impacts in the absence of adaptation measures. Meanwhile, Tunisia is exploring innovative avenues such as leveraging carbon markets to bridge financial gaps and facilitate the implementation of effective adaptation strategies.

4.2.5 Linking Adaptation with Disaster Risk Reduction

Climate and disaster risks are growing faster than our collective efforts to build resilience. The consequences of not anticipating, reducing, and managing disaster risks before they manifest as shocks can be dire for societies, livelihoods, and the ecosystems on which we depend. For this reason, it is crucial for countries to integrate disaster risk reduction (DRR) into their adaptation planning documents.

The study identified evidence of three main types of DRR integration within the NDCs, NAPs, and LTSs, with different levels of detail. The first type of DRR integration is characterized by countries that simply mention the Sendai Framework or a national plan (connected to disaster risk reduction) or disaster risk management strategy to inform processes when developing adaptation planning documents.

The second type is characterized by the integration of DRR considerations within the different adaptation priority sectors. For instance, countries mentioned performing a multi-hazard risk assessment to improve and develop early warning systems for particular or multiple priority sectors.

The third type of integration is characterized by countries that made DRR a priority sector with adaptation measures or goals. This type of integration can be very detailed, including time-bound goals, assigned roles, and finance estimates.

The study revealed a gap in the level of integration of climate adaptation and DRR efforts in strategic adaptation plans. The importance of a comprehensive approach to adaptation and DRR cannot be understated. This warranted a deep dive into the current level of integration of DRR into strategic adaptation plans, which is presented below.

4.3 Linkages Between the Disaster Risk Reduction Agenda and the Paris Agreement

The Hyogo Framework for Action is the key international agreement setting out goals to reduce disaster risks. It was adopted at the United Nations World Conference on Disaster Risk Reduction in 2005. It identifies priorities and offers guiding principles for reducing disaster risks through national efforts.

The Sendai Framework for Disaster Risk Reduction was adopted in 2015 at the third United Nations World Conference on Disaster Risk Reduction. It was a call to action to reduce the risk of anthropogenic and natural hazards, designed to substantially reduce losses in lives, livelihoods, and health by 2030. The framework presents a universal vision for how societies may collaborate to identify, prevent, and reduce risks before they manifest as shocks or disasters, and to build resilience.

Increasing hazards and natural disasters are directly linked to climate change and the CCA and DRR agendas overlap in several ways. They both seek to reduce vulnerabilities to hazards, and both operate in the context of sustainable development and poverty reduction. Risk reduction cannot occur without the use of climate information; equally, successful CCA depends on risk reduction. On the ground, most actions that can help adapt to a changing climate also reduce disaster impacts.

Despite the alignment opportunity between CCA and DRR agendas, the United Nations Office for Disaster Risk Reduction (UNDRR) 2020 analysis, "Pathways for Policy Coherence in Sub-Saharan Africa", argues that policy coherence is more incidental than structural. Furthermore, CCA and DRR have been historically managed by different political processes and communities.[28] At a country level, different ministries, agencies, and committees might be responsible for developing, implementing, and reporting on progress in adaptation action, while other national actors and bodies report on progress on the Sendai Framework indicators.

There is a need for a concerted effort to improve alignment of DRR strategies and national strategic adaptation documents to develop a comprehensive risk management approach. Using joint analysis and integrated planning can help streamline actions and avoid duplication of efforts. When DRR and CAA efforts are aligned, there is often greater sharing of data, information, and best practices, which can lead to better decision-making and more informed strategies. Combining resources and efforts, rather than addressing disasters and climate change separately, can lead to resource efficiency. That is, instead of duplicating efforts, governments and organizations can pool resources to address multiple challenges simultaneously.

DRR interventions and CCA strategies should no longer be managed independently. For this reason, the study extended its analysis to assess the degree to which DRR strategies and plans were included in strategic adaptation documents.

4.3.1 The Sendai Framework and National Disaster Risk Management Strategies

A total of 24 countries mentioned the Sendai Framework or a national strategy with a DRR focus in their NDC, NAP, or LTS. Some of these countries also mentioned the intent of integrating CCA and DRR into local policies and plans. Of the 24 countries, 18 listed a National Disaster Risk Management strategy to inform the elaboration of their NDC, NAP, or LTS. Considering disaster risk strategies in the development of adaptation goals and measures is a first step in lining up both agendas and optimizing resources and efforts. Nevertheless, the level of integration is difficult to assess in these cases without stakeholder consultation activities and therefore is a limitation to this analysis. Table 5 highlights disaster-related strategies for each country.

Table 5. DRM Strategy Linkages in NDCs, NAPs, and/or LTSs

Country	Mentioned DRM Strategy in NDC/NAP/LTS
Angola	Disaster Preparedness, Contingency, Response and Recovery Plan for the period 2014–2019 Strategic Plan for Disaster Risk Prevention and Reduction
Cabo Verde	National Strategy for Disaster Risk Reduction (ENRRD) 2018–2030
Central African Republic	The National Disaster Risk Reduction Strategy and an Action Plan 2020
Chad	National Action Plan for Capacity-building for Disaster Risk Reduction, Preparedness and Emergency Response (2015–2021) Action Plan to Implement the National Climate Services Framework (2016–2020) National Disaster Risk Reduction Strategy and Action Plan of Chad National Disaster Risk Management Strategy and Action Plan of Chad (2020)
Democratic Republic of the Congo	National Strategy and Action Plan 2017–2023 for the Reduction of Natural Risks and Disasters in the DRC
Egypt	National Strategy for Disaster Risk Reduction 2030
Liberia	National Disaster Risk Reduction and Resilience Strategy of Liberia (2020–2030) National Policy and Response Strategy on Climate Change (2018) National Disaster Management Policy (2012)
Lesotho	National Disaster Risk Reduction Policy 2007
Madagascar	National Disaster Management Policy (PNGRC) 2015 and the National Risk and Disaster Management Strategy (SNGRC)
Mauritania	National Action Plan for Disaster Risk Management National Action Plan for Capacity Building in Disaster Risk Reduction and Preparedness and Response to Emergencies National Plan for the Prevention of Risks and Disasters (PNPRC)
Mauritius	National Disaster Risk Reduction and Management Policy, Strategic Framework and Action Plan 2020–2030
Nigeria	The National Disaster Risk Management Policy 2019
Niger	The West Africa and Sahel Disaster Risk Management Strategy (2011)
Seychelles	National Integrated Emergency Management Plan (NIEMP)
Somalia	The Somali National Disaster Management Policy 2018
Gambia	The National Disaster Management Policy
Togo	National Strategy for Natural Disaster Risk Reduction National (SNRRC)
Uganda	National Disaster Preparedness and Management Policy 2010

4.3.2 Integration of Disaster Risk Reduction into Adaptation Priority Sectors

Nine countries identified adaptation measures or goals that are synergetic with DRR within their priority sectors. Some of these measures were geared toward creating Early Warning Systems and strengthening the capacity of monitoring, forecasting, and analysis to minimize damages in sectors like agriculture, water, coastal systems, vulnerable populations, health, and tourism, among others. Other activities focused on developing plans and strategies to reduce the risk of and vulnerability to climate change impacts and disseminate information. Other measures focused on post-disaster impacts by delineating the importance of setting up social protection tools (e.g., a national solidarity fund to support those impacted). Furthermore, some measures focused on public education and awareness-raising concerning security and resilience to natural disasters and humanitarian crises. On the other hand, there seemed to be few mentions of developing climate-resilient infrastructure services to adapt sectors to the impacts of disasters.

4.3.3 Disaster Risk Reduction as an Adaptation Priority Sector

Less than half of the countries (21) communicated DRR as a separate priory sector within their adaptation contributions. Of these, 18 countries expressed qualitative actions and goals, with various levels of details, for example, "Promoting integrated disaster risk management" (Tanzania), "Enhanced coordination and information-sharing between relevant ministries and stakeholders" (Somalia), and "Improved early warning dissemination system at local level" (Mozambique). Some qualitative goals are provided with indicators, thus are measurable, though without a target.

Sierra Leonne presents MRV indicators for adaptation with relevance to DRR, but these indicators are not clearly connected to specific goals. They include:

- Change in predictable losses of lives and economic assets due to the impact of extreme climate-related disasters in the geographic area.
- Number of climate change vulnerability studies and maps of coastal zones developed.
- Uptake of early warning systems.
- Percentage of companies/industries assessing risks and opportunities from extreme weather and reduced water availability to their production and supply chains.
- Percentage of households at reduced risk of floods.
- Percentage reduction of flood damage and disaster relief costs in cities due to increased standards for flood protection and improved flood emergency preparedness.

Rwanda presents DRR as a priority cross-cutting sector, with two related interventions and corresponding indicators: Disaster risk monitoring (with the indicators "Population covered by DRR programs" and "Number of effective city contingency plans developed"); and Establish an integrated early warning system and disaster response plans (with the indicator "Percentage of extreme weather events for which warning was provided at least 30 minutes in advance").

Only three countries included measurable goals with a quantified target within their DRR priority sector. Ethiopia, for example, aims to increase the number of modern weather monitoring stations from 325 (baseline 2018) to 806 by 2030. South Sudan outlines a strategy focusing on strengthening early warning systems, with a goal to rehabilitate five national disaster risk management centers in the medium term. Uganda aims to increase automation of their weather and climate network from 62 percent (baseline) to 82 percent by 2025, to help build more effective warning systems.

Spotlighting Good Practices

South Sudan has outlined a strong institutional framework for DRR across its strategic adaptation documents, with an appointed ministerial focal point for the sector that is embedded within the greater institutional arrangements for adaptation. Lines of communication and coordination between stakeholders are outlined clearly. South Sudan's Ministry of Humanitarian Affairs and Disaster Management is responsible for developing policy and decision-making on DRR at the national level. The department is responsible for improving early warning systems (with the support of the South

Sudan Meteorological Department which operates under the Ministry of Transport), raising awareness among various stakeholders, and capacity building on community response measures. As an implementing entity, it is tasked with developing sectoral policies and regulations for DRR in coordination with the Ministry of Environment and Forestry (the national NDC Focal Point), ensuring proper disbursement of funds to executing entities, and providing and/or facilitating technical support and training.

South Sudan also showcases good alignment of DRR actions across planning documents. The NAP includes nine priority sectors within which adaptation programs are outlined. The specific actions included in these programs were drawn from the country's NDC and NAPA, among other sources. This illustrates how actions across planning documents can be built upon one another and existing resources can be utilized for implementation. South Sudan articulates the development of implementation plans for each of the priority sectors as the next step of its NAP process. The plans would then be linked to a monitoring and evaluation framework, as well as a budgeting plan to identify sources of funding for implementation. It is envisaged that the Climate Change Finance Inter-Ministerial Steering Committee will play a strong role in coordinating financial support for priorities. This is a significant step toward embedding country finance bodies and mechanisms into institutional arrangements for climate adaptation, moving to a more integrated and coordinated adaptation planning approach.

Box 9. UNDRR's Comprehensive Disaster and Climate Risk Management Program

The United Nations Office for Disaster Risk Reduction (UNDRR) launched a flagship initiative: Comprehensive Disaster and Climate Risk Management (CRM), which seeks to integrate risk-centered approaches into NAPs, and climate forecast information into national and subnational disaster risk reduction strategies. This is aligned with Target E of the Sendai Framework for Disaster Risk Reduction, which aims to increase the number of countries with national and local disaster risk reduction strategies, in part through the promotion of policy coherence.

This comprehensive approach takes multiple factors into consideration, with the intention of strengthening synergies between disaster risk reduction and climate change adaptation. The process of this approach includes identifying mutually beneficial opportunities across policies and programs, while developing capacities of governments for cross-sectoral planning and ensuring vertical alignment. The CRM program focuses on risks across short-, medium-, and long-term timescales using information from weather, seasonal and climate forecasts, and predictions. This information is then translated into meaningful messages and recommendations to enable more comprehensive planning and implementation.

Currently four African countries are receiving technical assistance from UNDRR regional offices in relation to the application of the CRM tools: Benin, Malawi, the Niger, and Uganda.

Analysis of DRR Integration

Of the 21 countries with a DRR priority sector, only three provided measurable goals with a quantified target, illustrating the need for efforts in planning. Some qualitative goals are provided with indicators, thus are measurable, though without a target—this is a positive step in the right direction. Across strategic adaptation documents, very little evidence was shown of coordination with DRR strategies at the planning and institutional levels. A more comprehensive and intentional approach to DRR and CCA alignment and planning is needed.

Box 10. Loss and Damage

Climate change poses an existential threat with far-reaching and unprecedented effects on people's lives worldwide. The frequency and intensity of climate disasters are escalating, resulting in devastating impacts on communities and ecosystems. Developing countries are disproportionately affected by these calamities, as they often face challenges in rapidly rebuilding infrastructure or providing sufficient relief to affected communities due to limited financial resources.

As highlighted in recent State and Trends in Adaptation Reports (STA21 and STA22), African countries are not the primary contributors to climate change, yet they often bear the brunt of its impacts, especially during climate shocks and disasters, as do other regions with developing countries. The occurrence of contemporary climate shocks, ranging from devastating floods in Pakistan to prolonged droughts in the Horn of Africa, has served as a stark wake-up call. Countries argued that these disparities in responsibility and resilience call for a deeper commitment from the international community to provide support and solidarity to those most affected.

To address these issues, at COP27, held in Sharm El Sheikh in 2022, there was a notable turning point in the efforts to establish a loss and damage fund. The Loss and Damage (L&D) mechanism was created to address the impairment caused by the impacts of climate change in vulnerable countries. It recognizes that even with adaptation and mitigation efforts, some adverse effects are inevitable. This fund aims to provide financial support to assist these countries in dealing with the aftermath of climate-induced disasters and to support their efforts in coping with the challenges posed by climate change. However, due to the novelty of the fund, the exact execution mechanism has not been finalized and will be subject to discussion during COP28 in Dubai in December.

The loss and damage fund is a significant step toward climate justice.[29] By addressing climate justice through this fund, industrialized countries take responsibility for their historical contributions to climate change and aid the most vulnerable countries that lack the capacity to cope with the consequences, particularly after climate disasters.

According to the study's analysis, 14 countries have acknowledged the adverse effects of climate change in the form of L&D across the analyzed NDCs, NAPs, and LTSs. Some countries mentioned the importance of the L&D agenda and signaled intent to develop plans in the future, while others calculated the impacts of climate change while also alluding to the L&D agenda.

5 Adaptation Priorities Across Sectors

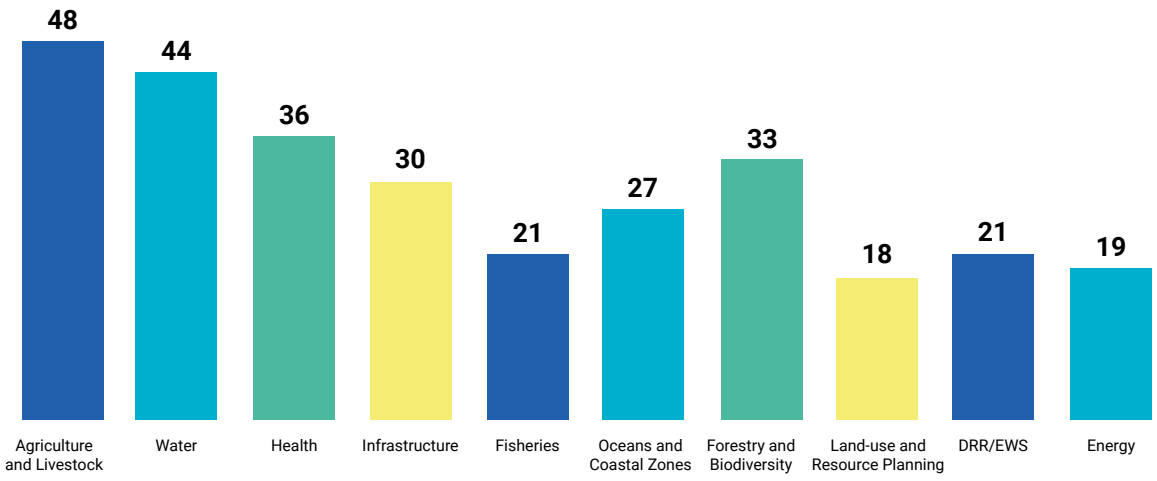
It is crucial for countries to identify quantitative and qualitative goals, across key sectors, that are time-bound, have defined roles, and cost estimates. This provides funders with the certainty of the country's direction in adaptation, enhances in-country planning and transparency, and allows countries to measure their progress and iterate to strengthen their adaptation plans.

