



# Climate Risk Regulation in Africa

## KEY MESSAGES

- African financial authorities and the private sector have a growing awareness of climate-related risks, which can be divided into physical risks and transition risks. Climate risks pose a significant threat to financial stability by reducing the collateral value of economic agents and jeopardizing the soundness of financial institutions.
- Climate-related risks have been added to the research agendas of various central banks and supervisory organizations as governments acknowledge the threat that climate change could pose to their economies and financial systems, including financial losses caused by climate-related disasters and implications on financial valuations of a necessary transition away from high-emitting sectors of the economy.
- Financial regulations and self-regulation practices of financial institutions are critical enablers of a resilient financial system and encourage more climate investment in the region. The increased quantification, pricing, and management of physical climate risks by financial institutions can help foster social resilience, not only by assuring the financial system's resilience to climate change, but also by providing price signals that influence economic behavior.



Photo: MOIZ HUSEIN/iStock

- As long-term measures to address climate-related financial risk, all 54 African countries have signed the Paris Agreement and submitted ambitious INDCs, while the majority have ratified NDCs. However, many of their commitments require financial, technical, and capacity-building support.
- There are three significant challenges that African governments are currently facing in their efforts to integrate climate risk into their financial systems: a lack of data; a lack of internal capability to define regulations and guidelines; and a lack of international standards or common methodologies, such as stress tests.

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**We are ready to take on more risk. Typically, we finance only 50 percent of projects. Now, we have decided to finance up to 75 percent of projects that are primarily motivated by adaptation and up to 100 percent in the most vulnerable parts of the world, including small and developing states and the least developed countries.”**

**Werner Hoyer**  
President, European Investment Bank

## INTRODUCTION

In different reports on financial risk, the World Bank, the International Monetary Fund (IMF), the European Central Bank, the U.S. Federal Reserve and the Global Center on Adaptation (GCA), among others, convey that climate change will be a source of systemic risk, with potentially severe consequences for both financial institutions and financial markets. The effects of climate change on financial stability depend on the distribution of financial exposure and the evolution of prospective financial system losses.

As the International Finance Corporation (IFC) has warned, the unexpected volatility of conditions caused by unaddressed climate impacts can affect projected results and weaken the financial systems.<sup>1</sup> For general debt instruments such as loans, for example, debt repayment capacity can be impacted by changes in underlying cash-flow values—projected earnings and expenses—caused by climate change, resulting in a deterioration of financial positions.

An analysis by Moody's Analytics found that 49 banks across 14 African countries had extended US\$218 billion of credit to environmentally sensitive sectors—about 29 percent of their total loans.<sup>2</sup> As a result, African banks are vulnerable to climate change shocks increasing in frequency and severity,

as they are projected to do. Unless lenders take action to manage these risks, Moody's expects that environmental factors will lead to a deterioration of the credit quality and profitability of these banks in the long term. Financial regulations and self-regulation practices of financial institutions are critical enablers of a resilient financial system and encourage more climate investment in the region.

This chapter focuses on the impact of climate risks on African financial systems. It is based on a study in 2021 by McKinsey & Company in collaboration with African Development Bank (AfDB), GCA, and United Nations Environment Programme Finance Initiative (UNEP FI).<sup>3</sup> The report's goal was to assess the integration of climate-related risks in the prudential, financial, regulatory, and supervisory frameworks of several African countries and identify potential levers to incentivize their internalization. It also included in-depth case studies on the Democratic Republic of the Congo (DRC), Egypt, Ghana, Kenya, Mali, Mauritius, Morocco, Nigeria, Rwanda, South Africa, Tunisia, and Zimbabwe, supported by interviews and discussion with regulators and stakeholders in these countries.

