Advancing Climate Adaptation and Resilience in Banking: A Values-Based Perspective

WHITE PAPER



Global Alliance for Banking on Values



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Foreword

The year 2024 marked a stark milestone as the warmest year on record, with global temperatures exceeding 1.5°C above pre-industrial levels for the first time. Yet the impacts of climate change are neither new nor unexpected. In recent decades, extreme weather events such as floods, heatwaves, wildfires, and droughts have caused widespread damage to livelihoods, the environment and the economy, disproportionately affecting those least responsible and least equipped to respond. According to the Intergovernmental Panel on Climate Change (IPCC), over 3.3 billion people live in highly vulnerable regions, where mortality from climate-related disasters is up to 15 times higher than in regions with very low vulnerability. Concentrated largely in the Global South, these populations face overlapping challenges of poverty, weak infrastructure, and limited access to finance, further deepening existing inequalities and threatening livelihoods.

While mitigation remains indispensable, scaling adaptation efforts to reduce vulnerability and build resilience to unavoidable impacts is increasingly urgent. The financial sector is both affected by climate risks and central to shaping society's response—a role explicitly recognized in the Paris Agreement, which calls for aligning financial flows with pathways toward low-carbon and climate-resilient development. Yet adaptation finance remains far below what is needed and continues to rely mainly on governments and public institutions.

What perspective can values-based banking bring to the way the financial sector approaches climate adaptation and resilience?

When adaptation is discussed, the dominant image is often large-scale infrastructure—sea walls, levees, and flood barriers—built to contain physical hazards. While necessary in some contexts, such approaches reflect a centralized, capital-intensive model that can be disconnected from local communities and may overlook important social impacts. This paper is built on a different perspective, drawing on mangrove ecosystems as an example: they contribute to adaptation by dissipating wave energy and reducing coastal erosion, while simultaneously supporting biodiversity and sequestering carbon.

Yet the mangrove's significance extends beyond ecology, carrying deep symbolic meaning. Caribbean writer Édouard Glissant uses the mangrove as an image of a system whose strength lies in the interweaving of roots, where stability emerges from connection to land, diversity, and mutual support rather than isolation[1]. This image is widely used in decolonial ecology—a field of thought that challenges colonial legacies in environmental knowledge and practice by centring Indigenous and Global South perspectives, and by emphasizing relational, place-based, and socially just approaches to environmental issues. In this context, the mangrove offers a compelling lens for rethinking adaptation: effective resilience depends not only on protection against shocks, but also on strengthening the relationships that enable societies and ecosystems to adapt and evolve over time.

Values-based banks have long embraced this perspective, prioritizing social and environmental objectives to foster more inclusive and resilient communities. Meeting the challenges of adaptation thus represents both an opportunity and a responsibility for the financial sector to rethink how it understands risk, allocates capital, and engages with the real economy in support of long-term, equitable resilience.

[1] Édouard Glissant, Poétique de la relation, Gallimard, 1990, cited in Fatima Ouassak (éd.), Terres et liberté : Manifeste antiraciste pour une écologie de la libération, Les Liens qui Libèrent, 2025.



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Executive Summary

Climate change is already reshaping economies, ecosystems and communities. More frequent and severe climate hazards—including floods, droughts, heatwaves and other extreme weather events—as well as long-term changes such as rising temperatures, sea-level rise and ecosystem degradation are disrupting livelihoods, damaging infrastructure, undermining food security and generating cascading risks that ultimately extend to financial systems. Addressing these impacts requires sustained investment in adaptation: the process of adjusting economic systems, institutions and communities to current and projected climate conditions.