This part of the report takes a deep dive into the top three sectors (agriculture, water, and health) and provides examples of countries that give more detailed information on their planned adaptation measures for each. It then highlights priority gaps relating to sectors such as the blue economy and tourism, where greater prioritization is needed in Africa.

5.1 Key Priority Sectors

Across NDCs and NAPs, the three most frequently identified prioritized sectors, areas, or pillars for adaptation were Agriculture and Livestock (48), Water (44), and Health (36) (Figure 8).

Figure 8. Key Adaptation Priority Sectors Mentioned Across NDCs and NAPs for Africa



Source: Authors

DRR, disaster risk reduction; EWS, early warning systems.

5.1.1 Agriculture and Livestock

The study grouped the following stated key sectors under the umbrella of Agriculture and Livestock: Agriculture, Livestock, Rural Resilience, Agriculture Landscapes, Food Systems, Food Security, and Rural Development. Table 6 highlights examples of various African countries' adaptation measures and goals in relation to agriculture and livestock.

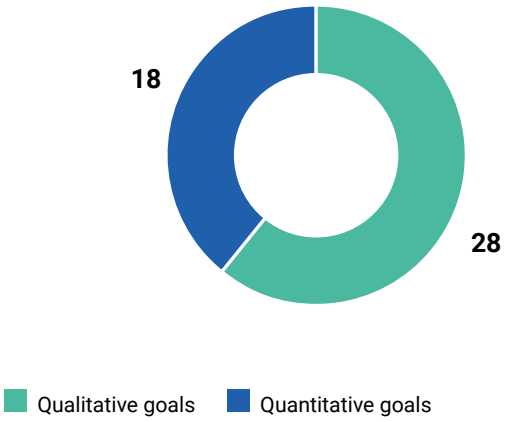
Table 6. Examples of Common Adaptation Measures and Good Practices in the Agriculture and Livestock Sector

Adaptation Measure, Goal, or Activity	Example of Countries' Goals
Integrate early warning systems for preventing food loss and crises associated with climate change impacts and diseases by disseminating weather reports and seasonal forecasts for minimizing the loss of crops and livestock.	Democratic Republic of the Congo: Establishment of an early warning system and implementation of response measures in the case of natural disasters to manage the risks of farmers between 2021 and 2030 with estimated costs of US$0.58 billion and US$2.88 billion, respectively.
Improve agro-pastoral water use through efficient irrigation systems, using techniques like micro-irrigation, the rehabilitation of irrigation canals, or the development of smart hydroponic systems.	Egypt: Rehabilitation of 20,000 km of irrigation canals for agricultural climate resilience (to benefit 60 million people). Morocco: Extension of irrigation to new agricultural perimeters, over an area of 60,000 ha, for a total investment of US$3.5 billion by 2030. Eritrea: Development and promotion of 170,000 ha of irrigation schemes.
Increase training and capacity building of farmers and agricultural extension agents to implement climate adaptation actions in the agriculture and livestock sectors, by increasing support for education and training on agricultural climate risks and adaptation solutions for vulnerable groups.	Liberia: Establish 100 farmer field schools and train 5,000 farmers in climate-resilient agricultural and livestock practices by 2025. Roll out a "Women in Agriculture" program with four training sessions per year (with at least 45 women trained per year) to support the implementation of climate-resilient agricultural and livestock practices and to increase women's access to agricultural inputs and labor-saving devices by 2025.
Build the resilience of agriculture systems through sustainable land management, conservation practices, agroforestry, and restoration and rehabilitation of degraded land.	Eritrea: Implement sustainable land management practices across 15 percent of Eritrea and an afforestation program covering over 36,000 ha by 2030.
Preserve and expand the biodiversity (genetics, species, or ecosystems) of crops and livestock varieties as well as introducing new traits through the application of a national collection of local seeds program. This will improve and create adapted local varieties, which will help change crop patterns and provide access to more drought- and heat-tolerant crop species and livestock feeds.	Liberia: Establish a national research institution focusing on new climate-smart seed varieties and improving livestock breeding by 2030. Malawi: Improve community participation in seed selection, storage, and management, and the establishment of community and multiplication seed banks (US$11 million unconditional target).
Develop subsidy mechanisms for farmers through safety nets, crop and livestock insurance systems, risk financing, and investment.	Malawi: Establish risk financing and investment including weather index insurance and other solutions at national and subnational levels, inclusive of microfinance and insurance products for smallholder and commercial farmers (US$37 million unconditional and US$40 million conditional targets).

The degree of specificity provided, and therefore their readiness for implementation, varied greatly. The study found 28 sectoral plans with qualitative descriptions of goals related to agriculture and/or livestock. Eighteen sectoral plans outlined goals with quantitative measures of progress (Figure 9a).

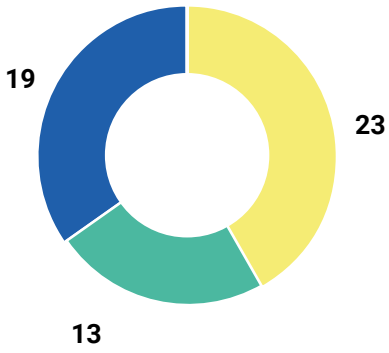
In relation to the level of detail of the goals: 23 were time-bound, 13 had ownership, and 19 had cost estimates (Figure 9b). Furthermore, adaptation measures in the agriculture and land-use sectors presented in the NDCs were characterized by mainly focusing on the production phase of agriculture—meaning in the pre-sowing and sowing stages. For instance, according to the Food and Agriculture Organization of the United Nations (FAO) 2022,[30] in the Sub-Saharan Africa region almost all NDCs (89 percent) focus on the production phase of agriculture and food systems, while only a small share focus on post-harvest operations (Seychelles, Lesotho, the Congo, and Côte d'Ivoire, Ghana, and Guinea), processing and packaging (Rwanda, the Gambia, Cameroon, and Côte d'Ivoire), transport, storage and distribution (Ethiopia, Guinea Bissau, Liberia, and Côte d'Ivoire), and retail (Cabo Verde and the Gambia). Focusing on adapting all the phases of production, from pre-sowing to retail of the food system, and creating time-bound goals, with clear roles and cost estimates, are recommended to enhance the readiness for investment in the sector.

Figure 9a. Adaptation Goals for the Agriculture Sector by Type of Goal



Source: Authors

Figure 9b. Adaptation Goals for the Agriculture Sector by Detail of Goal



Source: Authors

5.1.2 Water

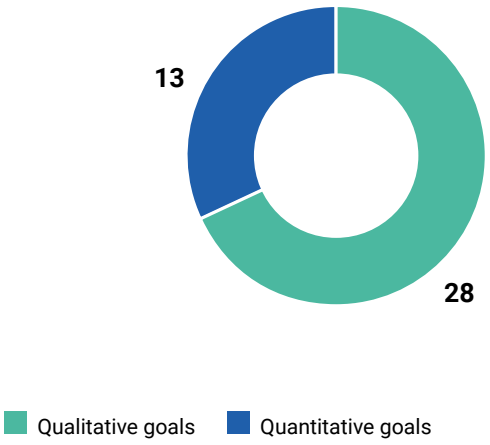
The study grouped the following stated key sectors under the umbrella of Water: Water; Water Resources; Water Supply; and Hygiene and Sanitation. Table 7 highlights examples of various African countries' adaptation measures and goals in relation to water.

Table 7. Examples of Common Adaptation Measures and Good Practices in the Water Sector

Adaptation Measure, Goal, or Activity	Example of Countries' Goals
Increase the number of meteorological and hydrometric stations to improve monitoring of rainfall and watersheds to ensure the security of water usage in the context of climate variability and climate change.	Central African Republic: By 2025, develop a ground and surface water resources monitoring system and establish a water quality monitoring system (SQE). Morocco: Reinforcement of the network of meteorological observation stations (currently numbering 200) by acquiring new stations and setting up a national meteorological network by integrating the stations of other partners, to reach a single network of 1,000 stations.
Improve existing wastewater collection and treatment systems and build new systems in underserved areas focusing on urban areas with a high concentration of people.	Cabo Verde: By 2030, provide 100 percent waste disposal coverage such as septic tanks for households outside the network. Morocco: Reuse of wastewater, to reach a capacity of 275 million^3 main urban areas and 16 million^3 main rural areas within the framework of the Shared Liquid Sanitation Program (PNAM) by 2030.
Achieve access and sustainable utilization of water resources by implementing water collection and storage systems in drought-prone areas to ensure continuity of human supply and watering of livestock.	Malawi: Water supply, storage, and harvesting in drought-prone areas, including water point rehabilitation coordinated by the Ministry of Forestry and Natural Resources (Department of Water Supply). Estimated Cost: US$108 million (Conditional: US$54 million/Unconditional: US$54 million). From 2020 to 2040. Eritrea: Safe drinking water supply will increase from 75 percent to 100 percent by 2030.
Increase the planning, construction, and improvement of flood management structures such as upstream dams, storm drains, dikes, and bunds.	Kenya: Build and improve the resilience infrastructure of dams, dikes, and river lines (within the 2030 goals). Morocco: Construction of 50 large dams by 2050 covering the entire Moroccan territory with an additional storage capacity of 11 billion m^3 by 2050.
Develop and strengthen water policies including integrated water resource management policies, plans, and approaches in priority watersheds and reservoirs.	Malawi: Integrate the climatic, biophysical, and economic limits to increasing water supply into the revisions of National Strategic Plan for Water and Sanitation (PLENAS) and National Action Plan for Integrated Water Resources Management (PAGIRE). Start by reducing water losses before increasing water supply and ensure a fair share of clean water to all consumers by 2030. Sao Tome and Principe: Elaboration and implementation of the integrated watershed management plan and water security and water security.

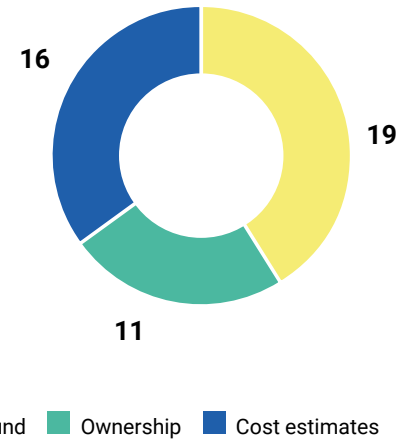
The study found 28 sectoral plans with qualitative descriptions of goals related to water. Thirteen sectoral plans outlined goals with quantitative measures of progress (Figure 10a). In relation to the level of detail of the goals: 19 were time-bound, 11 had ownership, and 16 had cost estimates (Figure 10b).

Figure 10a. Adaptation Goals for the Water Sector by Type of Goal



Source: Authors

Figure 10b. Adaptation Goals for the Water Sector by Detail of Goal



Source: Authors

Water adaptation measures are cross-sectoral, and can be mentioned as part of other sectors such as infrastructure (strengthening; planning; constructing dams, flood management structures, storm drains, etc.); health (managing wastewater and provision of clean water, etc.); agriculture (climate-smart irrigation, groundwater resources extraction for irrigation, etc.); forestry (improving the infiltration and replenishment of water resources through nature-based solutions, etc.); and disaster risk reduction (developing or enhancing early warning systems for drought and floods, integrated water resources management, etc.), among others. The cross-sectoral nature of the water sector makes it crucial that countries strengthen the institutional coordination mechanisms across sectors to avoid duplication of efforts and enhance the impact of adaptation actions. For instance, strengthening and developing goals on the implementation of Integrated Water Resources Management (IWRM) as a holistic framework used to address the diverse demands and pressures on water resources across sectors and at different scales can also help address multiple challenges and enhance cross-sectoral coordination.

5.1.3 Health

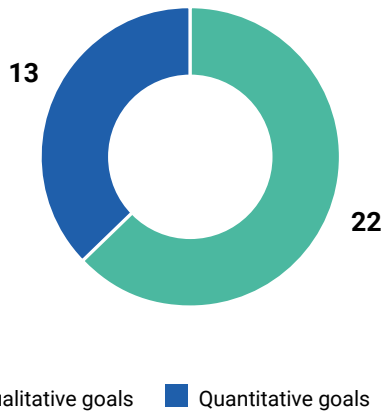
The study grouped the following stated key sectors under the umbrella of Health: Health, Wellbeing, and Public Health. Table 8 highlights examples of various African countries' adaptation measures and goals in relation to health.

Table 8. Examples of Common Adaptation Measures and Good Practices in the Health Sector

Adaptation Measure, Goal, or Activity	Example of Countries' Goals
Strengthen preventive measures to address health issues that are likely to be negatively impacted by climate change, such as disease transmission (outbreak), malnutrition, diarrhea, and malaria prevalence.	Liberia: Ensure that 80 percent of the rural population is within 5 km of health service points and reduce malaria prevalence by 45 percent, both by 2030. Eritrea: Prevalence of climate change related public health problems and diseases will be prevented and reduced by 90 percent by 2030. Ethiopia: Reduce malaria incidence from 26/1,000 (baseline) to 8/1,000 by 2030.
Strengthen human and institutional capacities as well as the dissemination of information on changing health risks, enhancing the response to climate-related diseases and facility access.	Liberia: Establish 425 community health clubs to improve community-level health care and disseminate information on changing health risks. Kenya: Develop a public awareness and social mobilization strategy on climate change and health impacts (within the 2030 goals).
Integrate potential impacts of climate change into development policies and plans.	Somalia: Set up municipal capacity to integrate climate-derived health issues into municipalities' sustainable development plans, leading to municipal climate change action plans with health prevention, treatment, and monitoring programs. DRC: Integrate potential impacts of climate change into development policies and plans by 2030. (Cost estimate: US$0.06 billion – Indicator: Number of plans or programs/Sustainable Development Goal links: 1 and 3).

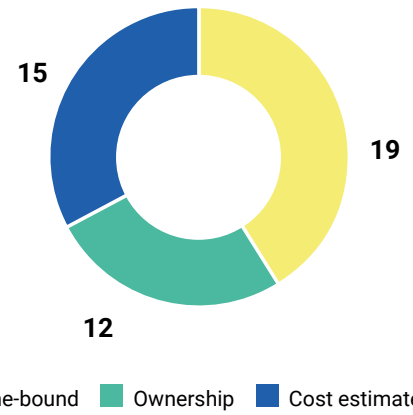
The degree of specificity provided, and therefore their readiness for implementation, varied greatly. The study found 22 sectoral plans with qualitative descriptions of goals related to health; 13 sectoral plans outlined goals with quantitative measures of progress (Figure 11a). In relation to the level of detail of the goals: 19 were time-bound, 12 had ownership, and 15 had cost estimates (Figure 11b).

Figure 11a. Adaptation Goals for the Health Sector by Type of Goal



Source: Authors

Figure 11b. Adaptation Goals for the Health Sector by Detail of Goal



Source: Authors

Adaptation activities and goals for the health sector are less quantitative than sectors such as agriculture and water. There is strong interest in strengthening the capacity-building programs of persons and institutions, disease prevention, as well as incorporating the impacts of climate change into public health development policies and plans (Table 8).

On the other hand, a range of crucial measures were barely mentioned and were identified as gaps, such as: improving research to understand the climate–health nexus; strengthening social protection tools to reduce vulnerability; mapping climate health hazards and area-based scenario planning for responding to climate health hazards; identifying vulnerabilities, and climate-proofing healthcare facilities and infrastructures.

Malawi, for instance, included social protection tools as a measure to strengthen the resilience of its health sector. The country plans to establish a Social Support Fund for predictable, timely response, linking inclusive social support systems to risk financing options, and increasing social cash transfer, among other measures. Morocco mentions increasing the resilience of health infrastructure and services through developing codes and design standards for health facilities and developing community training programs for health personnel on the risks.