The first section focuses on the exposure to climate-related risks of Africa's financial sector, pointing out that some African nations are among the most vulnerable in the world to climate risks. It then goes on to show that there is a growing momentum globally among financial authorities, including in Africa, to develop a broad-based regulatory framework to address such risks, and details the transmission channels through which climate risks threaten the stability of the financial system. The second, most substantial section presents the research and findings of the 2021 report. The chapter concludes with a set of recommendations for improving the capacity of African financial institutions, whether in the public or private sector, to manage such risks.

## AFRICA'S FINANCIAL SECTOR: EXPOSURE TO CLIMATE CHANGE

Climate change poses a significant threat to financial stability. Climate hazards are already a highly relevant concern in Africa today and are expected to intensify, with their effects contributing to food insecurity, population displacement, and stress on water resources. A 2021 World Bank analysis warned that extreme weather events can strand



Photo: James Harrison/Stock

assets, reducing the collateral value of economic agents and jeopardizing the soundness of financial institutions.<sup>4</sup> African authorities and the private sector have a growing awareness of these physical risks of climate change. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) found that climate change is already reducing economic growth across Africa, increasing income inequality between African countries and those in temperate climates.<sup>5</sup>

African countries are dealing with climate-related issues that threaten livelihoods, public health, infrastructure investments, economies, water and food systems, and agriculture. According to the Global Climate Risk Index 2021, five African nations were among the 10 most affected by extreme weather in 2019: Mozambique (No. 1), Zimbabwe (No. 2), Malawi (No. 5), South Sudan (No. 8), and Niger (No. 9).<sup>6</sup> African countries thus have a significant incentive to join the global effort to adapt to climate change and climate variability because they are among the most vulnerable to climate hazards. Water stress, food insecurity, and disruptions across the continent will worsen as the climate warms, worsened by more severe weather events.

## GLOBAL MOMENTUM FOR ADDRESSING CLIMATE CHANGE RISKS IN THE FINANCIAL SECTOR

The “Breaking the Tragedy of the Horizon” speech by former Bank of England Governor Mark Carney on September 29, 2015, brought climate risk-related issues to the attention of financial authorities worldwide.<sup>7</sup> By tying climate risks to financial stability, it changed how regulators saw global warming’s threat to financial stability and prompted additional action by numerous financial market stakeholders.

As a result, the G20 Financial Stability Board (FSB) launched the Task Force on Climate-Related Financial Disclosures (TCFD) in December 2015, seeking to identify the information needed by investors, lenders, and insurance underwriters to assess and price climate-related risks and opportunities effectively.<sup>8</sup> TCFD principles are substantially comparable with most environmental, social, and governance (ESG) standards in terms of risk management framework (identification, quantification, modeling, strategy, and disclosure), notably on risk identification and assessment.

The Network of Central Banks and Supervisors for Greening the Financial System (NGFS) brings together supervisors to create a forum for discussion and knowledge exchange on green finance and climate change systemic issues. In contrast, the TCFD is a private sector initiative for market participants.

### Box 1. NGFS Commitments to Climate-Related Risks

**Commitment 1:** Integrating climate-related risk into financial stability monitoring and micro-supervision

**Commitment 2:** Integrating sustainability factors into own-portfolio management

**Commitment 3:** Bridging the data gaps

**Commitment 4:** Building awareness and intellectual capacity and encouraging technical assistance and knowledge

**Commitment 5:** Achieving robust and internationally consistent climate and environment-related disclosure

**Commitment 6:** Supporting the development of a taxonomy of economic activities

There are other similar initiatives that are being formed around the world, including the Sustainable Banking and Finance Network (SBFN), the Partnership for Carbon Accounting Financials (PCAF), the Principles for Responsible Investment (PRI), and various initiatives under the United Nations Environment Programme Finance Initiative (UNEP FI), such as the Principles for Responsible Banking (PRB), Collective Commitment to Climate Action (CCCA), and the Net-Zero Alliances.