The scale of the challenge is considerable. **The global adaptation finance gap is estimated by the United Nations Environment Programme (UNEP) at between USD 284 and 339 billion annually**, with investment needs exceeding current flows by more than a factor of ten. Closing this gap will require a significant mobilisation of private capital. **Banks are uniquely positioned to contribute by directing finance towards resilience-building investments**, supporting clients in managing climate risks and helping create the conditions under which households, businesses and communities can adapt effectively. This paper presents a values-based banking perspective on climate adaptation and resilience, arguing that **adaptation is not simply a technical or financial challenge, but also a question of equity, institutional purpose and long-term responsibility.**

Climate risks are highly context-specific, shaped by the interaction of hazards, exposure and vulnerability, and can propagate across ecological, social and economic systems. Poorly designed responses can lead to maladaptation, increasing vulnerability or shifting risks onto already exposed communities. Effective adaptation therefore requires forward-looking risk assessment, local knowledge, inclusive decision-making and a systemic understanding of resilience.

The paper highlights three interrelated challenges that can amplify physical climate risks and must be addressed by the financial sector. **First, prevailing approaches, while evolving, remain insufficient for the scale and complexity of the challenge.** Risk management frameworks built around historical data and short planning horizons are often poorly suited to the long-term, uncertain, non-linear and systemic nature of climate risk. **Second, climate vulnerability is closely linked to financial exclusion, poverty, gender inequality and other structural barriers**. Households, small enterprises and farmers with limited access to savings, credit, insurance and payment services are often least able to prepare for, absorb and recover from climate shocks. **Third, adaptation must be grounded in climate justice.** Communities and countries that have contributed least to climate change—particularly in the Global South—often face the greatest impacts while having the most limited access to affordable finance.

Financial institutions can respond through three core roles. As risk managers, they can integrate physical climate risks into strategy, governance, lending and transition planning using forward-looking approaches while avoiding practices that simply exclude vulnerable clients or geographies. As capital intermediaries, they can finance resilience through targeted products, client engagement and portfolio strategies that support outcomes in the real economy, including resilient agriculture, infrastructure, housing, energy systems, early-warning tools and nature-based solutions. As corporate citizens, they can strengthen their own operational resilience, collaborate with public actors, insurers, civil society and research institutions, and use their influence to advocate for policy and regulatory environments that enable just and inclusive adaptation.



Executive Summary

The experience of the Global Alliance for Banking on Values (GABV) member institutions shows how **values-based banks are already putting these roles into practice** across more than 45 countries and diverse contexts. While operating in different markets and institutional settings, these institutions share a commitment to financing the real economy, building long-term relationships, maintaining transparency and generating positive social and environmental impact alongside financial sustainability. This orientation enables them to **move beyond defensive risk management and support resilience through practical, client-centred and locally grounded solutions.** Examples highlighted in the paper include integrating physical climate risks into strategic planning; embedding climate-smart practices within agricultural lending; expanding access to finance for refugees, low-income households and smallholder farmers; financing nature-based solutions that deliver adaptation, mitigation and biodiversity benefits; convening partnerships across value chains; and supporting Indigenous-led and community-driven resilience initiatives.

Drawing on these experiences, **the paper identifies six guiding principles for a values-based approach to adaptation finance** that can inform institutions across the sector: broadening risk frameworks to account for uncertainty, systemic interdependence and long-term resilience; **delivering client-centred solutions rooted in the real economy**; ensuring adaptation is inclusive, locally led and just; prioritising multi-benefit investments that strengthen resilience across sectors; **fostering long-term stakeholder engagement and collaboration; and embedding a historically informed climate justice perspective into financing decisions.**

Financial institutions that ground their activities in long-term social and environmental purpose are better positioned to navigate climate uncertainty and contribute to resilient and inclusive economies. The experience of GABV members demonstrates that such an approach is both viable and scalable.

The paper therefore concludes with a call to action for financial institutions, policymakers and regulators. Key priorities:

- Developing dedicated adaptation strategies;
- Integrating current and forward-looking physical climate risk assessments into institutional decision-making;
- Expanding financing instruments with clear and measurable resilience outcomes;
- Designing risk frameworks that preserve access to finance for vulnerable clients and communities;
- Creating enabling policy and regulatory environments that support long-term resilience investment; and
- Recognising the particular responsibility of institutions in the Global North to direct capital towards climate-vulnerable regions on terms that strengthen, rather than undermine, local adaptive capacity.