As the 2021 State and Trends in Adaptation Report (STA21) points out, Africa is presently confronted with huge and complex healthcare challenges. The looming impacts of climate change are expected to have a very disruptive impact on the health sector. Climate change can exacerbate diseases linked to warmer climates and extreme weather events, disproportionately affecting the poorest and most vulnerable sections of the population. Additionally, extreme weather events exacerbated by climate change can have stark impacts on healthcare system infrastructure, adding challenges to the sector. Therefore, it is crucial to enhance efforts to apply the insights and strategies of well-planned and systematic climate adaptation strategies that address the health gap to create a strong line of defense against the impacts in the sector that will almost inevitably accompany a warming climate.

5.2 Highlighting Less Discussed Priority Adaptation Sectors and Themes

5.2.1 Coastal Zones and the Blue Economy

Coastal erosion is severely impacting coastal cities and populations in Africa. Coastal erosion mechanisms are significantly aggravated by anthropogenic climate change, such as changing wave patterns, sea-level rise and subsidence, and the increasing frequency of coastal flooding events. Densely populated low-lying coastal areas, with limited protection across the continent, render Africa's coastal zones highly vulnerable to these changes. North and West Africa are especially vulnerable, with coastal erosion rates among the fastest in the world.[31]

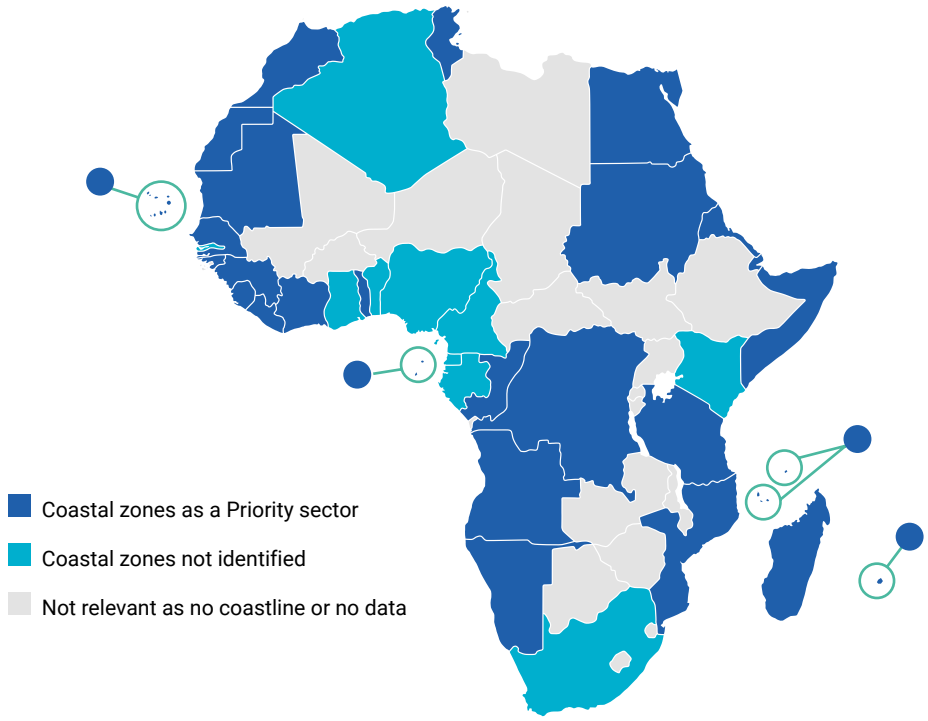
Major planning and adaptation efforts are therefore crucial for the protection of African marine and coastal ecosystems. The study, however, revealed that many gaps exist in coastal zone adaptation planning in Africa's coastal countries.

Of the 37 UNFCCC-affiliated coastal countries across the continent, 11 did not communicate blue economy or coastal erosion adaptation actions in any of their NDCs, NAPs, or LTSs (Figure 12). Three countries in West Africa, and one country in North Africa, did not have coastal zones as a priority adaptation area.

Coastal ecosystems hold great potential for nature-based solutions that, when integrated with a blue economy approach, can contribute to: mitigating climate change; increasing coastal resilience; and boosting the African economy. As a starting point, it is critical to implement efficient and cost-effective no-regret measures (such as nature-based solutions) which can catalyze further adaptation action. Nature-based solutions can protect coastlines by preventing erosion, absorbing incoming wave energy, and providing storm surge protection.

Blue economy sectors, like tourism and fisheries, rely on rich coastal ecosystems and the services they provide, such as protection from floods and erosion, fish nurseries, and recreation. Their healthy functioning not only provides great economic opportunity but is also intrinsically tied to the wellbeing and livelihoods of local communities. Blue Carbon Ecosystems—such as mangroves, seagrass, and salt marsh ecosystems—help buffer against

Figure 12. Adaption Prioritization of Coastal Zones



Source: Authors

climate impacts and protect a wealth of biodiversity. They also play an important role as blue carbon sinks due to their potential for carbon sequestration. The protection of these ecosystems is critical for both adaptation and mitigation.

While policies and programs for marine resources, such as fisheries and tourism, are under development in many African countries, without cross-sectoral coordination these actions cannot be equated to blue economy development. Adaptation planning, with an integrated blue economy approach, can serve huge benefits for coastal African countries.

Spotlighting Good Practices

Kenya is a good example of a country with a high enabling environment for investment in coastal zone management and the blue economy. Although the country does not have coastal zones as a prioritized area for adaptation, its NDC mentions the following adaptation programs within the Environment priority sector.

- Conduct blue carbon readiness assessment for full integration of blue carbon/ocean climate actions into NDCs.
- Promote and expand opportunities for nature-based enterprises including seaweed farming and mangrove ecotourism.
- Integrate the use of nature-based solutions, including the implementation of a national mangrove management plan, into national and county development plans.

Namibia prioritizes coastal zones and fisheries and outlines actions, a responsible ministry (Ministry of Fisheries and Marine Resources), and cost estimates in its NDC. Seven activities are outlined within the sector. All actions are conditional upon external finance, except for one unconditional action to collaborate with the insurance market to guide investment in coastal areas. Each action is accompanied by mitigation, environmental, and social co-benefits, as well as gender and private sector agendas. The NDC has a section dedicated to blue carbon opportunities and proposes future blue economy adaptation activities. Twenty-two adaptation objectives are listed across nine industries: Renewable Energy, Engineering and Built Environment; Coastal Land Use Planning; Services (technology, weather, health, research);

Ecotourism and Wildlife; Marine Fisheries and Aquaculture; Marine Mining; Value-Addition and Food Manufacturing; Coastal Agriculture; and Water Use Efficiency and Management. Further, Namibia intends to develop a blue economy strategy or policy.

Mauritius has a mature institutional approach to the blue economy. As communicated in their NDC, the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping is responsible for activities related to: marine pollution from vessels; ports; fisheries and marine ecosystem management and protection; restoration of coral reefs; and marine parks. The Ministry of Environment, Solid Waste Management and Climate Change is responsible for integrated coastal zone management and the development of beaches and shoreline. Two priority sectors within the adaptation contribution are Climate Smart Fisheries and Blue Economy, and Tourism and Coastal Zone Management. Examples of adaptation measures include: Develop and implement an integrated approach aligned with coastal zone and biodiversity/forestry sectors; Enhance the knowledge regarding the risks of climate change for coastal ecosystems and communities; Development and implementation of sustainable fishing management plans and Foster an integrated approach that combines the goals and targets for the fisheries sector with the coastal zone management sector.

Box 11. Seychelles: An Integrated Blue Economy Approach to Coastal Zone Management

Seychelles has a comprehensive coastal management plan with an integrated blue economy approach. The Coastal Management Plan (CMP) 2019–2024 is currently the country's main adaptation strategy against coastal erosion, flooding, cyclones, and tidal variations. The CMP emphasizes nature-based and hybrid engineering solutions for the restoration of beaches and dunes, coral reefs, and wetlands. Several nature-based solutions projects have been implemented, focusing on dune/mangrove restoration and reconnecting coastal wetlands to improve drainage and reduce flooding.

Seychelles' Marine Spatial Plan (SMSP) focuses on planning for, and management of, the sustainable use and health of the country's Exclusive Economic Zone (EEZ). Key challenges covered in the SMSP include climate change adaptation, marine protection, and supporting the blue economy.

In 2018, Seychelles adopted a Blue Economy Strategic Framework and Roadmap, which centers around reducing vulnerability to economic and environmental shocks and planning for resilience.

Seychelles incorporates Resilience to Blue Carbon Ecosystems as a priority sector in their NDC. The country intends to map the extent of carbon storage capacity within blue carbon (seagrass and mangrove) habitats, through cutting-edge technologies and partnerships that aim to strengthen local, scientific, methodological, and governance capacities. Part of its commitment to blue carbon ecosystems involves protecting at least 50 percent of its seagrass and mangrove ecosystems by 2025 and 100 percent by 2030. The realization of this goal, however, is subject to external support and the identification of financing mechanisms, such as multilateral and bilateral funds, insurance products, debt-for-nature swaps, private investment, blue carbon credits and bonds, and other innovative conservation financing mechanisms.

The country is committed to integrating climate change considerations across all key sectors by 2030. One critical priority action is the adoption of an integrated Ridge to Reef approach to coastal management that brings together the Seychelles Marine Spatial Plan, the Coastal Management Plan, the Blue Economy Roadmap, the National Biodiversity Strategy and Action Plan, and other initiatives with the vision of guiding the development in sectors such as fisheries and aquaculture, tourism, agriculture, waste management, water resources, biodiversity conservation, and urban development.

5.2.2 Tourism

Tourism is one of the primary industries driving growth and job creation in many of the world's emerging economies.[32] According to the United Nations World Tourism Organization (UNWTO), before the Covid-19 pandemic, the sector contributed 10.4 percent to the global GDP and about 7 percent of Africa's GDP.[33] In Africa alone, tourism supported 8.8 million jobs in 2018; however, the sector is still recovering from the impacts of the pandemic.

Tourism is highly vulnerable to climate change. Temperature increases can impact humans and put pressure on terrestrial and marine ecosystems. Coastal tourism can be impacted by sea-level rise, floods, and other natural phenomena. Hydrological variability and water scarcity can have cascading effects on tourism.[34] For instance, in Cape Town, South Africa, droughts and water restrictions reduced arrivals and impacted jobs.[35] Therefore, it is crucial that adaptation is mainstreamed into the sector's plans, and that they are complementary to the sustainable development and mitigation agenda ambitions.

Despite this, only 15 countries mentioned tourism as a key sector for adaptation in the study. Of the countries with a prioritized tourism sector plan, some only offered broad goals and general statements for their sectoral plans, while a few took a step further and presented concrete ideas for adapting their tourism sector. For instance, the Congo expressed interest in preserving and fostering the handicraft sector by ensuring a steady supply of sustainable raw materials and organizing competitions to encourage local artisans.

Spotlighting Good Practices

Kenya has a specific goal of conducting risk and vulnerability assessments for its tourism sector. This initiative aims to identify potential challenges and vulnerabilities in the sector, paving the way for targeted adaptation measures.

Lesotho has expressed its intention to increase the preparedness of tourism and recreational operations to tackle extreme weather conditions.

Malawi has taken a step further by actively working on the development of a comprehensive tourism crisis management strategy and plan, which includes provisions for handling emergency situations. Notably, the document also highlights the responsible ministry tasked with achieving this plan, the estimated financial requirements, and a well-defined timeline for implementation. Additionally, it emphasizes the alignment of this strategy with the Sustainable Development Goals (SDGs). Malawi's proactive approach demonstrates its commitment to safeguarding its tourism industry against potential crises and ensuring resilience in the face of adverse circumstances.

5.2.3 Infrastructure and Human Settlements

Beyond the direct damages to assets by extreme events such as wildfires, floods, and landslides, climate change is causing negative impacts to infrastructure in African societies. Thirty countries directly mention in their NDCs and NAPs that infrastructure is a key sector for adaptation. Given the importance of infrastructure to economies and to society, it is crucial that green and gray solutions are mainstreamed into countries' plans to enhance resilience to climate change and mitigate disaster risk challenges. Further, nature-based solutions, which are more common in sectors like water, agriculture, and forestry, could benefit the infrastructure sector by reducing costs.

African nations' climate risk is increasingly being concentrated in cities, where rapidly growing populations, assets, and economic activity are becoming exposed to climate hazards. Despite this, there remains a unique opportunity to get things right, as much of Sub-Saharan Africa (approximately 40 percent) is still in the early stages of urbanization. However, the study found that only 17 countries mention human settlements as priority sectors for adaptation in their NDCs and NAPs. Given the cross-cutting nature of the topic, mentions of adaptation actions related to human settlements can be found in sectors like infrastructure, water, and agriculture, nevertheless, the topic should be prioritized as its own sector.

5.2.4 The Importance of Inclusion

Locally Led Adaptation

The study found that there are challenges remaining when it comes to including local communities in the design, planning, and implementation of NDC and NAP adaptation activities. NDCs and NAPs generally included consultation processes with local communities for the formulation of the documents but lacked clarity as to how they were participating in the planning and implementation phases of adaptation measures. Further, locally led adaptation by communities was generally mentioned as an isolated goal in a particular sector rather than as a cross-cutting topic across all sectors. According to the 2022 State and Trends in Adaptation Report (STA22), shifting to a model of adaptation that is locally led can enhance effectiveness and efficiency, and lead to more equitable benefits. For this reason, it is crucial to ensure that adaptation interventions are locally led.

To be successful, adaptation actions should respond to highly localized, multiple-interacting stressors (as no two communities can ever have identical risk profiles) and incorporate diverse priorities, values, perspectives, inherited wisdom, and interests, particularly of the most vulnerable.

Putting local communities in a leadership position within a process of adaptation that tackles structural drivers of risk through strengthening local institutions may be more complex and, in certain cases, have higher upfront costs than top-down, technocratic interventions. However, as shown in STA22, the evidence on returns on investment from adaptation initiatives that focus on the agency of communities suggests that the benefits far outweigh the costs. Therefore, mainstreaming locally led adaptation into all the phases of the conception of NDC and NAP adaptation measures as a cross-cutting topic will enhance the efficiency of the actions and be more sustainable in the long term.

Youth and Jobs

According to the study's analysis, there are gaps when it comes to including youth and job considerations in the design, planning, and implementation of NDC and NAP adaptation activities. Youth considerations are normally mentioned only in the consultation processes to develop NDCs and NAPs or as isolated goals across a few sectors. The calculated impact of adaptation measures in job generation is hardly mentioned across African NDCs and NAPs.

Africa's large and growing young population, estimated at over 1.4 billion in 2022, is one of the continent's most valuable assets for growth. Capitalizing on this presents an unparalleled opportunity for harnessing social and economic development in Africa and driving transformative adaptation at scale across the continent. Nevertheless, there is not yet a significant level of youth engagement in relation to the climate crisis. The youth–climate change nexus cuts across a range of development issues, including employment. The youth play a big role in urbanization trends, as they are most likely to migrate from rural areas or between urban areas. Climate change could accelerate this trend, trapping youth in substandard living conditions (slums) and poverty. Therefore, it is crucial to include youth in the design, planning, and implementation of NDC and NAP actions to enhance their effectiveness, and efficiency, and lead to outcomes that protect the continent's most valuable assets for growth.

Further, as stated in STA21, Africa's fast-growing population, with more than one billion workers projected by 2040,[36] needs to be considered when it comes to adapting the continent to climate change. The continent's relatively young population provides a large and cost-competitive supply of labor. But there is currently a deficit of green jobs[37] for Africa's large and expanding workforce, which has impacts on the resilience of its communities. Job creation and retention in Africa are central to building community resilience in the face of climate change. Africa's massive endowment of nature can be harnessed as both an engine for jobs and a pathway for cost-effective adaptation, allowing the continent to embark on a more sustainable development pathway. With its rapidly increasing young labor force and vast natural resources, Africa has the potential to take a growth path focused on labor-intensive modern industries in ecotourism services, climate-smart agriculture, the blue economy, and green building and infrastructure. Therefore, youth and job considerations are crucial to acknowledge as cross-cutting topics to enhance the NDCs and NAPs, as they help create a stronger case for adaptation to attract investment into the continent.