The African Financial Alliance on Climate Change (AFAC) brings together leaders in the African financial industry: central banks, insurance companies, sovereign wealth and pension funds, stock exchanges, and commercial and development banks. AFAC aims to increase financial sector participation in climate action to raise the share of investments supporting low-carbon and climate-resilient development in Africa.

## CLIMATE-RELATED RISKS AND FINANCIAL STABILITY

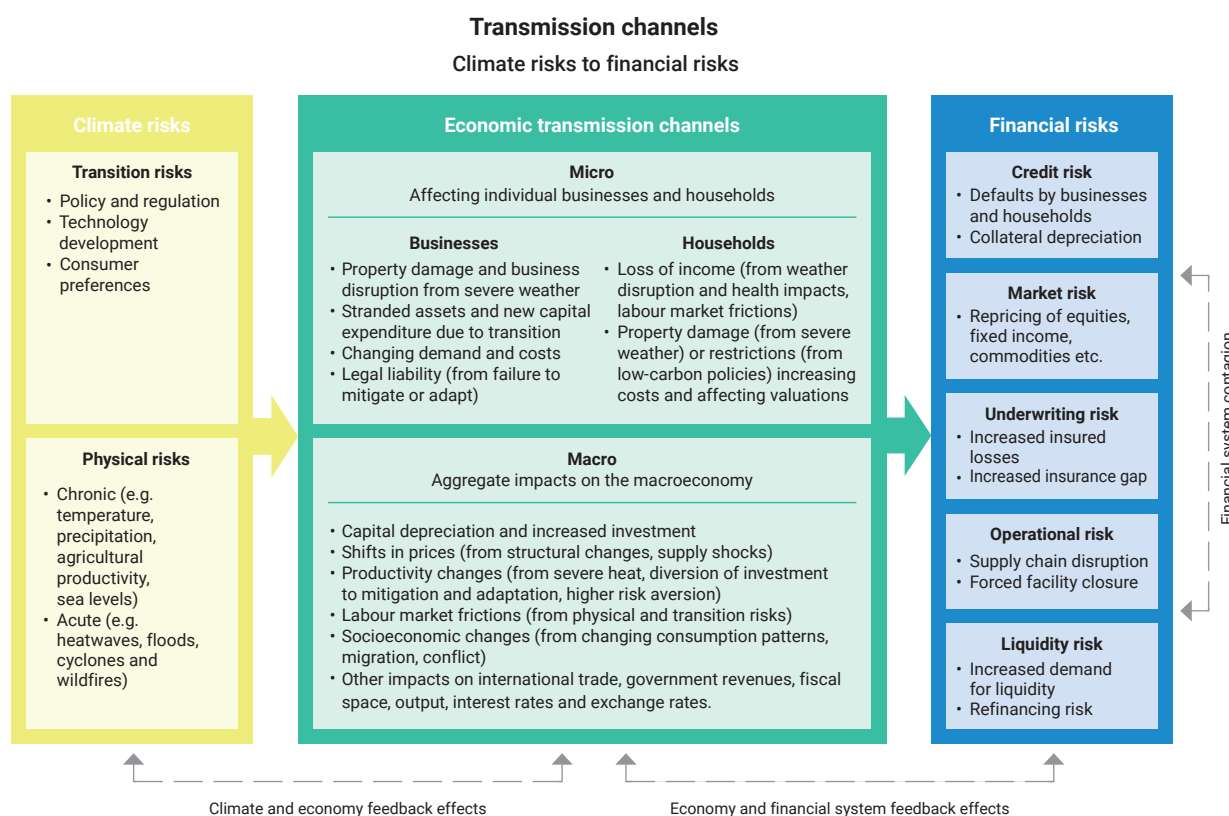
Climate-related financial risks are a group of potential risks that may arise as a result of climate change, and which may have an impact on the safety and soundness of individual financial institutions as well as a broader financial stability implication for the banking system.<sup>9</sup> Climate-related risks have been added to the research agendas of various central banks and supervisory organizations as governments acknowledge the threat that climate change could pose to their economies and financial systems, including financial losses caused by climate-related disasters and the implications on financial valuations of a necessary transition away from high-emitting sectors.<sup>10</sup> Moreover, some countries have already established well-defined frameworks for defining and regulating climate-related risks.