Ultimately, **adaptation should not be viewed solely as a risk-management challenge, but as an opportunity to reorient finance towards long-term resilience, climate justice and shared prosperity.**

1 Introduction

1.1. About This Paper

This paper sets out the Global Alliance for Banking on Values (GABV)'s position on climate adaptation and resilience finance, drawing on more than 15 years of experience from its members in pioneering values-based banking.

Three characteristics position the GABV to contribute meaningfully to the adaptation agenda:



- **Built-in climate resilience:** Climate action and resilience are embedded in the values-based banking model. Two of the GABV's six Principles of Values-Based Banking (1)—the Triple Bottom Line and a long-term perspective—commit members to generating positive social and environmental impact while maintaining resilience in the face of external shocks. In practice, this is reflected in banking approaches that often go beyond regulatory requirements, including the early exclusion of fossil fuel financing and the integration of robust environmental and social risk assessments. These practices provide a strong foundation for advancing climate adaptation and resilience.

- **Global reach, local insight:** With more than 70 member institutions (2) across over 45 countries serving more than 50 million customers, the GABV combines a global perspective with deep local engagement. Many members operate in regions already experiencing severe climate impacts, particularly in the Global South, where adaptation needs are greatest and climate vulnerabilities are most acute. This provides the alliance with direct insight into how climate risks affect communities, businesses and local economies. Its diverse membership—including commercial banks, cooperative and mutual institutions, credit unions, small finance banks and microfinance institutions—also offers a broad view of adaptation challenges and emerging practices across the financial sector.

- **Leadership and advocacy:** While modest in size relative to the global banking industry, the GABV has consistently demonstrated leadership on climate issues. Members have long financed renewable energy, energy efficiency and other sustainable investments, while the alliance has supported initiatives such as the Partnership for Carbon Accounting Financials (PCAF) (3) and the Fossil Fuel Non-Proliferation Treaty (FFNPT) (4).

Building on this foundation, the paper presents a values-based banking perspective on climate adaptation and resilience, with the aim of informing the wider financial sector, policymakers and regulators. It responds to the growing urgency of strengthening adaptation efforts and highlights the role financial institutions can play in supporting resilience in the real economy. At the same time, it calls for a broader understanding of adaptation, moving beyond narrow risk-management approaches to prioritise long-term social, environmental and economic resilience. The paper concludes with a set of guiding principles and practical recommendations drawn from members' experience, demonstrating how financial institutions can contribute to adaptation in ways that are effective, inclusive and aligned with long-term societal needs.

Two important clarifications should be noted:

→ First, although the focus is on climate adaptation, the values-based approach to resilience is inherently systemic, inclusive, and context-specific. **Adaptation cannot be considered in isolation from related challenges such as financial inclusion, biodiversity loss and the structural inequalities that shape vulnerability across and within countries.**

→ Second, greater attention to adaptation must not come at the expense of mitigation. **Every additional degree of warming increases physical climate risks and reduces the capacity of communities and ecosystems to adapt**. The objectives of the Paris Agreement (5) must therefore remain the guiding framework for financial institutions' actions.

1.2. Understanding Climate Adaptation and Resilience: Context and Definitions

Climate change is rapidly reshaping economies, societies and ecosystems. Global temperatures have already risen by approximately 1.2°C above pre-industrial levels, leading to more intense and frequent extreme weather events, along with long-term shifts in global and regional climate patterns (6). Human-induced climate change is increasingly turning extreme events into recurring threats: between 1995 and 2024, more than 832,000 people died, and over USD 4.5 trillion in losses resulted from more than 9,700 extreme weather events globally (7), underscoring the growing urgency of strengthening climate adaptation and resilience efforts.