6 Recent Strategic Documents, Policy and Institutional Actions Supported by the World Bank and the IMF

The World Bank and the IMF have recently developed new instruments that will provide important support to strengthen institutions and policies on climate change. The World Bank has developed a new core analytical tool called the Country Climate and Development Report that analyzes the macroeconomic and sectoral impacts of climate change on countries and provides specific recommendations on programs, policy reforms, and institutional strengthening measures to deal with climate change. The IMF has developed the Resilience and Sustainability Trust which is providing fresh financial resources to support policy and institutional reforms to tackle climate change. Given the direct relevance to the analysis in this report, and the importance that policymakers are giving to these new tools, an initial analysis of findings and areas of support from these two new tools is provided in this section of the report.

6.1 Country Climate and Development Reports (CCDRs)

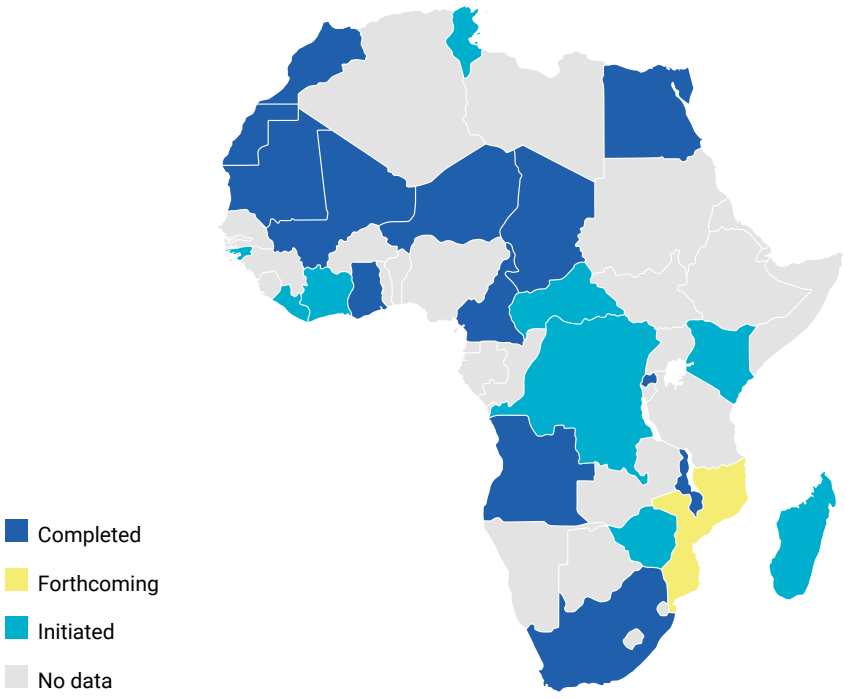
The World Bank Group's Country Climate and Development Reports (CCDRs) are diagnostic reports that combine the best available data, models, and tools in a systematic approach to provide immediate and actionable recommendations that integrate climate and development objectives. The first set of 20 CCDRs was released in 2022 and covers 24 countries. Thirteen African countries are currently covered by CCDRs and 10 are forthcoming or initiated (Figure 13).

CCDRs follow a similar framework to build the climate rationale for a just transition to low-carbon and resilient development. The prioritization process follows four main steps (Figure 14).

Economy-Wide Assessments of Climate Change

Economy-wide assessments are conducted in most of the CCDRs using macroeconomic modelling tools to estimate climate-related impacts on macroeconomic aggregates (e.g., GDP). The most widely used model is the World Bank's Climate Change Macro-Fiscal Model (CC-MFMod). It is a computable general equilibrium (CGE) model that uses "baselines" (long-term growth) scenarios that assume no additional climate change impacts beyond what has already been experienced in the

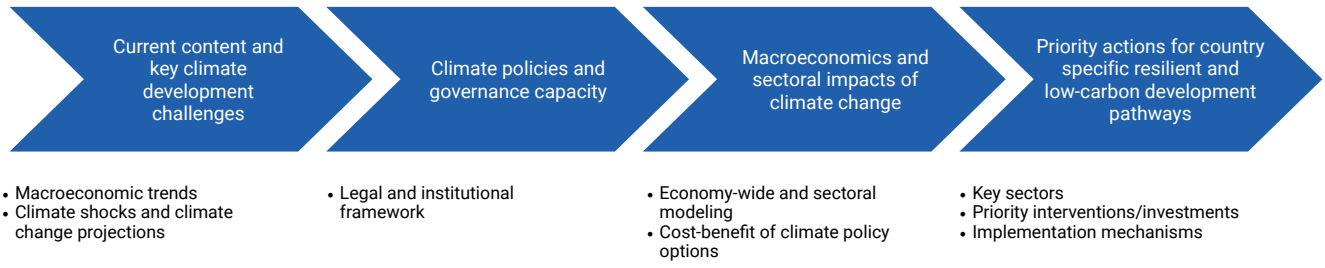
Figure 13. Status of Country Climate Development Reports in Africa



Source: Authors

past. The model estimates the impact of climate change-related shocks on the economy by comparing them to the baselines.[38]

Figure 14. CCDRs Prioritization Process



Source: Authors' elaboration based on a review of available CCDRs

The results of the economy-wide assessments presented in the CCDRs are not comparable between countries due to the different scenarios and models used (Table 9). It is also important to note that the results for each country should be used with caution due to the large uncertainties in their estimation. The choice of climate and baseline scenarios, the model assumptions, and the reliability of the available data can all lead to substantial differences in the results. However, despite the high uncertainties, such assessments provide important insights that can help countries plan and finance their adaptation strategies.

Overall, macroeconomic and sectoral assessments in CCDRs show that the direct impacts of climate-related shocks on African economies are context-specific but tend to be large and increasing over time. For instance, Cameroon's GDP would deviate by approximately –2 percent by 2030 under a middle-emission scenario (RCP4.5), but by –6 percent by 2050. Climate impacts also depend on the severity of climate change. By 2050, Cameroon's GDP deviation due to climate change could reach –10 percent under a high-emission scenario. In other words, urgent action is needed on both adaptation and mitigation.

Adaptation should also be integrated into medium- and long-term development strategies, as structural change plays a crucial role in mitigating the impacts of climate change. On average, the macroeconomic impacts of climate change are higher in countries where the economy is dominated by the agricultural sector (especially rainfed crop production activities). This is also the case for fossil fuel dependent economies. For instance, the modelling assessment for Angola shows that "income per capita by 2050 can be as much as 70 percent greater if [the country] successfully diversifies its economy than in the business-as-usual scenario".

Lastly, the assessment conducted for the G5 Sahel countries underscores the critical importance of fostering regional coordination. All countries in the region are negatively affected by climate change. Results from the modelling exercise show, for instance, that under the wet and optimistic climate scenarios (SSP1–1.9) annual GDP losses compared to a medium-growth baseline would range between 2.2 percent (the Niger) and 6.4 percent (Mali) by 2050. As highlighted in the report, this is likely to underestimate the economic losses from climate change because they do not include spillover effects, both within and between countries. Populations in the region are intricately connected through dense patterns of migration and trade flows. Ultimately, a climate-related shock in one country can reverberate and indirectly affect its neighbors through various impact channels, such as road connectivity (the second largest impact channel under the wet and optimistic climate scenarios, after heat-labor productivity). However, these interconnected flows also provide a solid foundation on which to build stability mechanisms to face cross-boundary risks.

6.1.1 Climate Policy Recommendations for Priority Action

The first set of CCDRs provides country-specific recommendations for adaptation and mitigation. Most recommendations are economy-wide or relate to the agriculture sector. Water, health, and environment sectors are strong priorities for adaptation but with relatively fewer linkages to mitigation. On the other hand, forestry, finance, and energy have a relatively lower priority for adaptation compared to other key sectors, but they have important co-benefits potential for climate action.

For interventions and investments, climate-smart agriculture, climate finance, governance, and urban planning are key policy issues for adaptation with strong cross-cutting linkages for climate action. Economy-wide resilience and adaptation, water-related resilience, social protection, and disaster risk management are also important policy issues for adaptation but with fewer co-benefits for mitigation. Just transition, improving macroeconomics and the enabling environment, climate fiscal policies, and deforestation have a relatively lower priority for adaptation compared to other key issues but can lead to important co-benefits for climate policy (Figure 15).

The implementation of selected interventions depends on balancing the cost of inaction and the cost of adaptation, in relation to time and other development objectives. Action is considered urgent when the cost of inaction increases faster than the cost of adaptation. At the same time, a trade-off can emerge when urgent climate action makes the achievement of development objectives more difficult (Table 10).

Table 9. Macroeconomic Impact Estimated in CCDRs for African Countries

Country	Scenario	Time Horizon	
		2030 (Medium-Term)	2050 (Long-Term)
Angola	RCP4.5 (middle-emission scenario)		−3% annual GDP losses relative to a scenario with no climate change
	RCP8.5 (high-emission scenario)		−5.8% annual GDP losses relative to a scenario with no climate change
Burkina Faso	Wet and SSP1–1.9 (optimistic climate scenario)	−1.2% annual GDP losses from the medium-growth baseline	−3.5% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	−1.6% annual GDP losses from the medium-growth baseline	−6.8% annual GDP losses from the medium-growth baseline
Cameroon	RCP4.5 (middle-emission scenario)	~ −2% GDP deviation compared to business-as-usual scenarios	~ −6% GDP deviation compared to business-as-usual scenarios
	RCP8.5 (high-emission scenario)	~ −3.5% GDP deviation compared to business-as-usual scenarios	~ −10% GDP deviation compared to business-as-usual scenarios
Chad	Wet and SSP1-1.9 (optimistic climate scenario)	−0.9% annual GDP losses from the medium-growth baseline	−4.2% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	−2.1% annual GDP losses from the medium-growth baseline	−10.5% annual GDP losses from the medium-growth baseline
Egypt	*No economy-wide modeling of climate impacts was conducted for the CCDR*		
Ghana	RCP4.5 (middle-emission scenario)	−2% annual GDP losses from the medium-growth baseline	−5% annual GDP losses from the medium-growth baseline
	RCP8.5 (high-emission scenario)	−2% annual GDP losses from the medium-growth baseline	−7% annual GDP losses from the medium-growth baseline
Malawi	Wet and SSP1–1.9 (optimistic climate scenario)	~ −10% annual GDP losses from the medium-growth baseline	~ −15% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	~ −2.5% annual GDP losses from the medium-growth baseline	~ −10% annual GDP losses from the medium-growth baseline
Mali	Wet and SSP1–1.9 (optimistic climate scenario)	−2.2% annual GDP losses from the medium-growth baseline	−6.4% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	−2.3% annual GDP losses from the medium-growth baseline	−10.7% annual GDP losses from the medium-growth baseline
Mauritania	Wet and SSP1–1.9 (optimistic climate scenario)	−2.8% annual GDP losses from the medium-growth baseline	−3.4% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	−2.4% annual GDP losses from the medium-growth baseline	−7.2% annual GDP losses from the medium-growth baseline
Morocco*	Low-reduction in water supply scenario (−10%)		−4.3% GDP deviations from a baseline scenario in which water is not rationed in the economy
	High-reduction in water supply scenario (−25%)		−6.5% GDP deviations from a baseline scenario in which water is not rationed in the economy
Niger	Wet and SSP1–1.9 (optimistic climate scenario)	−2.8% annual GDP losses from the medium-growth baseline	−2.2% annual GDP losses from the medium-growth baseline
	Dry and SSP3–7.0 (pessimistic climate scenario)	−4.5% annual GDP losses from the medium-growth baseline	−11.9% annual GDP losses from the medium-growth baseline
Rwanda	RCP4.5 (middle-emission scenario) [Wet; Dry]	~ −4% [−3;−4] annual deviation of GDP from the baseline**	~ −4% [−2;−6] annual deviation of GDP from the baseline
	RCP8.5 (high-emission scenario) [Wet; Dry]	~ −4% [−3;−4] annual deviation of GDP from the baseline	~ −4% [−2;−6] annual deviation of GDP from the baseline
South Africa	SSP3–7.0	−0.6% of GDP losses per year	−1.2% of GDP losses per year

*Results reported in the table are from scenarios (Simulations SC1 to SC4) where Morocco experiences a reduction in water supply from 10 to 25 percent with 5 percent increments, plus yield changes induced by climate change on irrigated and non-irrigated crops, based on the modeling work conducted by Ouraich (2010) to drop by 15 percent on average while yields for irrigated crops are projected to increase by 5 percent on average until 2050 (Simulations SC1 to SC4).
**The baseline scenario for Rwanda is the development path envisioned when the 2020 NDC was approved.

To broaden the "implementation space" it is essential to reinforce implementation capacity and to make finance and technology more accessible. Implementation capacity depends both on state capacity and political capital. State capacity can be reinforced through policy reforms and capacity building. It is assessed in stage two of the CCDR prioritization process. Political capital is considered in some CCDRs at stage three of the prioritization process (e.g., South Africa), when looking at the distributional impacts of different adaptation options through a just transition approach. International cooperation can support scaling up efforts for adaptation in the poorest and most climate-vulnerable countries by providing additional finance and technology access.

Different instruments and mechanisms have been suggested in CCDRs to support the implementation of adaptation policies. Strategic planning, infrastructure investments, and social protection systems are the most cited in the recommendations. Each of them offers a solution to the three factors that determine the implementation space: state capacity, finance and technology access, and political capital respectively.

The G5 Sahel CCDR was published in June 2022 and covers Burkina Faso, Chad, Mali, Mauritania, and the Niger. All of them are included in the Least Developed Countries list by the UN and they are considered (except for Mauritania) as low-income countries by the World Bank country classification. The South Africa CCDR was published in October 2022. The country is classified in the upper-middle-income level group by the World Bank.

Key Development Challenges

Apart from Mauritania, the G5 Sahel countries are landlocked and covered by semi-arid grasslands and savannahs, with shrublands and forests in the south. The population is expected to increase from 89 million to 180–211 million by 2050 due to high fertility and declining mortality rates. Despite this growth, population density remains relatively low, although urbanization continues to shape large urban areas through rural-urban migration flows and growing settlements being upgraded as secondary cities. Agriculture still contributes 40 percent of regional GDP through smallholder subsistence and rainfed farming. Human development indicators and average incomes remain low despite robust economic growth over the past decade, which has been marked by gender inequality. Recent progress is threatened by the emergence of waves of conflict linked to perceptions of injustice by some marginalized communities. Climate risks and socio-political instability interact across national borders, further increasing the vulnerability of the population.

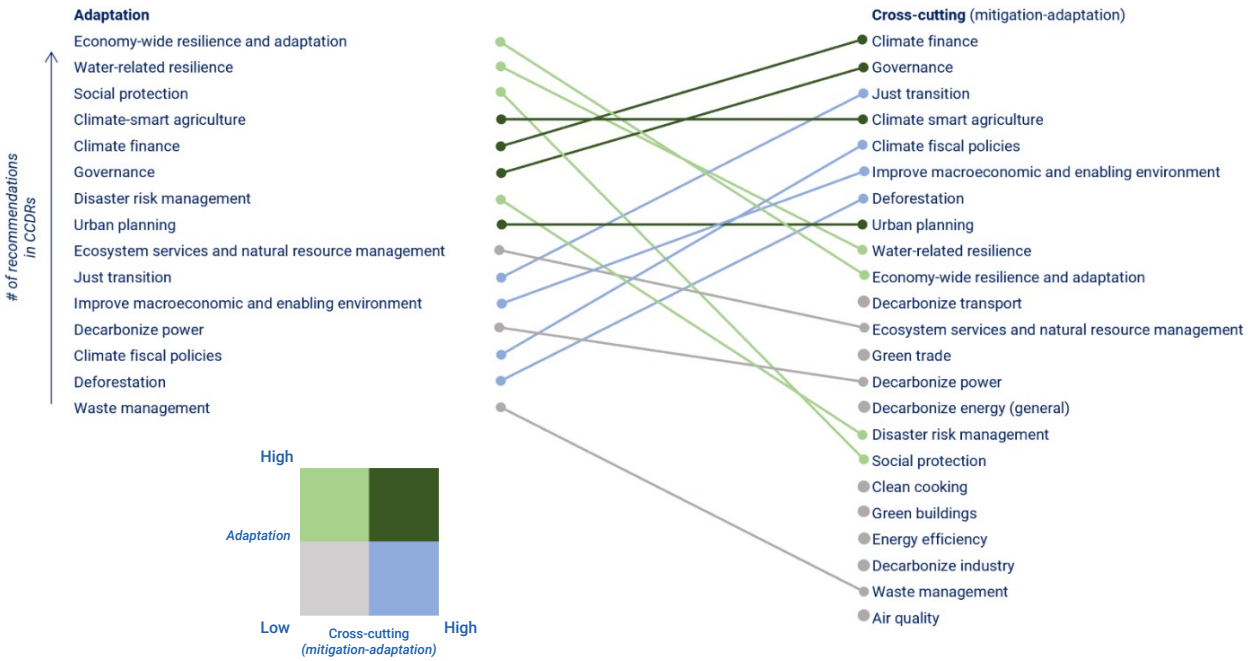
South Africa is delineated by coastlines to the south, and its land consists mainly of grassland, savannah, and scrubland. With its diverse ecosystems, the country is considered a biodiversity hotspot. Its 60 million people are concentrated in urban centers on the coast (Cape Town and Durban) and in the northeast (Johannesburg and Pretoria). South Africa's economy and society are closely linked to the mining industry, a major driver of the country's early economic expansion. At the same time, mining is also linked to the institutionalization of racial discrimination in labor markets and the concentration of ownership throughout the economy. As a legacy of apartheid, the country remains one of the most unequal in the world, with a skewed distribution of land and productive assets, weak property rights, and spatial exclusion of historically disadvantaged settlements. Poverty and unemployment remain high, partly due to a decade of low growth. The transition to a high-income economy is further hampered by a long-standing energy crisis due to an old coal-based power generation fleet.