Climate risks are of two main kinds: physical risks and transition risks.<sup>11</sup> Physical risks include the

potential economic costs and financial losses stemming from the increased severity and frequency of extreme climate change-related events and longer-term shifts in the climate. Transition risks are associated with the process of transitioning to a low-carbon economy. Financial institutions from all sectors are required to adopt a consistent definition of climate-related financial risks that encompasses both physical and transition aspects.

As the financial implications of climate change become obvious, financial services and supervisors are focusing on acceptable responses. The increased quantification, pricing, and management of physical climate risks by financial institutions can help to foster social resilience, not only by assuring the financial system’s resilience to climate change, but also by providing price signals that influence economic behavior. Financial institutions could also promote the formation of markets for climate resilience funding, generating opportunities for financing adaptation and resilience.

**Figure 1. Transmission Channels from Climate Risks to Financial Risks**



Source: Reproduced from NGFS Climate Scenarios for Central Banks and Supervisors report (2021)<sup>12</sup>

According to the Africa NDC Hub, all 54 African countries have signed the Paris Agreement and submitted ambitious Intended Nationally Determined Contributions (INDCs), and the majority have ratified Nationally Determined Contributions (NDCs).<sup>13</sup> Signatories have committed to enhancing climate action by reducing their greenhouse gas (GHG) emissions and building resilience. However, many of their commitments require financial, technical, and capacity-building support.

## CLIMATE RISK INTEGRATION IN AFRICAN FINANCE REGULATORY FRAMEWORKS

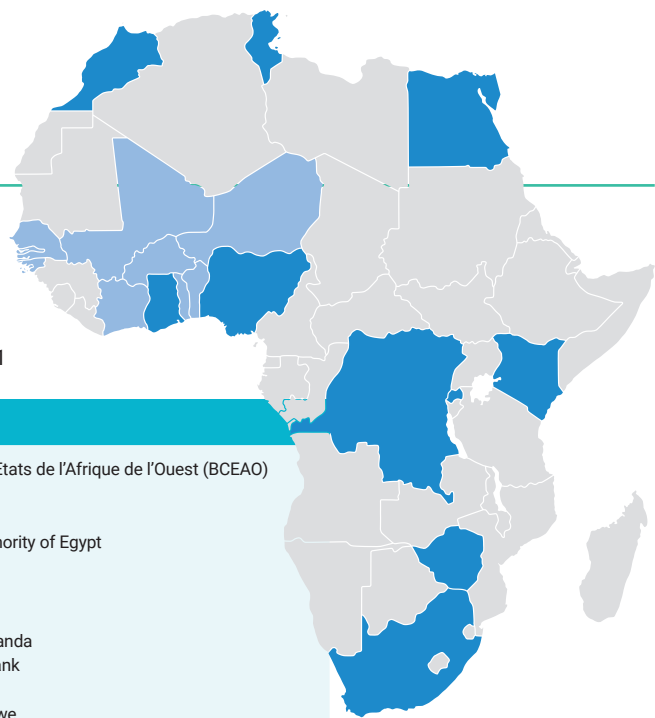
Regulators can speed up the adoption of climate risk-related practices in the business sector. The recent report on climate risk regulation in Africa's financial sector by McKinsey & Company in collaboration with AfDB, GCA, and UNEP FI sought to establish which African countries' financial sectors already have climate-related legal and supervisory requirements

and whether authorities want to make additional advancements in this area.<sup>14</sup> The assessment also considered industry-level private sector initiatives, such as national or regional working groups promoting self-regulation, supporting capacity building, or developing information-sharing forums.