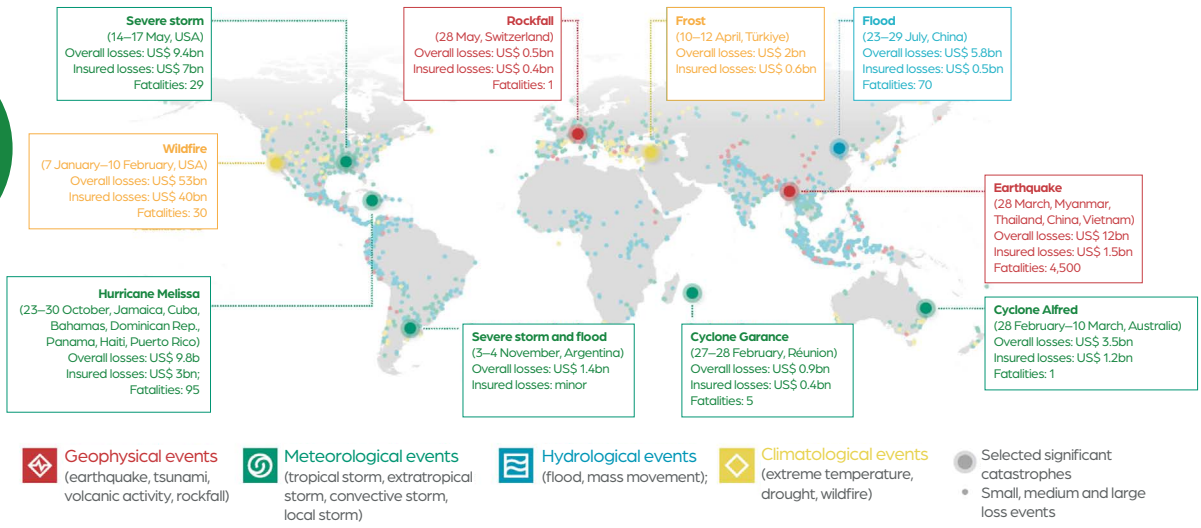


Figure 1: World map of natural disasters 2025 – Source: Munich RE (8)

Recent evidence (see Figure 1) also shows that disaster-related losses continue to rise, with most impacts now influenced by climate change—either through more intense and frequent hazards or by amplifying underlying vulnerabilities that drive higher damages. While mitigating greenhouse gas emissions remains a critical priority, adaptation and resilience efforts must be rapidly and significantly scaled up to withstand both present and future climate risks[2].

While the impacts of extreme weather events are felt worldwide, coping capacity and levels of resilience vary widely across countries and communities. In its definitions (see BOX 1), the IPCC also highlights that hazards, exposure, and vulnerability are subject to uncertainty in terms of magnitude and likelihood and may evolve over time due to socio-economic changes and human decision-making (6). Understanding the interplay between these factors is therefore essential for assessing and managing climate-related financial risks.

BOX 1: KEY DEFINITIONS

The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (6) defines, in a climate change context:

Risk as *"the potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social, and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems, and species. In the context of climate change impacts, risks result from dynamic interactions between climate-related hazards with the exposure and vulnerability of the affected human or ecological system to the hazards."*

- Hazard as *"the potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources."*
- Exposure as *"the presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected."*
- Vulnerability as *"the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt."*

Adaptation as *"in human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects."*

Resilience as *"the capacity of interconnected social, economic, and ecological systems to cope with a hazardous event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity, and structure. Resilience is a positive attribute when it maintains capacity for adaptation, learning and/or transformation."*

[2] climate mitigation refers to efforts to reduce or prevent greenhouse gas emissions or enhance their removal (e.g. through carbon sinks), thereby limiting the magnitude of climate change. Climate adaptation refers to adjustments in natural or human systems in response to actual or expected climate impacts, aimed at moderating harm or exploiting beneficial opportunities (6).