Key Climate Challenges

Chad, the Niger, and Mali are among the 10 most vulnerable countries in the world according to the ND-GAIN ranking. Projections indicate an anticipated rise in annual temperatures across the region, with an estimated increase of 1.5–4°C relative to pre-industrial levels. In some parts of the region, the number of days with a wet-bulb temperature of 35°C (considered the upper survivable limit for human beings) will increase, making them unlivable to human populations. The G5 Sahel countries confront heightened exposure to an array of extreme events, encompassing droughts, floods, and heatwaves, while simultaneously facing the challenges of land degradation and desertification.

Similarly, South Africa faces rising temperatures, with average monthly temperatures projected to increase by 2°C by 2050 under a high-emissions global scenario. Models estimate a 39 percent

Figure 15. Key Policy Issues for Adaption and Cross-Cutting Interventions Tackled in CCDRs



Source: World Bank, 2022. Climate and Development: An Agenda for Action

Table 10. Climate Change Action Synergies and Trade-Offs

	URGENT (Delay in action increases the cost of achieving the same end point)	**LESS URGENT** (Delay in action does not increase the cost of achieving the same end point)
SYNERGIES (Action facilitates the achievement of other development objectives)	**Synergetic and urgent actions are to be prioritized** and should be part of the recommendations (but it is important to identify the obstacles that explain why it has not been done already)	**Synergetic actions that can be delayed should be implemented, but only if implementation capacity allows it.** If capacity and polical capital are limited, delaying them may be preferable, especially if net benefits are small or uncertain
TRADE-OFFS (Cost of action makes the achievement of development objectives more difficult)	**Urgent actions that create trade-offs are the most challenging. Options to explore include:** • **specific designs** to minimize or reverse trade-offs, or protect the poor, such as recycling options with a carbon tax • opportunities to mobilize **concessional (climate or development) financing** to manage the trade-offs	**Actions that create trade-offs with other development objectives and can be delayed should be delayed**

Source: World Bank, 2022. Climate and Development: An Agenda for Action.

increase in the likelihood of severe annual droughts by mid-century, with cities such as Cape Town already experiencing water emergencies. The frequency of other extreme events, such as floods, will further increase. South Africa's coastal population is moderately exposed to sea-level rise. Overall, the country is considered less vulnerable than the G5 countries (it ranks 75th out of 185 on the ND-GAIN vulnerability index).

Climate Policies and Governance Capacity

All the G5 Sahel countries updated their NDCs in 2021, with a strong focus on adaptation. The estimated total cost of NDC adaptation investments amounts to US$33 billion by 2030. Costs vary a lot across countries. The volume of estimated NDC adaptation investments in Burkina Faso is US$2.8 billion (68 percent of total NDC investment), which would require an average annual investment amounting to 21 percent of 2021 total capex. For Mauritania, estimated NDC adaptation investments are US$10.63 billion (24 percent of total NDC investment), representing 167 percent of 2021 total capex in average annual investment. Burkina Faso, Chad, and the Niger have also submitted NAPs.

South Africa updated its NDC in 2021, which contains its first adaptation NDC. It is also aligned to the country's Low-Emission Development Strategy and Just Transition Framework. The country submitted its NAP to the UNFCCC in 2021. Annual investments required for adaptation will amount to between 0.9 and 1.3 percent of South Africa's GDP, according to the CCDR.

Macroeconomic and Sectoral Impacts of Climate Change

Without adaptation, the annual GDP losses due to climate risks are estimated to be very high for the G5 Sahel countries, with different levels of sensitivity between countries. Under a pessimistic climate scenario (Dry and SSP3–7.0), the direct economy-wide impact would range from –6.8 percent in Burkina Faso to –11.9 percent in the Niger by 2050. The impact of the different climate risks varies by economic sector and climate scenario. The traditional agricultural sector is affected by larger negative shocks, although rainfed crop yields would increase in some countries under the wet climate scenario (but decrease under the dry climate scenario).

Under a pessimistic scenario (SSP3–7.0), total damages from climate change would amount to 0.8 percent of South Africa's GDP per year between 2022 and 2050. Damages would increase over time, reaching –1.2 percent by 2040–2050. Most of the damage is due to heat shocks on labor productivity. Agriculture is highly exposed to climate risks, but accounts for less than 3 percent of GDP. However, there are important differences between regions and income groups. Damage is expected to be more significant in large urban centers, with the poorest being disproportionately affected.

Priority Areas and Actions

Priority areas highlighted by the CCDR for the G5 Sahel countries cover landscape, agriculture, livestock, and fisheries, water security, rural water services, and cities. These match the countries' adaptation NDC priority sectors, which also include human capital (health, education, gender, and social protection). The G5 Sahel CCDR details a list of policy recommendations and investments, distinguishing between those that could be made in the next three years and those that could be made by 2030. The report also highlights the need to increase both institutional capacities and financing for climate action, through pre-arranged risk mitigating and risk-sharing mechanisms.

Key policy areas for adaptation identified in the CCDR for South Africa include agriculture and urban infrastructure systems (water and transport). The report underscores the need to improve public investment management and coordination across different levels of government. It also stresses the role that the domestic financial sector could play to scale up private investment.

6.2 IMF's Resiliency and Sustainability Trust

The Resilience and Sustainability Trust (RST) was formally agreed upon in April 2022 and became operational in October, when the IMF negotiated policy programs under the new Resilience and Sustainability Facility. The RST "complements the IMF's existing lending toolkit1 by providing longer-term, affordable financing to address longer-term challenges".[39] This balance of payment financing has a 20-year maturity and a 10.5-year grace period, for countries eligible to the Poverty Reduction and Growth Trust (PRGT). It is funded by the share of the August 2021 Special Drawing Right (SDR) allocation

that some countries with strong external positions have voluntarily committed to channel to more vulnerable members.

The RST's objectives are to support "policy reforms that reduce macro-critical risks associated with climate change and pandemic preparedness", and to augment "policy space and financial buffers to mitigate the risks arising from such longer-term structural challenges".

RSF-supported policies are expected to catalyze broader donor support on terms that moderate borrowers' credit risk. Disbursements can only be made when the borrowing country has a regular IMF program or credit line in place. Besides, conditionality is "linked to reform progress, where each measure is connected to one RSF disbursement". RST loans also have their own policy requirements (e.g., access limits, phasing rules, debt sustainability).

A reform measure can be a single policy action or a set of very closely related actions constituting a single reform. They fall into two broad categories.

Institutional reforms focus on integrating climate concerns into financial planning and policymaking processes. These types of reforms involve:

- Planning and strategies (e.g., approving a National Adaptation Plan or a disaster risk financing strategy).
- Public financial management (e.g., systematically including climate implications in published budget documents or develop a climate budget tagging system).
- Public investment management (e.g., defining climate-related criteria and conducting mandatory climate-related analysis for the ex-ante appraisal of public investment projects).

Policy measures aim to mitigate the impact of climate change, while also improving the balance of payments position. For instance:

- Fiscal policy measures (e.g., phasing out subsidies on emission-intensive activities).
- Regulatory policy (e.g., issuing regulations on carbon pricing policy or adopting measures to achieve at least full cost recovery in water utility pricing).

To date, eight RSF arrangements and two staff-level agreements have been approved (Table 11). Disbursements have been approved for three countries, including Rwanda (Box 12).

Table 11. RST: RSF Arrangements Approved in Chronological Order (As of March 3, 2023)

Country	Access*		Group**	Status
	In SDR millions	In percent of Quota		
Costa Rica	554	150%	C	Approved 11/14/2022
Barbados	142	150%	C	Approved 12/07/2022
Rwanda	240	150%	A	Approved 12/12/2022
Bangladesh	1,000	94%	B	Approved 01/30/2023
Jamaica	574	150%	C	Approved 03/01/2023
Total	2,511			

*The access policy envisages a norm of 75 percent of quota and a cap at the lower of 150 percent or SDR 1 billion.

** Group A consists of PRGT-eligible countries, excluding presumed blenders. Group B includes presumed blenders and small states with Gross National Income (GNI) per capita below 10 times International Development Association (IDA) cutoff. Group C includes eligible countries that are nor in groups A and B. See IMF (2022) for the RST eligibility.

Source: IMF, 2023

Box 12. Rwanda: Accessing the Resilience and Sustainability Facility

In December 2022, the IMF Executive Board approved an arrangement for the Government of Rwanda to access US$319 million through the Resilience and Sustainability Facility (RSF), the first for an African country. The first review of Rwanda's program under the RSF was completed in May 2023, allowing for an immediate disbursement equivalent to about US$98.6 million for budget support.

In parallel, the IMF Executive Board also approved a 36-month Policy Coordination Instrument to support the authorities in maintaining "macroeconomic stability and foster more inclusive growth". Prior to its formal program request, Rwanda had already requested (together with Bangladesh and Costa Rica) capacity development in climate Public Finance Management (PFM) to inform climate-related program conditions. On average, PFM-related reform measures constitute about half of the number of RSF reform measures across these three RST pilots.

Proposed reform areas under an RSF include: strengthening and institutionalizing monitoring and reporting of climate-related spending; integrating climate risks into fiscal planning; improving the sensitivity of public investment management to climate-related issues; strengthening climate-related risk management for financial institutions; and strengthening the disaster risk reduction and management strategy and operations.

Moreover, at the Paris Summit for a New Global Financing Pact in June 2023, the Government of Rwanda announced a complementary and coordinated initiative with bilateral and multilateral donors. It includes:

- Additional programmatic budget support (€50 million) and technical assistance grant (€3 million) provided by the Agence Française de Développement (AFD) to support Rwanda's Measurement, Reporting, and Verification (MRV) framework and the implementation of its sustainable finance roadmap.
- The development by the International Finance Corporation (IFC) of long-term investment plans for climate-smart agriculture and sustainable urbanization to strengthen private sector engagement.
- Additional financing by the European Investment Bank (EIB), estimated at €100 million, provided under the Global Gateway strategy, to the Ireme Invest investment facility powered by the Rwanda Green Fund (FONERWA) and the Development Bank of Rwanda (BRD).

Source: International Monetary Fund (2023). First Reviews under the policy coordination instrument and the arrangement under the resilience and sustainability facility. IMF Country Report No. 23/198. https://doi.org/10.5089/9798400242052.002

7 Recommendations

The analysis presented in this paper covered a wide range of issues and good practices among strategic adaptation documents in Africa. The excellent coverage in the region with NDCs, NAPs, and LTSs clearly demonstrates that African nations are taking the climate crisis seriously and planning to transform their economic growth into more climate-adapted trajectories.

The findings of this report show that for each dimension of analysis, there are some, and in many cases several, good examples in Africa of adaptation planning. This means that African countries can learn from each other to continuously improve their planning processes and institutions to design and implement adaptation programs at scale.

This report offers four main recommendations:

- **First, ministries of finance and planning need to play a central role in the strategic directions and priorities for adaptation action at scale.** While sectoral ministries and agencies have a critical policy and implementation role in adaptation, and the Ministry of Environment and/or Climate Change plays a principal role, it is essential to ensure that adaptation is a core theme in the deliberations and choices of the ministries of finance and planning.
- **Second, adaptation is not only the government's responsibility—choices and priorities for adaptation action require the involvement of all stakeholders in African societies**, including households, communities, the private sector, civil society, as well as vulnerable populations. A truly participatory process during planning and policy formulation will ensure ownership of changes by all stakeholders.
- **Third, adaptation plans need to be more specific, with clear goals, timelines, financing plans, and monitoring systems**. The NDCs, NAPs, and LTSs provide helpful directions and priorities, however, there is still a gap between these strategic documents and specific sectoral investment programs, well-defined adaptation policies, and bankable adaptation investments.
- **Fourth, adaptation plans need to be continuously improved by considering all key vulnerable economic sectors and by strengthening the linkages with disaster risk reduction.** This report offers specific areas for consideration by African governments in this continuous improvement process.

Other more detailed recommendations that African countries may consider in their strategic adaptation planning processes include:

- It is important to assess how well-established the enabling environment is for adaptation investments in the country's planning process. This study offers a six-level scale that may be used for such assessment and for an improvement program using good practices from other African countries rated higher in this metric. Countries with higher income levels may learn from the excellent strategic work that several low-income, vulnerable countries have done in this area.
- In general, the institutional framework to plan, legislate, and manage the implementation of adaptation actions requires strengthening. This need is not uncommon, even in high-income countries. Having well-defined arrangements for leadership, coordination, prioritization, and funding of adaptation actions is key to success.
- While national cross-sectoral adaptation policies and programs are needed in most countries, achieving effective change in the resilience and adaptation capacities of communities, regions, businesses, and sectors requires more specific and targeted plans and programs at the sectoral and subnational levels. These plans and programs need well-defined goals, financial need estimates, implementation arrangements, and a comprehensive implementation roadmap.

- The monitoring and evaluation systems for adaptation policies and priorities are generally weak in Africa and require strengthening. This is an area of active research and learning in other regions, so there are no ready-made solutions to copy. African countries need to develop systems linked to the national institutions and processes instead of parallel approaches focused on adaptation.
- An effective implementation of the priorities and directions defined by national strategic adaptation documents requires a detailed estimate of funding needs. These estimates vary in quality and depth among the strategic documents reviewed. It is crucial to continuously improve these estimates and link them to the national budget and investment prioritization process.
- It is critical for the African region to enhance coordination between strategic adaptation documents and national disaster risk reduction policies. This could be done by merging initiatives and finding inter-agency coordination mechanisms to ensure the strongest possible leverage between these two areas of work that are, sometimes, not as integrated as they could be.
- African countries should consider gradually expanding the priority sectors for adaptation action to include the blue economy, tourism, infrastructure, and human settlements. Cross-sectoral issues such as inclusion, youth, and jobs should also be incorporated into future versions of adaptation strategies and plans.
- Finally, African countries could leverage further new tools developed by the World Bank and the IMF, such as the Country Climate and Development Reports and the Resilience and Sustainability Trust, respectively. These new instruments provide a robust analysis of policy and institutional reforms needed to strengthen the capacity of African nations to deal with the rapidly increasing impacts of climate change.

Endnotes

Part 1

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

2 The State & Trends in Africa 2021 report (STA21) showed that adaptation measures have benefit-to-cost ratios that are mostly above 2:1 (i.e., a dollar invested generates double this in terms of economic benefits), often above 5:1, and in a few cases as much as 15:1. A weighted average of 4:1 was used to calculate missed economic benefits due to lack of financing (1.7 trillion minus 182 billion of expected financing available multiplied by 4 gives 6 trillion of economic benefits lost).