The analysis was conducted through a series of semi-structured interviews, and a questionnaire was created for each of the countries studied. These questionnaires were distributed to the authorities of the financial systems of each country, as well as to regulated financial institutions in those countries. The study included 19 countries with different levels of financial system sensitivity to climate-related hazards. Overall, 25 organizations were surveyed, including 11 financial regulators and 14 private entities. Figure 2 provides an overview of the project.

**Figure 2. Overview of Participating Institutions in the Climate Risk in Africa Analysis**

26 interviews with authorities and private players covering 19 countries were organized between September and October 2021



Organisation category	Region or country	Organisation name
<b>Central bank/Authority (11)</b>	Mali	La Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO)
	DRC	Central Bank of Congo
	Egypt	Central Bank of Egypt
	Egypt	Financial Regulatory Authority of Egypt
	Ghana	Bank of Ghana
	Mauritius	Bank of Mauritius
	Morocco	Al Maghrib Bank
	Rwanda	Banque Nationale de Rwanda
	South Africa	South African Reserve Bank
	Tunisia	National Bank of Tunisia
	Zimbabwe	Reserve Bank of Zimbabwe
<b>Industry initiative/Group (2)</b>	Zimbabwe	Bankers Association of Zimbabwe
	Kenya	Kenya Bankers Association
<b>Private sector players (13)</b>	Egypt	Commercial International Bank of Egypt ICEA LION Group
	Kenya	KCB Group
	Mauritius	Mauritius Commercial Bank
	Nigeria	Wema Bank
	Nigeria	Africa Re
	Rwanda	Bank of Kigali
	Rwanda	Equity Bank
	South Africa	FirstRand Group
	South Africa	Investec Group
	South Africa	Land Bank
	South Africa	Standard Bank
Zimbabwe	Central Africa Building Society (CABS)	

Note: UMOA member countries in dark blue, non-UMOA member countries in light blue

Source: Reproduced with permission from AfDB et al. (2021)<sup>3</sup>

Table 1 summarizes the state of climate risk regulation in 12 countries examined in greater depth. A more thematic analysis of the data follows.

**Table 1. Climate Risk-Related Initiatives: Country Analysis for 12 Countries**

Country	Financial stability architecture	Climate risk-related initiatives	
		Regulation on climate-related risks	Self-regulatory bodies and private sector initiatives
DRC	Regulated by the Central Bank	No regulation on climate-related risks	Private sector does not currently have an industry initiative working on climate-related risks
Egypt	The Egyptian financial sector is overseen by the Central Bank of Egypt (CBE) and the Financial Regulatory Authority (FRA)	CBE issued its Guiding Principles on Sustainable Finance for the banking sector; FRA laid out the sustainability disclosure requirements	FRA launched the Regional Center for Sustainable Finance (RCSF)
Ghana	Ghana's financial system is regulated and supervised by four distinct authorities	Bank of Ghana (BoG) issued voluntary guiding Sustainable Banking Principles to underpin banks' Environmental and Social Risk Management (ESRM)	To the knowledge of BoG, no private player is currently building capacity on climate-related risk
Kenya	Kenya's financial sector (excluding insurance) is supervised and regulated by the Central Bank of Kenya (CBK)	Kenya's parliament enacted the Climate Change Act (2016), providing a regulatory framework in response to climate change and a mechanism for effective institutional arrangements for climate action, including climate finance	Kenya Bankers Association (KBA) has commenced the development of Sustainable Finance Guiding Principles to create a globally competitive industry
Mali	The Malian financial sector is regulated by the Central Bank of Western African States (BCEAO)	The Malian financial regulatory framework does not explicitly mention climate-related risks	According to interview responses and desk research, there is currently little private sector initiative on climate-related risks in Mali
Mauritius	The financial sector in Mauritius is regulated and supervised by the Central Bank of Mauritius (BoM) in collaboration with the Financial Services Commission (FSC)	BoM has established the Climate Change Center (CCC) and various taskforces	No voluntary private sector initiatives have been reported
Morocco	The Moroccan banking system is solely regulated by the Central Bank of Morocco, also called Bank Al-Maghrib (BKAM)	BKAM and the Moroccan Capital Market Authority (AMMC) have become members of the SBFN	The Professional Banking Group of Morocco (GPBM) has published a Banks and Climate Charter
Nigeria	The Nigerian financial sector is overseen by the Central Bank of Nigeria (CBN)	CBN, via the Bankers' Committee, has approved the adoption of the Nigeria Sustainable Banking Principles (NSBP)	In collaboration with the CBN, the private sector of the banking industry has established a group called the Sustainability Champions
Rwanda	The National Bank of Rwanda (BNR) is the sole regulator and supervisor of the Rwandan financial sector	BNR has no regulation on climate risks as yet; however, this is under development	The Rwanda Bankers Association has a mandate to ensure proper risk management frameworks in general and in banking operations
South Africa	The South African financial services sector is overseen by the South African Reserve Bank (SARB), a member of NGFS, to ensure its stability and functioning	South Africa currently has no active regulation relating to climate risk, but the Prudential Authority (PA) is working on a set of regulations expected to be enforced	The financial industry is taking voluntary steps towards integrating climate risk in decision-making