Adaptation strategies can reduce risk by addressing one or more of these dimensions but must remain context-specific. Evidence from the 2026 Climate Risk Index illustrates this uneven vulnerability: most of the countries hardest hit between 1995 and 2024 are low and middle income economies, many in the Global South, showing that they face disproportionately high levels of climate-related impacts (7). In this context, resilience becomes a critical complement to adaptation, ensuring that investments support long-term sustainability, inclusivity, and human dignity. **More broadly, a resilience perspective invites a re-examination of the interdependencies between businesses, communities, and the social, economic, and ecological systems in which they operate.**

1.3. The Adaptation Finance Gap

In 2025 alone, natural disasters caused an estimated USD 224 billion in global economic losses, yet only USD 108 billion were insured (8), according to Munich Re—leaving roughly half of the damages uncovered. This protection gap, particularly pronounced in Global South countries, underscores the urgent need to strengthen adaptation measures alongside more inclusive financial protection systems. While the direct economic costs of climate impacts—such as rising temperatures, sea-level rise, and extreme weather events—are increasingly well documented, other consequences, including biodiversity loss and wider social impacts such as conflict and migration, remain difficult to quantify (9). As a result, many estimates of the "cost of inaction" are likely to be significant underestimations (10), reinforcing the need for immediate investment in adaptation and resilience.

Despite this urgency, adaptation finance remains far below both commitments and needs (see Figure 2). Globally, only 7% of climate finance supports adaptation, with another 2% addressing both adaptation and mitigation (11). **The adaptation finance gap is estimated at USD 284–339 billion annually until 2035, with required investments 12–14 times higher than current flows (12).** The imbalance is particularly stark for the 50 Least Developed Countries (LDCs), home to more than one billion people yet responsible for less than 4% of global emissions. In 2022, they received only USD 14.5 billion—around 19% of global adaptation finance (13).

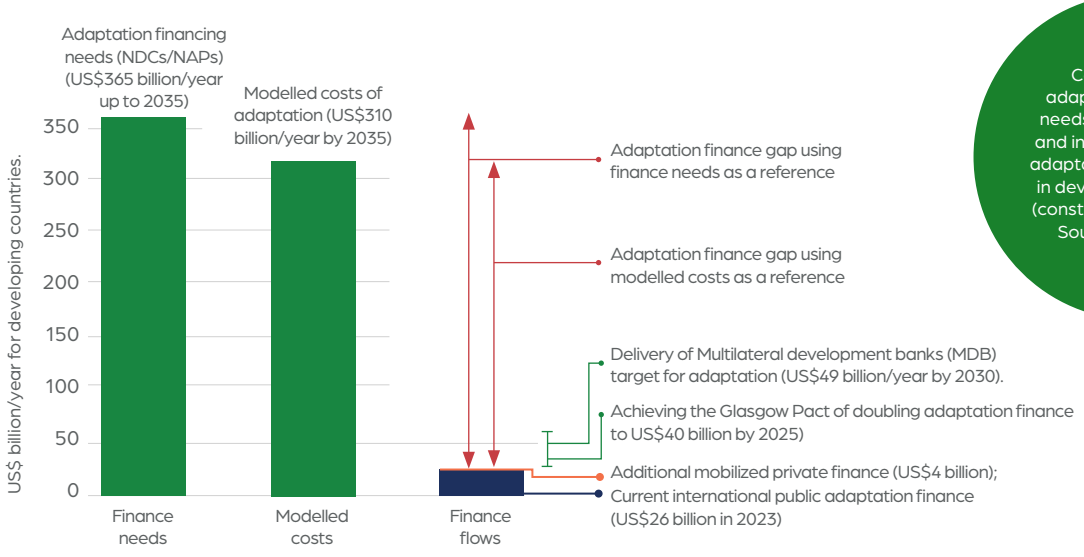
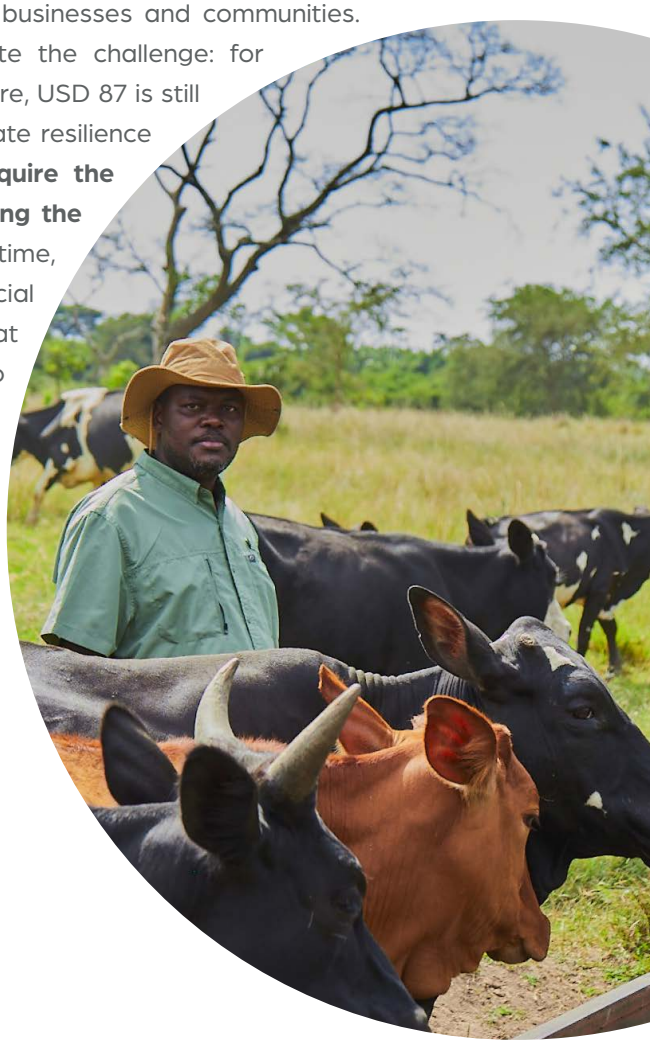