3 This figure includes both mitigation and adaptation.

4 The 2023 UNEP Adaptation Gap Report will be published in the fall of 2023 and will include new analysis of the adaptation finance gap.

5 UNEP. (2022). Adaptation Gap Report 2022. https://www.unep.org/resources/adaptation-gap-report-2022

6 Climate Policy Initiative. (2022a). Global landscape of climate finance: A decade of Data. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/

7 WRI. (2023). The State of Nationally Determined Contributions: 2022. https://files.wri.org/d8/s3fs-public/2022-10/state-of-ndcs-2022.pdf?VersionId=1KmRfYb85rXRRK2rYivyzxSDuUhdR60

8 Climate Policy Initiative. (2022b). The State of Climate Finance in Africa: Climate Finance Needs of African Countries. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/06/Climate-Finance-Needs-of-African-Countries-1.pdf

9 Ibid.

10 Ibid.

11 African Development Bank. (2019). Analysis of Adaptation Component of Africa's Nationally Determined Contributions (NDCS). https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Analysis_of_Adaptation_Components_in_African_NDCs_2019.pdf

12 UNFCCC Standing Committee on Finance. (2021). First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement. https://unfccc.int/sites/default/files/resource/54307_1%20-%20UNFCCC%20BA%202020%20-%20Report%20-%20V4.pdf

13 Climate Policy Initiative. (2022c). Landscape of climate finance in Ethiopia. https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-ethiopia/

14 These estimates are based on early findings of tracking and analysis conducted for the Global Landscape of Climate Finance for 2021-2022 that will be finalized by CPI in Q4 2023. A full report to be finalized by COP28 will feature more thorough data and analysis.

15 Climate Policy Initiative. (2022b). The State of Climate Finance in Africa: Climate Finance Needs of African Countries. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/06/Climate-Finance-Needs-of-African-Countries-1.pdf

16 Climate Policy Initiative. (2022a). Global landscape of climate finance: A decade of Data. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/

17 Adaptation presented an overall 6.7% cumulative average growth rate (CAGR) compared to a 6% CAGR in mitigation finance.

18 These estimates are based on early findings of tracking and analysis conducted for the Global Landscape of Climate Finance for 2021-2022 that will be finalized by CPI in Q4 2023. A full report to be finalized by COP28 will feature more thorough data and analysis.

19 This includes institutions such as the Brazilian Development Bank (BNDES).

20 Climate Policy Initiative. (2022a). Global landscape of climate finance: A decade of Data. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/

21 Global Center on Adaptation. (2022). State and trends in Adaptation Report 2022: Adaptation Finance Flows in Africa. https://gca.org/wp-content/uploads/2023/01/GCA_State-and-Trends-in-Adaptation-2022_Adaptation-Finance-Flows-in-Africa.pdf?_gl=1*fok138*_ga*MTg2NDUzNjUwMi4xNjkwNzcxMjI2*_up*MQ

22 Climate Policy Initiative. (2022d). Landscape of Climate Finance in Africa. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Landscape-of-Climate-Finance-in-Africa.pdf

23 Climate Policy Initiative. (2022a). Global landscape of climate finance: A decade of Data. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/

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

25 Climate Policy Initiative. (2022e). Landscape of Climate Finance in Africa: Interactive Data Tools https://www.climatepolicyinitiative.org/dataviz/landscape-of-climate-finance-in-africa-interactive-data-tools/

26 These risks include currency instability, regulatory and governance problems, lack of bankable project pipelines, counterparty risks, lack of technical capacity, transparency, and accountability mechanisms, and information asymmetries.

27 World Bank. (2023). FY23 list of fragile and conflict-affected situations. https://thedocs.worldbank.org/en/doc/a91e714e0a53291b569c4a41981aa2c5-0090082023/original/FCSList-FY06toFY23.pdf

28 Climate Policy Initiative. (2022e). Landscape of Climate Finance in Africa: Interactive Data Tools https://www.climatepolicyinitiative.org/dataviz/landscape-of-climate-finance-in-africa-interactive-data-tools/

29 International Institute for Environment and Development. (2022). Rich countries on track to give little more than half of climate adaptation finance promised at COP26. https://www.iied.org/rich-countries-track-give-little-more-half-climate-adaptation-finance-promised-cop26

30 Climate Action Tracker. (2022). CAT net zero target evaluations. https://climateactiontracker.org/global/cat-net-zero-target-evaluations/

31 Climate Policy Initiative. (2022f). Public Financial Institutions' Climate Commitments. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/10/public-financial-institutions-climate-commitments.pdf

32 Asian Development Bank et al. (2019). High Level MDB Statement. https://www.adb.org/sites/default/files/page/41117/climate-change-finance-joint-mdb-statement-2019-09-23.pdf

33 European Investment Bank et al. (2021). Joint Report on Multilateral Development Banks'. https://www.eib.org/attachments/lucalli/mdbs_joint_report_2021_en.pdf

34 In 2019, nine MDBs signed onto an agreement to double their total levels of adaptation finance by 2025.
Asian Development Bank et al. (2019). High Level MDB Statement. https://www.adb.org/sites/default/files/page/41117/climate-change-finance-joint-mdb-statement-2019-09-23.pdf

35 African Development Bank. (2019). The African Development Bank pledges US$ 25 billion to climate finance for 2020-2025, doubling its commitments. https://www.afdb.org/en/news-and-events/the-african-development-bank-pledges-us-25-billion-to-climate-finance-for-2020-2025-doubling-its-commitments-19090#:~:text=The%20African%20Development%20Bank%20will,%2425%20billion%20towards%20climate%20finance

36 Africa Development Bank. (2023). Africa Development Bank Group: a world leader in commitments to climate finance. https://www.afdb.org/en/news-and-events/africa-development-bank-group-world-leader-commitments-climate-finance-60637#:~:text="The%20African%20Development%20Bank%20set,Guterres

37 Asian Development Bank. (2021). ADB Raises 2019–2030 Climate Finance Ambition to $100 Billion. https://www.adb.org/news/adb-raises-2019-2030-climate-finance-ambition-100-billion

38 Chadwick, V. (2021). EIB sets 15% climate adaptation target by 2025. Devex. https://www.devex.com/news/eib-sets-15-climate-adaptation-target-by-2025-101994

39 World Bank. (2020). World Bank Group Announces Ambitious 35% Finance Target to Support Countries' Climate Action. https://www.worldbank.org/en/news/press-release/2020/12/09/world-bank-group-announces-ambitious-35-finance-target-to-support-countries-climate-action#:~:text=The%20World%20Bank%20–%20IBRD%20and,adapt%20to%20its%20mounting%20impacts

40 Inter-American Development Bank. (2020). IDB Group sets climate-related financing at an annual floor of 30% until 2023. https://www.iadb.org/en/news/idb-group-sets-climate-related-financing-annual-floor-30-until-2023#:~:text=The%20Board%20of%20the%20IDB,for%20the%20next%20four%20years

41 Islamic Development Bank. (2020). 2020-2025 Climate Action Plan. https://www.isdb.org/sites/default/files/media/documents/2022-02/IsDB_Climate_Action_Plan_2020%20-%202025%5B12%5D.pdf

42 Zawya Projects. (2023). NDB earmarks 40% funding for climate change mitigation projects. https://www.zawya.com/en/projects/bri/ndb-earmarks-40-funding-for-climate-change-mitigation-projects-w99vz5xd

43 Asian Infrastructure Investment Bank. (2023). AIIB Issues First Climate Adaptation Bond Targeting Resilient Infrastructure. https://www.aiib.org/en/news-events/news/2023/AIIB-Issues-First-Climate-Adaptation-Bond-Targeting-Resilient-Infrastructure.html

44 European Investment Bank et al. (2021). Joint Report on Multilateral Development Banks'. https://www.eib.org/attachments/lucalli/mdbs_joint_report_2021_en.pdf

45 EBRD also has a Climate Adaptation Action Plan 2023-25, but it does not indicate quantitative objectives for adaptation finance volumes.

European Bank for Reconstruction and Development. (2023). The EBRD Climate Adaptation Action Plan 2023-25. https://www.ebrd.com/climate-adaptation-action-plan.pdf

46 Green Climate Fund (n.d.). About GCF. https://www.greenclimate.fund/about#:~:text=GCF%20is%20mandated%20to%20invest,LDCs%2C%20and%20African%20States

47 Adaptation Fund. (2023). Adaptation Fund Board Approves Implementation Plan for New 5-Year Strategy, Greenlights US$ 74 Million in New Projects. https://www.adaptation-fund.org/adaptation-fund-board-approves-implementation-plan-for-new-5-year-strategy-greenlights-us-74-million-in-new-projects/

48 Climate Policy Initiative. (2022d). Landscape of Climate Finance in Africa. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Landscape-of-Climate-Finance-in-Africa.pdf

49 Global Center on Adaptation. (2022). State and trends in Adaptation Report 2022: Adaptation Finance Flows in Africa. https://gca.org/wp-content/uploads/2023/01/GCA_State-and-Trends-in-Adaptation-2022_Adaptation-Finance-Flows-in-Africa.pdf?_gl=1*fok138*_ga*MTg2NDUzNjUwMi4xNjkwNzcxMjI2*_up*MQ

50 CPI was unable to identify clear and ambitious adaptation commitments through a review of annual reports and articles available online.

51 ECOWAS. (2022). Regional Climate Strategy (RCS) And Action plan (2022-2030). http://www.climatestrategy.ecowas.int/images/documentation/ECOWAS%20Regional%20Climate%20Strategy_adopted%20june%202022.pdf

52 Ibid.

53 A new UK FCDO funding mechanism, the Climate Action Window (CAW), worth GBP 200 million, was set up in collaboration with African Development Bank (AfDB).

54 Nordic Development Fund. (2020). Strategy 2025 Nordic Leadership addressing climate change. https://www.ndf.int/media/strategy/strategy-publication-final.pdf

55 Climate Policy Initiative. (2022a). Global landscape of climate finance: A decade of Data. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/

56 Global Center on Adaptation. (2022). State and trends in Adaptation Report 2022: Adaptation Finance Flows in Africa. https://gca.org/wp-content/uploads/2023/01/GCA_State-and-Trends-in-Adaptation-2022_Adaptation-Finance-Flows-in-Africa.pdf?_gl=1*fok138*_ga*MTg2NDUzNjUwMi4xNjkwNzcxMjI2*_up*MQ

57 The totals provided here do not match with USD 11.4 billion tracked in adaptation finance flows to Africa in 2019-2020 because other sectors with small shares such as buildings, industry etc. are not included in this figure

58 World Bank. (2017). Lesotho - Transport Infrastructure and Connectivity Project. https://www.worldbank.org/en/news/loans-credits/2017/11/20/lesotho-transport-infrastructure-and-connectivity-project

59 USAID. (2021). U.S. and Ethiopia Launch New $2.2 Billion Phase of the Productive Safety Net Program. https://www.usaid.gov/ethiopia/press-release/us-and-ethiopia-launch-new-22-billion-phase-productive-safety-net-program

60 African Development Bank. (2023). Egypt: the Abu Rawash wastewater treatment plant, a model of sustainable development. https://www.afdb.org/en/success-stories/egypt-abu-rawash-wastewater-treatment-plant-model-sustainable-development-60110

61 Food Securities Fund (n.d.) https://www.foodsecuritiesfund.com

62 UBS. (n.d.). A win-win situation: Social Success Note Aligning interests with impact loans. https://www.ubs.com/global/en/ubs-society/philanthropy/optimus-foundation/what-we-do/win-win-situation.html

63 Hebbale, C. and J. Urpelainen. (2023). Debt-for-adaptation swaps: A financial tool to help climate vulnerable nations. Brookings. https://www.brookings.edu/articles/debt-for-adaptation-swaps-a-financial-tool-to-help-climate-vulnerable-nations/#:~:text=In%202018%2C%20Seychelles%20became%20the,group%20of%2020%20industrialized%20nations

64 African Risk Capacity Group (n.d.) https://www.arc.int

65 European Investment Bank et al. (2021). Joint Report on Multilateral Development Banks'. https://www.eib.org/attachments/lucalli/mdbs_joint_report_2021_en.pdf

66 UNFCCC BA. (2020). Fourth Biennial Assessment and Overview of Climate Finance Flows. https://unfccc.int/sites/default/files/resource/54307_1%20-%20UNFCCC%20BA%202020%20-%20Report%20-%20V4.pdf

67 This recommendation is informed by stated limitations in understanding of the intended end state and aggregate objectives of climate adaptation and resilience efforts which hinder finance flows into these activities. As updates to the Global Goal on Adaptation (GGA) are underway in 2023, there is a time-sensitive opportunity to solve knowledge gaps regarding the intended end state of climate adaptation and resilience efforts in order to inform negotiations advancing on pathways to a resilient world. This recommendation would seek to be complementary to work underway through initiatives including advancement of the Global Goal on Adaptation and the Race to Resilience.

PART 2

1 By public, private, international, and domestic financial actors.

2 This growth is largely the result of accelerated investment in clean energy in a handful of countries: China, USA, Japan and India, which collectively received 90% of the increased funds.

3 In absolute terms, there was a modest increase in global adaptation finance of 28% year-on-year between 2019–2020 and 2021–2022.

4 89%, or USD 56 billion, of which was for adaptation in developing countries specifically (emerging markets and developing economies (EMDEs), including China, and least developed countries (LDCs)).

5 About 45% of global adaptation finance flows went to the East Asia and Pacific region, followed by 20% to Africa and about 10% each to Latin America and the Caribbean and South Asia.

6 The UNEP Adaptation Gap Report 2023 suggests a similar volume of adaptation finance need in Africa – at USD 46 billion annually from 2021–2030. See: UN Environment Programme. (2023). Adaptation Gap Report 2023. https://www.unep.org/resources/adaptation-gap-report-2023

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

8 The UNEP Adaptation Gap Report 2023 suggests a similar volume of adaptation finance need in Sub-Saharan Africa – at USD 46 billion annually from 2021–2030.

9 compares international public humanitarian assistance funding (defined here as 'emergency response funding' and 'reconstruction funding,' as reported by donors to OECD CRS

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

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

12 Though this report aims to present a global picture of adaptation finance, there is a strong focus throughout on developing countries given the: 1) relatively higher GDP burden associated with adaptation in these countries and 2) trajectory of increasing climate vulnerability concentrated in these countries (linked to poverty).

13 LSE Grantham Research Institute on Climate Change and the Environment. (2022). Financing a big investment push in emerging markets and developing countries for sustainable, resilient and inclusive recovery and growth. https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/05/Financing-the-big-investment-push-in-emerging-markets-and-developing-economies-for-sustainable-resilient-and-inclusive-recovery-and-growth-1.pdf

14 Notably, adaptation components do not necessarily reveal country financing needs.

15 WRI. (2023). The State of Nationally Determined Contributions: 2022. https://files.wri.org/d8/s3fs-public/2022-10/state-of-ndcs-2022.pdf?VersionId=1KmRfYb85rXRRK2rYivyzxSDuUhdR60

16 Compared to 2.5% in lower-middle income countries and 1.4% in upper-middle and high-income countries.

17 Climate Policy Initiative. (2022b). The State of Climate Finance in Africa: Climate Finance Needs of African Countries. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/06/Climate-Finance-Needs-of-African-Countries-1.pdf

18 African Development Bank. (2019). Analysis of Adaptation Component of Africa's Nationally Determined Contributions (NDCs). https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Analysis_of_Adaptation_Components_in_African_NDCs_2019.pdf

19 UNFCCC Standing Committee on Finance. (2021). First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement. https://unfccc.int/sites/default/files/resource/54307_1%20-%20UNFCCC%20BA%202020%20-%20Report%20-%20V4.pdf

20 Climate Policy Initiative. (2022c). Landscape of Climate Finance in Ethiopia. https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-ethiopia/

21 Climate Policy Initiative. (2023). Global Landscape of Climate Finance 2023. https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Global-Landscape-of-Climate-Finance-2023.pdf

22 Roughly 15% (USD 177 billion) of the total climate finance flows in 2021–2022 (USD 1.3 trillion) tracked in the Global Landscape of Climate Finance 2023 can be attributed to new data additions compared to the 2019–2020 analysis, which mainly contributed to the domestic climate financing flows in the US and Western Europe, especially in the buildings and infrastructure sector.