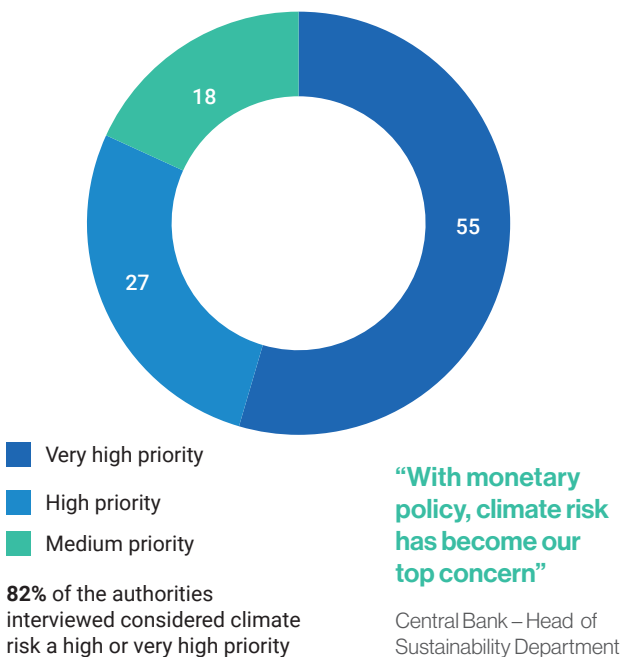
Country	Financial stability architecture	Climate risk-related initiatives	
Tunisia	The Central Bank of Tunisia regulates the country's banks with the main objective of maintaining price stability	In line with the country's efforts in terms of green growth, the Central Bank of Tunisia has integrated NGFS principles	The Tunisia Green Economy Financing Facility (GEFF)
Zimbabwe	Zimbabwe's financial sector is made up of four regulatory authorities supervised by the Ministry of Finance: The Reserve Bank of Zimbabwe (RBZ), the Deposit Protection Corporation, the Securities Commission, and the Insurance and Pensions Commission	Expert interviews indicate that climate risk-related initiatives in Zimbabwe are still developing	There is no legislative directive on climate-related risk initiatives

Source: Authors' summary of the findings of AfDB et al. (2021).<sup>3</sup>

### Key Insights from the Analysis

**Climate risk is a top priority for financial authorities.** Nine of the 11 officials interviewed (82 percent) ranked it as a high or very high priority on their agenda. This sense of urgency can be seen in the broad participation of authorities in climate and sustainability risk-related initiatives such as the NGFS and SBFN. Several interviewees emphasized that climate-related risks cannot be considered in isolation and that overall economic and societal circumstances (for example, economic concentration in carbon-intensive sectors) must be considered.