Figure 2: Comparison of adaptation financing needs, modelled costs and international public adaptation finance flows in developing countries (constant 2023 prices) – Source: UNEP (12)

Note: Domestic and private finance flows are excluded. Note values are in constant 2023 prices and not inflation-adjusted to 2035.

Closing the gap between current adaptation finance flows and the scale of global needs will require a broader range of financial approaches than those currently deployed. While public actors accounted for around 90% of tracked adaptation finance in 2023, scaling adaptation will require both increased public funding and significantly greater mobilisation of private capital (13). To date, however, private sector engagement remains limited and difficult to assess. In contrast to public institutions, private actors are also not subject to standardised reporting or risk assessment frameworks for adaptation and resilience, making their contributions harder to track (15).

Without a rapid increase in both public and private investment, climate vulnerabilities risk being locked into long-lived assets, increasing future losses for businesses and communities. Current infrastructure investment patterns illustrate the challenge: for every USD 1 invested in climate-resilient infrastructure, USD 87 is still directed toward infrastructure that does not integrate resilience principles (14). **Addressing this imbalance will require the private sector to play a more active role in closing the adaptation and resilience finance gap**. At the same time, this raises questions about whether traditional financial approaches, built around risk–return frameworks that tend to favour short-term horizons, are well suited to the specific challenges of adaptation and long-term resilience.



2 Meeting the Adaptation and Resilience Challenges

Despite the urgent need to act amid an accelerating climate crisis and increasingly frequent extreme events, translating adaptation goals into action remains difficult. This section explores these challenges, highlighting the deep connections between climate change and broader socio-economic issues and the need for a systemic, historically informed approach to achieve adaptation that is both fair and resilient.

2.1. The Risk of Maladaptation: Toward a Systemic and Context-Sensitive Approach

Assessing the risks associated with the physical impacts of climate change is inherently complex because it requires understanding the interaction between three dimensions: hazards, exposure and vulnerability. The frequent confusion between weather and climate illustrates the challenge of linking long-term climate trends with the short-term mitigation and adaptation efforts required today. Moreover, physical climate risks arise from complex, non-linear dynamics within the climate system, where feedback loops and tipping points limit the predictability of future outcomes.



Exposure adds a further layer of complexity: climate hazards vary significantly across regions in their frequency, intensity and manifestation, requiring highly granular, location-specific assessments. Evaluating these risks often relies on long-term climate scenarios extending well beyond the planning horizons typically used by businesses and financial institutions. Access to the data, tools and expertise needed to conduct such assessments remains uneven.