23 89%, or USD 56 billion, of which was for adaptation in developing countries specifically (EMDEs, including China, and LDCs).

24 Analysis by World Meteorological Organization (WMO) suggests that there is a 66% likelihood that the annual average near-surface global temperature between 2023 and 2027 will be more than 1.5°C above pre-industrial levels for at least one year. https://public.wmo.int/en/media/press-release/global-temperatures-set-reach-new-records-next-five-years#:~:text=There%20is%20a%2066%25%20likelihood,be%20the%20warmest%20on%20record

25 The UNEP Adaptation Gap Report 2023 estimates a comparable range at USD 130-415 billion annually in adaptation costs for developing countries in this decade.

26 Agricultural insurance and listed equities are not captured in the Global Landscape of Climate Finance which adheres to the principle of conservativeness and only tracks 'project-level' primary transactions in real economic sectors climate projects. Nonetheless, these instruments play an important role in managing climate risks and supporting small and medium-sized enterprises that deploy adaptation technologies.

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

28 The UNEP Adaptation Gap Report 2023 suggests a similar volume of adaptation finance need in Sub-Saharan Africa – at USD 46 billion annually from 2021–2030.

29 Climate Policy Initiative. (2023). Global Landscape of Climate Finance 2023. https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Global-Landscape-of-Climate-Finance-2023.pdf

30 Cross-sectoral solutions break down silos and align with several sustainable development goals (SDGs) and development impacts. Africa hosts some of the world's fastest-growing economies, and its real GDP growth is projected to surpass the global average in 2023–2024. Considering this, it is imperative that adaptation projects in Africa align with development priorities and deliver multiple benefits across sectors.

31 Given the AFOLU sector's implications for food security, gender, biodiversity, and water security, it is possible that some portion of the finance flowing to the AFOLU sector is captured in the cross-sectoral sub-category.

32 Climate Policy Initiative. (2023). Global Landscape of Climate Finance 2023. https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Global-Landscape-of-Climate-Finance-2023.pdf

33 CPI. (2022a). The State of Climate Finance in Africa: Climate Finance Needs of African Countries. Available at: https://www.climatepolicyinitiative.org/wp-content/uploads/2022/06/Climate-Finance-Needs-of-African-Countries-1.pdf

34 See Section 1 for analysis on underestimation of adaptation finance needs in Africa.

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

36 CPI. (2022b). Landscape of Climate Finance in Africa: Interactive Data Tools. Available at: https://www.climatepolicyinitiative.org/dataviz/landscape-of-climate-finance-in-africa-interactive-data-tools/

37 World Bank. (2023). FY23 List of Fragile and Conflict-affected Situations. Available at: https://thedocs.worldbank.org/en/doc/a91e714e0a53291b569c4a41981aa2c5-0090082023/original/FCSList-FY06toFY23.pdf

38 CPI. (2022b). Landscape of Climate Finance in Africa: Interactive Data Tools. Available at: https://www.climatepolicyinitiative.org/dataviz/landscape-of-climate-finance-in-africa-interactive-data-tools/

39 GCA. (2023). Strategy and Planning to Redouble Adaptation in Africa. Available at: https://gca.org/wp-content/uploads/2023/09/Strategy-and-Planning-to-Redouble-Adaptation-in-Africa_Web.pdf?_gl=1*19g9iyj*_ga*Nzc2NjczMDU2LjE2OTcwMzQ5Mjk.*_up*MQ.

40 Climate Policy Initiative. (Forthcoming). Public Financial Institutions' Climate Commitments.

41 Climate Policy Initiative. (2021). Net Zero Finance Tracker. https://netzerofinancetracker.climatepolicyinitiative.org/

42 The four African SRDBs analyzed in this research are: the East African Development Bank, Eastern and Southern African Trade and Development Bank (TDB), Economic Community of West African States Bank of Investment and Development (ECOWAS), and the West African Development Bank.

43 The regional focus of the research on African and Middle Eastern financial institutions is informed by the location of recent and upcoming COP meetings, and by the underlying climate risk present in those locations. Further research would be merited on the commitments of public financial institutions in other regions.

44 Commitments and statements are divided into three categories based on their relevance to adaptation finance: solely adaptation (the declaration concerns adaptation only), includes adaptation (the declaration concerns adaptation and mitigation or other climate-related concepts), and green finance (the declaration does not explicitly mention adaptation, but is rather concerned with broader finance related to climate change).

45 The metric of 50% of climate finance earmarked for adaptation is ambitious, but aims to mirror calls for a balance of mitigation and adaptation financing to achieve effective adaptation interventions globally. Under current accounting procedures, this will be a difficult target for institutions to achieve, because most institutions track proportional or incremental adaptation finance (i.e., just the portion of a project specific to adaptation outcomes) while tracking total cost of mitigation projects.

46 Sectors to be detailed include agriculture, water, transport, energy, urban infrastructure, land use and forestry, and others.

47 Climate Policy Initiative. (2022). What Makes a Transition Plan Credible? Considerations for financial institutions. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/03/Credible-Transition-Plans.pdf

48 'Adaptation commitments' here is used to describe both commitments concerning solely adaptation and commitments including adaptation but having a broader scope.

49 Where an institution fits into two categories (e.g., it is both an IDFC member and a sub-regional development bank), it is captured in the analysis in the regional category to avoid double-counting.

50 One IDFC member, the China Development Bank (CDB), was excluded from this analysis due to analytical capacity constraints around language.

51 Global Center on Adaptation. (2022). State and Trends in Adaptation Report 2021. https://gca.org/wp-content/uploads/2022/07/03_WTW_14855_GCA_2021_Sect1_FINANCE_v10.pdf

52 Climate Impact Partners. Markers of Real Climate Action in the Fortune Global 500. https://www.climateimpact.com/news-insights/fortune-global-500-climate-commitments/#:~:text=Two%20thirds%20of%20Fortune%20Global,around%20two%20thirds%20of%20companies

53 The Institutional Investors Group on Climate Change. (2022). IIGCC publishes discussion paper to support the development of a Climate Resilience Investment Framework. https://www.iigcc.org/media-centre/iigcc-publishes-discussion-paper-to-support-the-development-of-a-climate-resilience-investment-framework

54 Paris Aligned Asset Owners. (2023). Commitment. https://www.parisalignedassetowners.org/commitment/

55 IMF. (2019). Climate Change and Financial Risk. https://www.imf.org/en/Publications/fandd/issues/2019/12/climate-change-central-banks-and-financial-risk-grippa

56 Idem.

57 The NGFS was established in 2017 with eight members and has since expanded significantly. It now comprises 95 members and 15 observers, including all major central banks. The primary objective of the NGFS is to integrate climate-related risks into financial supervision and stability monitoring, reflecting the growing recognition of the impact of climate change on the global financial system.

58 Global Center on Adaptation. (2023). Africa Adaptation Acceleration Program. https://gca.org/programs/aaap/

59 Market-rate debt refers to loans provided at market conditions.

60 The Common Framework is intended to deal with insolvency and protracted liquidity problems, along with the implementation of an IMF-supported reform program.

61 Climate Policy Initiative. (2023). Global Landscape of Climate Finance 2023. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/

62 Ibid.

63 Climate Policy Initiative. (2023). Global Landscape of Climate Finance 2023. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/

64 Ibid.

65 Tracked flows provided by governments includes both OECD and non-OECD members.

66 Ibid.

67 International Monetary Fund. (2020). Fiscal Policies to Address the Covid-19 Pandemic. https://www.imf.org/-/media/Files/Publications/fiscal-monitor/2020/October/English/ch1.ashx

68 Monasterolo et al. (2023). Scaling up climate adaptation finance during periods of growing public debt, inflation and natural disasters. ECMI. Policy Brief no 35. https://www.ecmi.eu/sites/default/files/scaling_up_climate_adaptation_finance_formatted.pdf

69 IMF. (2023). Global Debt Is Returning to its Rising Trend. https://www.imf.org/en/Blogs/Articles/2023/09/13/global-debt-is-returning-to-its-rising-trend

70 Hebbale, C. & Urpelainen, J. (2023). Debt-for-adaptation swaps: A financial tool to help climate vulnerable nations. Brookings. https://www.brookings.edu/articles/debt-for-adaptation-swaps-a-financial-tool-to-help-climate-vulnerable-nations/#:~:text=estimates%20that%20developing%20countries%20already,alone%-20will%20exceed%20%2440%20billion

71 Buhr, B. & Volz, U. (2018). Climate Change and the Cost of Capital in Developing Countries. Imperial College Business School and SOAS University of London. https://eprints.soas.ac.uk/26038/1/ClimateCostofCapital_FullReport_Final.pdf

72 Gamso, J. (2023). Debt-for-Climate Swaps Can Save the Planet. Why Aren't They? Stanford Social Innovation Review. https://ssir.org/articles/entry/debt_for_climate_swaps_can_save_the_planet_why_arent_they#:~:text=For%20instance%2C%20some%20governments%20may,their%20access%20to%20credit%20markets.

73 Camps, B. & Plant, M. (2022). Debt-for-Climate Swaps Won't Solve the Climate or Debt Crises, but Can They Help? Center For Global Development. https://www.cgdev.org/blog/debt-climate-swaps-wont-solve-climate-or-debt-crises-can-they-help#:~:text=Debt-for-climate%20swaps%20are,climate-friendly%20policies%20or%20projects.

74 Climate Policy Initiative. (2021). Debt for Climate Swaps Supporting a sustainable recovery. https://www.climatepolicyinitiative.org/wp-content/uploads/2021/05/Debt-for-Climate-Swaps-Blueprint-May-2021.pdf

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

76 Global Center on Adaptation. (2022a). Financial Innovation for Climate Adaptation in Africa. https://gca.org/wp-content/uploads/2021/10/GCA-CPI-Financial-Innovation-for-Climate-Adaptation-in-Africa.pdf

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

78 Over USD 3 billion or 5% of GDP.

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

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

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

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

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

84 Climate Fund Managers. (nd). Patong - Desalination. https://climatefundmanagers.com/portfolio/patong-desalination/

85 European Bank for Reconstruction and Development. (2019). Climate Resilience Bonds/Green Bond Programme information. https://www.ebrd.com/documents/treasury/framework-for-climate-resilient-bonds.pdf

86 Ibid.

87 World Bank. (2021). Enabling Private Investment in Climate Adaptation & Resilience. https://openknowledge.worldbank.org/server/api/core/bitstreams/127de8c7-d367-59ac-9e54-27ee52c744aa/content

88 Adaptation involves making adjustments in human systems to mitigate the impacts of climate change, while resilience refers to the capacity to absorb shocks and maintain function. Both concepts are intertwined, with adaptation actions often enhancing system resilience.

89 Climate Policy Initiative. (2021d). Landscape of Climate Finance in Africa. https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa/

90 Africa Development Bank. (2023). Africa Economic Outlook: Mobilizing Private Sector Financing for Climate and Green Growth in Africa. https://www.afdb.org/en/knowledge/publications/african-economic-outlook#:~:text=Despite%20the%20confluence%20of%20multiple,mixed%20and%20considerable%20challenges%20remain.

91 Ibid.

92 Global Center on Adaptation. (2020). What are resilience bonds and how can they protect us against climate crises? https://gca.org/what-are-resilience-bonds-and-how-can-they-protect-us-against-climate-crises/

93 Climate Bonds Initiative. (2023). Designing a Climate Resilience Classification Framework. https://www.climatebonds.net/files/reports/resiliencewhitepaper_climatebondsinitiative_undrr.pdf

94 The Climate Resilience and Adaptation Finance and Technology Transfer Facility (CRAFT) is one pioneering example of a blended finance initiative. CRAFT's approach involved investing in companies dedicated to climate resilience solutions and offering grants to provide them with crucial technical support. For every dollar allocated with concessional support, CRAFT aims to leverage at least three times that amount in commercial funding. Other blended finance instruments used for adaptation and resilience investments include Climate Investor Two (CI2), Ejido Verde SAPI de CV, and the InsuResilience Fund.

95 World Bank. (2022a). Unlocking Private Investment in Climate Adaptation and Resilience. https://www.worldbank.org/en/news/feature/2021/03/04/unlocking-private-investment-in-climate-adaptation-and-resilience

96 Convergence. (2022). State of Blended Finance 2022. https://www.convergence.finance/resource/state-of-blended-finance-2022/view

97 Convergence. (2023). State of Blended Finance 2023. https://www.convergence.finance/resource/state-of-blended-finance-2023/view

98 Ibid.

99 UNFCCC. (2014). UNFCCC Standing Committee on Finance – 2014 Biennial Assessment and Overview of Climate Finance Flows Report. https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/2014_biennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf

100 Of note, disclosure approaches recommended by the Taskforce on Climate-related Financial Disclosures (TCFD) are a promising step in improving the tracking of private adaptation finance. The approaches recommended by the TCFD have spurred developments in reporting requirements of CDP and led to the introduction of Article 173 in France, and are also intended to increase climate risk reporting in SEC 10-K forms in the United States and in global financial filings. Increased reporting of overall private sector activity related to climate risk is likely to increase the volume of available information on private flows to adaptation.

101 European Investment Bank et al. (2021). Joint Report on Multilateral Development Banks. https://www.eib.org/attachments/lucalli/mdbs_joint_report_2021_en.pdf

102 UNFCCC BA. 2020. Fourth Biennial Assessment and Overview of Climate Finance Flows. https://unfccc.int/sites/default/files/resource/54307_1%20-%20UNFCCC%20BA%202020%20-%20Report%20-%20V4.pdf

103 MDBs. (2021). Joint Methodology for Tracking Climate Change Adaptation Finance. https://www.adb.org/sites/default/files/institutional-document/913431/mdbs-joint-tracking-climate-change-adaptation-finance.pdf

104 IDFC. (2023). IDFC Green Finance Mapping Report 2023. https://www.idfc.org/wp-content/uploads/2023/09/idfc-gfm-2023-4pager-august-29-clean.pdf

105 MDBs. (2021). Joint Methodology for Tracking Climate Change Adaptation Finance. https://www.adb.org/sites/default/files/institutional-document/913431/mdbs-joint-tracking-climate-change-adaptation-finance.pdf

106 IDFC. (2018). Lessons Learned from Three Years of Implementing the MDB-IDFC Common Principles for Climate Change Adaptation Finance Tracking. https://www.idfc.org/wp-content/uploads/2018/12/mdb_idfc_lessonslearned-full-report.pdf

107 Ibid.

108 CABRI. (2021). Policy Brief: The integration of climate change into budgeting and finance. https://www.cabri-sbo.org/uploads/files/Documents/CABRI-Policy-Brief-Climate-change-financining-English.pdf

109 Climate Policy Initiative. (2022). Landscape of Climate Finance in Africa. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Landscape-of-Climate-Finance-in-Africa.pdf

110 Global Center on Adaptation. (2019). The Role of Domestic Budgets in Financing Climate Change Adaptation. https://gca.org/reports/the-role-of-domestic-budgets-in-financing-climate-change-adaptation/

111 Long-term Infrastructure Investors Association. (2022). Climate-Resilient Infrastructure: How to scale up private investment. https://www.ltiia.org/wp-content/uploads/2022/09/Report-Climate-adaptation-INvestment-final-version-Sept2022.pdf

112 LSE. (2023). Private investment for climate change adaptation – difficult to finance or difficult to see the finance? https://www.lse.ac.uk/granthaminstitute/news/private-investment-for-climate-change-adaptation-difficult-to-finance-or-difficult-to-see-the-finance/

113 This recommendation is informed by stated limitations in understanding of the intended end state and aggregate objectives of climate adaptation and resilience efforts which hinder finance flows into these activities. As updates to the Global Goal on Adaptation (GGA) are underway in 2023, there is a time-sensitive opportunity to solve knowledge gaps regarding the intended end state of climate adaptation and resilience efforts in order to inform negotiations advancing pathways to a resilient world. This recommendation would seek to be complementary to work underway through initiatives including advancement of the Global Goal on Adaptation and the Race to Resilience.