**Figure 3. Priority Perception of Climate Risk Among Financial Authorities**



Source: Reproduced from Figure 5 in AfDB et al. (2021)<sup>3</sup>

### Climate risk data and methodologies are inadequate.

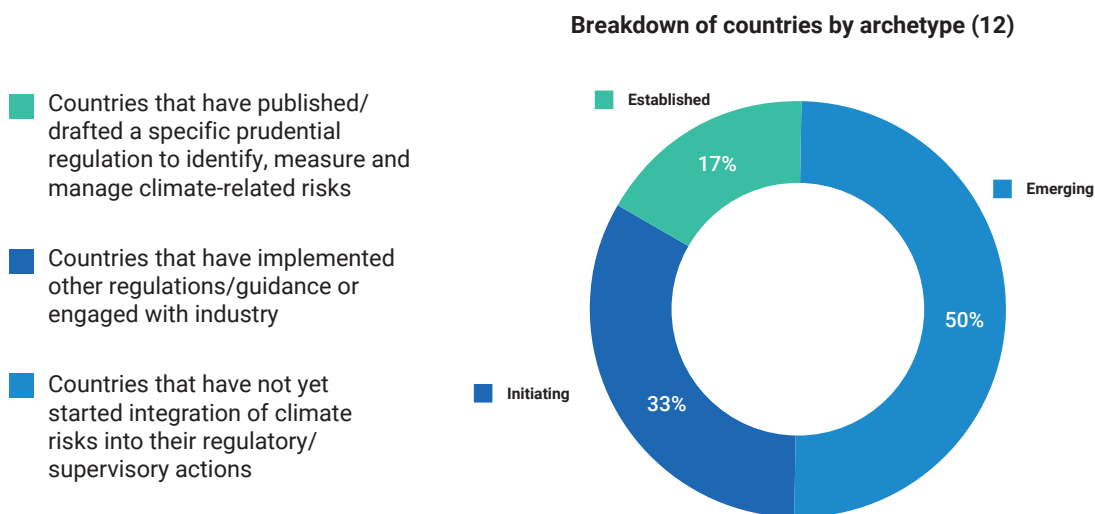
There are three significant challenges that African governments are currently facing in their efforts to integrate climate risk into their financial systems. The most relevant ones for authorities were a lack of data and a lack of internal capability to define regulations and guidelines, both of which were mentioned by 82 percent of those interviewed. This was followed by 73 percent of interviewed authorities mentioning a lack of international standards or common methodologies, such as stress tests. Data has many dimensions, including access, availability, coverage, and granularity. Many respondents, particularly those from the private sector, expressed a lack of access to reliable databases for assessing and measuring climate risk.

**There is a lack of regulations and measures.** Very few authorities and supervisors in the financial sector have established regulations or supervisory expectations. The report concludes that most regulators and supervisors in the financial industry have not addressed climate-related risks or more significant sustainability-related concerns through binding rules and supervisory guidelines. Although authorities can evaluate these risks as part of their existing duties, there are ongoing attempts to build effective and comprehensive frameworks to detect, analyze, manage, and communicate climate-related risks that are connected to developments in the private sector.

In terms of regulatory status, countries were classified into three regulatory and supervisory categories, or archetypes. Figure 4 summarizes the results. Figure 5 provides an overview of climate risk-related regulations and initiatives in the 12 countries.



Figure 4. Classification of 12 African Countries by Regulatory Action on Climate Risk



Source: Authors' summary of the findings of AfDB et al. (2021)<sup>3</sup>

Figure 5. Overview of Climate Risk-Related Regulations and Initiatives Across African Regions

**Based on interviews**

- Driving "Established"
- Driving "Emerging"
- Considered relevant, not yet initiated
- Considered relevant, under development (< 2 years)
- In place

		Archetype 3 "Initiating"				Archetype 2 "Emerging"				Archetype 1 "Established"				
		DRC	Tunisia	BCEAO	Rwanda	Zimbabwe	Egypt	Ghana	Nigeria <sup>1</sup>	Morocco	South Africa	Kenya	Mauritius <sup>2</sup>	
<b>Authorities and private-sector actions</b>	<b>Define specific prudential regulations</b>													
	<b>Implement other regulations/guidelines or engage with industry</b>	Define principle-based regulation												
		Define disclosure requirements												
		Publish guidelines/best practices												
		Run exploratory stress tests												
<b>Working groups and international collaboration</b>	Run survey on climate risk practices													
	Join international working group (NGFS, SBFN)													
	Set up internal working group(s) on climate risk													
<b>Private-sector initiatives</b>	Set up a private-public working group(s)													
	FIs joining international association (e.g. TCFD, NZBA)													
	Existence of industry working group on climate risk													

Notes: Archetypes were defined in terms of regulatory advancement. (1) Implementation Guidance to the Nigerian Sustainable Banking Principles are not binding per se, but can generally be considered detailed. (2) Mauritius has drafted its prudential regulations and should be finished by the end of the year 2021.

Source: Amended from Figure 6 in AfDB et al. (2021)<sup>3</sup>

**Non-binding measures are considered very relevant.** Non-binding measures are preferred by authorities but are not widely implemented at the moment. For example, six of the top nine initiatives declared highly relevant or in place (by more than 50 percent of authorities interviewed) among the 14 measures to strengthen the financial industry's integration of climate risk are non-binding.

**Encouragement through informal promotion is emphasized.** Conducting awareness-raising campaigns and events (for example, through surveys, conferences, and dialogue) is the most relevant non-regulatory action, with a full 100 percent of authorities rating it as "very relevant," but it is only implemented in two of the featured jurisdictions. Sharing best practices (for example, through guides and roundtables) is deemed necessary by 82 percent of the interviewed authorities and has been implemented by two featured jurisdictions. Publishing assessments of the aggregate climate risk exposure of the financial sector is deemed relevant by 64 percent of the authorities questioned and has been implemented by two featured jurisdictions. Finally, although 64 percent of all authorities interviewed believe that defining a taxonomy for economic activities is essential, no featured jurisdiction has done so.

## POLICY RECOMMENDATIONS

Based on the challenges of addressing climate risks identified in the analysis, the following recommendations for action emerge:

### Address the lack of capacity and capabilities of authorities

Public authorities and financial regulators should be encouraged to develop their own capabilities while also contributing to the capacity development of private sector players, for example by highlighting best practices, offering training programs, forming working groups, and so on. Several interviewees mentioned the importance of collaborating with external organizations and initiatives to implement this approach.

### Set standard disclosure instructions/set mandatory reporting and disclosures

Consider mandating minimum disclosure standards for the financial and non-financial sectors in accordance with TCFD recommendations, covering



governance, strategy, risk management, metrics, and targets. Consider specific regulations and supervisory guidelines and metrics to ensure that financial institutions adequately consider climate risk and facilitate interactions with counterparties, investors, and clients.

### Promote access to data and information/develop stress test models and scenarios analysis

Make physical and transition risk-related data and information more accessible, for example by incorporating reliable sources into a central repository. Develop stress test models and scenario analyses for supervisory purposes as well as institutional reference points.

### Promote non-binding measures

Non-regulatory actions are often the most effective ways to raise awareness about climate change. For instance, conducting awareness-raising events and surveys is often the most effective way to gather information about the financial sector's exposure to climate risk. Sharing best practices, for example via guides and roundtables, publishing assessments of the financial sector's aggregate climate risk exposure, and defining a taxonomy for economic activities are other tools and resources that can help financial stakeholders make informed decisions when assessing their exposure to climate risk.