114 Global Center on Adaptation. (2023). Strategy and Planning to Redouble Adaptation in Africa. https://gca.org/wp-content/uploads/2023/09/Strategy-and-Planning-to-Redouble-Adaptation-in-Africa_Web.pdf?_gl=1*3rwzkg*_ga*ODMwODA0NzgwLjE2OTc2NTQ0ODk.*_up*MQ

115 TCFD. (2023). Task Force on Climate-related Financial Disclosures 2023 Status Report. https://www.fsb.org/wp-content/uploads/P121023-2.pdf

116 World Resources Institute. (2022). Physically Fit? How Financial Institutions Can Better Disclose Climate-Related Physical Risks in Line with the Recommendations of the TCFD. https://www.wri.org/research/physically-fit-financial-institutions-climate-recommendations-tcfd

117 Climate Policy Initiative. (2022). Tracking Investments in Climate Resilient Infrastructure. https://www.climatepolicyinitiative.org/wp-content/uploads/2022/12/Tracking-Investments-in-Climate-Resilient-Infrastructure.pdf

118 Analysis completed from 2020-2023: A report on Adaptation Finance in the Context of Covid-19, a report on Financial Innovation for Climate Adaptation in Africa, a section of a 2022 report on the State and Trends in Adaptation, focused on Economics and Finance, and a brief for the Africa Climate Summit on Accelerating Adaptation Finance.

119 Development Initiatives. (2023). Global Humanitarian Assistance Report 2023. https://devinit-prod-static.ams3.cdn.digitaloceanspaces.com/media/documents/GHA2023_Digital_v9.pdf

120 Flood Resilience Alliance. (2023). Addressing loss and damage: insights from the humanitarian sector. https://reliefweb.int/report/world/addressing-loss-and-damage-insights-humanitarian-sector

121 Humanitarian Action. (2022). The Climate Crisis is a Humanitarian Crisis. https://humanitarianaction.info/article/climate-crisis-humanitarian-crisis#:~:text=Climate%2Drelated%20disasters%20almost%20tripled%20in%20current%20decade%20compared%20to,more%20during%20the%20same%20period.

122 Development Initiatives (2023). Global Humanitarian Assistance Report 2023. https://devinit-prod-static.ams3.cdn.digitaloceanspaces.com/media/documents/GHA2023_Digital_v9.pdf

123 Oxfam. (2023). Still too important to fail: addressing the humanitarian financing gap in an era of escalating climate impacts. https://devinit-prod-static.ams3.cdn.digitaloceanspaces.com/media/documents/StillTooImportantToFail_final_2.pdf

124 While domestic governments may commit their own resources before, during or after humanitarian crises, this analysis specifically takes an international lens.

125 Development Initiatives (2023). Global Humanitarian Assistance Report 2023. https://devinit-prod-static.ams3.cdn.digitaloceanspaces.com/media/documents/GHA2023_Digital_v9.pdf

126 Almost all of which was provided as ODA grants, with top donors for the period 2019–2021 including the USA, Turkey, the EU Commission and Germany.

127 Approximately half of which was provided as ODA grants and 15% as ODA loans; top donors for the period 2019–2021 were Asian Infrastructure Investment Bank (AIIB), Japan and the World Bank.

128 As reported to OECD-DAC CRS; https://stats.oecd.org/DownloadFiles.aspx?DatasetCode=CRS1

129 The Global Humanitarian Assistance Report 2023 tracks private international humanitarian assistance (USD 5.5–6.8 billion per year, between 2019–2021) which is not considered in this analysis focused on international public funding.

130 Climate attribution cannot be established in these instances due to limited data.

131 SPARC. (2022). Issue Brief: Obstacles to and Opportunities for Anticipatory Action in Somalia. https://www.sparc-knowledge.org/sites/default/files/documents/resources/Obstacles%20to%20and%20opportunities%20for%20anticipatory%20action%20in%20Somalia%20Final.pdf

132 WFP. (2023). WFP Somalia: Anticipatory action and integrated climate risk. https://reliefweb.int/report/somalia/wfp-somalia-anticipatory-action-and-integrated-climate-risk-updated-september-2023

133 Ibid.

134 CERF. (2021). CERF Anticipatory Action. https://cerf.un.org/sites/default/files/resources/211117%20CERF%20Anticipatory%20Action.pdf

135 WFP. (2023). WFP Somalia: Anticipatory action and integrated climate risk. https://reliefweb.int/report/somalia/wfp-somalia-anticipatory-action-and-integrated-climate-risk-updated-september-2023

136 Ibid.

137 ODI. (2020). Anticipatory action for livelihood protection. https://cdn.odi.org/media/documents/202006_odi_anticipatory_action_for_livelihood_protection_wp_final.pdf

138 USAID. (2018). Economics of Resilience to Drought. https://2017-2020.usaid.gov/sites/default/files/documents/1867/Kenya_Economics_of_Resilience_Final_Jan_4_2018_-_BRANDED.pdf

139 At a minimum, it should seek to avoid maladaptation.

140 This is also highly relevant to the emerging Loss & Damage (L&D) finance agenda, which calls for unlocking additional funding to respond to the losses and damages associated with climate change, rather than simply re-labelling humanitarian aid as such.

141 International Federation of Red Cross and Red Crescent Societies. (2019). The Cost of Doing Nothing: The Humanitarian Price of Climate Change and How it Can be Avoided. Available at: https://www.ifrc.org/sites/default/files/2021-07/2019-IFRC-CODN-EN.pdf

142 Azour, J. & Selassie, A. (2023). Africa's Fragile States Are Greatest Climate Change Casualties. Available at: https://www.imf.org/en/Blogs/Articles/2023/08/30/africas-fragile-states-are-greatest-climate-change-casualties

143 Ibid.

144 The Fund for Peace (PPF). (2023). Fragile States Index. Annual Report 2023. Available at: https://fragilestatesindex.org/wp-content/uploads/2023/06/FSI-2023-Report_final.pdf

145 Doshi, D. and Garschagen, M. (2020). Understanding Adaptation Finance Allocation: Which Factors Enable or Constrain Vulnerable Countries to Access Funding? Sustainability, 12 (10). Available at: https://www.mdpi.com/2071-1050/12/10/4308

146 Oxfam. (2023). Leaving no one behind: A green bargain for people and planet. Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621545/bp-leaving-no-one-behind-a-green-bargain-for-people-and-planet-210923-en.pdf;jsessionid=5AB031E670F1809E45B1B4C7C30B64FAsequence=1

147 German Watch. (2023). Operationalising the Loss and Damage Fund. Available at: https://www.germanwatch.org/en/88557

148 OCHA. Country-Based Pooled Funds. https://www.unocha.org/country-based-pooled-funds

149 Ibid.

150 IFRC. What is Forecast-based Financing? https://www.forecast-based-financing.org/about/

151 Red Cross. Forecast-based financing helps people prepare for disasters. https://www.redcross.org.uk/stories/disasters-and-emergencies/world/forecast-based-financing-helps-people-prepare-for-disasters#:~:text=In%20a%20nutshell%2C%20FbF%20combines,in%20an%20early%20action%20protocol.

152 Centre for Disaster Protection. (2023). Humanitarian Insurance: Risk Transfer 101. https://www.disasterprotection.org/blogs/humanitarian-insurance-risk-transfer-101

153 Ibid.

154 Reuters. (2023). Explainer: What is the 'Bridgetown Initiative' asking for at Paris financial summit? https://www.reuters.com/business/finance/what-is-bridgetown-initiative-asking-paris-financial-summit-2023-06-20/

155 International Monetary Fund. Resilience and Sustainability Trust. https://www.imf.org/en/Topics/Resilience-and-Sustainability-Trust

156 Ibid.

157 Ibid.

158 Ibid.

Part 3

1 University of Notre Dame. 2023. "ND-GAIN Country Index." Notre Dame Global Adaptation Initiative. https://gain.nd.edu/our-work/country-index/rankings/

2 IPCC. 2022. "Climate Change 2022: Impacts, Adaptation and Vulnerability." Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi:10.1017/9781009325844.

3 World Meteorological Organization (WMO). 2022. "The State of Climate in Africa 2021 report." https://public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate/Africa

4 Intergovernmental Panel on Climate Change. AR6 WGII. 2022."Factsheet –Africa." https://www.ipcc.ch/report/ar6/wg2/downloads/outreach/IPCC_AR6_WGII_FactSheet_Africa.pdf

5 World Meteorological Organization (WMO). 2021. "The State of the Climate in Africa 2020 report." https://www.preventionweb.net/publication/state-climate-africa-2020

6 World Resource Institute. 2023. "Adaptation Finance and Investment." https://www.wri.org/initiatives/adaptation-finance

7 Global Center on Adaptation. 2022. "The State and Trends in Adaptation in Africa Report 2022." Adaptation Finance Flows in Africa. https://gca.org/wp-content/uploads/2023/01/GCA_State-and-Trends-in-Adaptation-2022_Adaptation-Finance-Flows-in-Africa.pdf?_gl=1*hai8sc*_ga*MTg4MzA4ODAwLjE2OTE1MDc0MDg.*_up*MQ

8 Africa NDC Hub. 2021. "Africa's NDC journey and the imperative for climate finance innovation." https://africandchub.org/sites/default/files/2021-11/211103_ANDC%20Hub_Africa%E2%80%99s%20NDC%20journey%20and%20climate%20finance_.pdf

9 IPCC. 2022. "Annex II: Glossary." In: "Climate Change 2022: Impacts, Adaptation, and Vulnerability." Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2897–2930, doi:10.1017/9781009325844.029.

10 United Nations Climate Change 15/07/2023. "Paris Agreement and the NDCs." https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

11 Fransen, T. et al. 2017. "Enhancing NDCs by 2020: Achieving the goals of the Paris Agreement." https://www.wri.org/research/enhancing-ndcs-2020-achieving-goals-paris-agreement

12 UNFCCC. 2021. "National Adaptation Plans 2021: Progress in the formulation and implementation of NAPs." https://unfccc.int/sites/default/files/resource/UNFCCC-NAP2021-Progress-report.pdf

13 World Resources Institute (WRI). "State of the Nationally Determined Contributions: Enhancing Adaptation Ambition." https://www.wri.org/research/nationally-determined-contributions-enhancing-adaptation-ambition

14 NDC Partnership. 2023. Country Pages. https://ndcpartnership.org/countries-map

15 NAP Global Network. 2023. https://napglobalnetwork.org/about/

16 United Nations Development Program (UNDP). 2021. "Nationally Determined Contributions (NDC) Global Outlook Report 2021: The State of Climate Ambition." https://www.undp.org/publications/nationally-determined-contributions-ndc-global-outlook-report-2021-state-climate-ambition

17 United Nations Development Program (UNDP). "State of Climate Ambition." Regional Snapshots. https://climatepromise.undp.org/state-of-climate-ambition/regional-snapshots

18 UNFCCC. 2021. "National Adaptation Plans 2021: Progress in the formulation and implementation of NAPs." https://unfccc.int/sites/default/files/resource/UNFCCC-NAP2021-Progress-report.pdf

19 UNDP Climate Change Adaptation. 2023. "National Adaptation Plans – Country Projects. Advancing adaptation planning in countries". https://www.adaptation-undp.org/naps-gcf; Green Climate Fund. 2023. "Programs and Projects. Country and Entity Engagement. Country Readiness". https://www.greenclimate.fund/readiness

20 Food and Agriculture Organization of the United Nations (FAO). 2021. "(Interim) Global update report: Agriculture, Forestry and Fisheries in the Nationally Determined Contributions." https://www.fao.org/3/cb7442en/cb7442en.pdf

21 Global Water Partnership (GWP). "Preparing to Adapt: The Untold Story of Water in Climate Change Adaptation Processes." https://www.gwp.org/globalassets/global/events/cop24/gwp-ndc-report.pdf

22 African Development Bank Group. Africa NDC Hub. https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-ndc-hub

23 African Development Bank (AfDB). 2018. "Gap Analysis Report: African Nationally Determined Contributions (NDCs)." https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/African_NDCs_Gap_Analysis_Report.pdf

24 African Development Bank (AfDB). 2019. "Analysis of Adaptation Components of Africa's Nationally Determined Contributions (NDCS)." https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Analysis_of_Adaptation_Components_in_African_NDCs_2019.pdf

25 It is important to outline a few limitations of our study here. Due to time constraints and the length of the NDCs, NAPs, and LTSs, this body of strategic adaptation documents alone was used to assess the status of national planning for adaptation. The analysis was extensive but limited to these documents, which presents the risk of leaving relevant information from other documents out of the assessment. Having one set framework with which to analyze this body of strategic adaptation documents presents limitations in that it may not catch the nuances of each. Further, the same document differs from country to country in terms of content, structure, terms, and language, which could also result in different interpretations and consequently, comparing countries or regions becomes an intricate task. The analysis, therefore, should only be taken as an approximation of a general picture of the status of planning for adaptation in Africa. We also recognize a limitation in understanding the true and whole picture of a country's institutional arrangements, plans, and planning processes—which can only be gained though engagement with stakeholders on the ground. As such, this document serves to provides a high-level overview of the status of adaptation planning in Africa—as communicated through NDCs, NAPs, and LTSs only—to set the foundation for co-development of the country compacts.

26 https://gain.nd.edu/our-work/country-index/

27 Russell, A., A.Y. Banana, and P.O. Ongugo. 2016. "Lessons learned for improving policies affecting forest conservation and climate change adaptation in Uganda's water tower communities."

28 UNDRR. 2020. "Disaster Risk Reduction and Climate Change Adaptation, Pathways for policy coherence in Sub-Saharan Africa." https://www.undrr.org/media/47688/download?startDownload=true; UNDRR. 2020. "Integrating Disaster Risk Reduction and Climate Change Adaptation in the UN Sustainable Development Cooperation Framework: Guidance Note on Using Climate and Disaster Risk Management to Help Build Resilient Societies." https://unsdg.un.org/sites/default/files/2020-08/Integrating-DRR-CCA-in-CFs-web.pdf

29 Qi, J., A. Dazé, and A. Hammill. 2023. "Addressing loss and damage: What can we learn from countries' National Adaptation Plans?" NAP Global Network report. International Institute for Sustainable Development. https://napglobalnetwork.org/resource/loss-and-damage-national-adaptation-plans/

30 Crumpler, K. et al. 2022. "Regional analysis of the nationally determined contributions in Sub-Saharan Africa – Gaps and opportunities in the agriculture and land use sectors." Environment and Natural Resources Management Working Paper No. 94. Rome, FAO. https://doi.org/10.4060/cc0599en

31 Global Center on Adaptation. 2022. "The State and Trends in Adaptation Report: Africa. Coastal Erosion."

32 Landry, S. 2018. "Africa's Tourism Potential: Trends, Drivers, Opportunities, and Strategies." Africa Growth Initiative, Brookings Institution. https://www.brookings.edu/wp-content/uploads/2018/12/Africas-tourism-potential_LandrySigne1.pdf >

33 Lusigi, A. 2022. "Rethinking tourism as a pathway for development." UNDP Ghana. https://www.undp.org/ghana/blog/rethinking-tourism-pathway-development

34 Trisos, C.H. et al. 2022. "Africa." In: "Climate Change 2022: Impacts, Adaptation and Vulnerability." Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1285–1455, doi:10.1017/9781009325844.011.

35 Ibid.

36 ILO. 2013. "African Union calls for more investment to promote jobs in Africa." ILO, Geneva.

37 Green jobs is defined by the International Labour Organization (ILO) as employment in the environmental sector that meets the requirements of decent work — and, in particular, jobs for adaptation and resilience, a subcategory of green jobs (STA21).

38 In the case of Morocco, the authors used the GTAP-BIO-Water Model, another CGE model, to estimate the economy-wide impacts of water scarcity. In the case of South Africa, the authors used the South African General Equilibrium (SAGE) model to estimate the impacts of a low-carbon transition derived from the energy-sector South Africa TIMES Model (SATIM).

39 IMF. 2023. "Review of Resource Adequacy of the Poverty Reduction and Growth Trust, Resilience and Sustainability Trust, and Debt Relief Trusts." April 7, 2023: https://www.imf.org/en/News/Articles/2023/04/07/pr23112-2023-review-of-resource-adequacy-of-the-poverty-reduction-growth-trust

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