Vulnerability is equally difficult to assess because it is shaped by multiple forms of interdependence: between hazards that may interact, between actors and the ecological, social and economic systems on which they depend, and between climate and non-climate risks that can reinforce one another. **As a result, adaptation measures are not automatically beneficial. This concern is captured by the concept of maladaptation**, defined by the IPCC as *"actions that may lead to increased risk of adverse climate-related outcomes, including via increased GHG emissions, increased vulnerability to climate change, or diminished welfare, now or in the future. Maladaptation is usually an unintended consequence"* (6).

Climate risks can also propagate across interconnected ecological, social, financial and economic systems, creating systemic risks in several ways (15):

- **Compound risks** – when one hazard amplifies another, producing impacts greater than the sum of their parts. For example, prolonged drought can weaken vegetation and intensify wildfires.

- **Cascading risks** – when the impacts of one hazard trigger disruptions across systems through feedback loops and interdependencies. Changes in temperature and precipitation, for example, can reduce soil fertility and crop yields, disrupt food production and increase food insecurity in vulnerable regions.

- **Aggregate risks** – when multiple localized or sectoral disruptions accumulate into broader systemic impacts. Repeated storm surges and sea-level rise may threaten individual coastal properties, but when aggregated across mortgage portfolios they become material credit risks for financial institutions.

Failure to account for these interconnections and local contexts can lead to maladaptation, ultimately increasing climate risks and reinforcing existing inequalities (12) (16). This risk is further compounded by the tendency to focus on acute hazards—such as floods, heatwaves and wildfires—while overlooking chronic risks including rising temperatures, sea-level rise and changing precipitation patterns, despite their profound long-term implications. According to CPI, 27% of tracked private adaptation finance in 2022 carried potential risks of maladaptation or significant harm, highlighting the need for more robust adaptation risk assessment frameworks (17).

The IPCC provides numerous examples of maladaptation. Seawalls, for instance, may reduce flood risk in the short term but can encourage development in exposed coastal areas and disrupt natural coastal processes, ultimately increasing long-term vulnerability to flooding and erosion (11). Adaptation decisions therefore involve complex trade-offs between short- and long-term objectives, between different categories of risks, and sometimes between adaptation and mitigation goals (see Figure 3). At the same time, many climate actions can generate important synergies and co-benefits across adaptation, mitigation and biodiversity protection (11), highlighting that adaptation outcomes are not binary but lie along a continuum shaped by design, context and implementation.

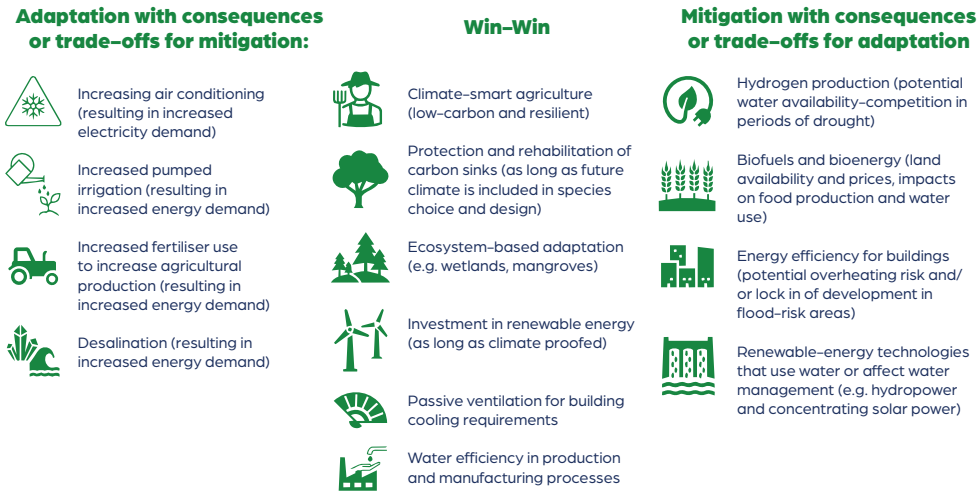


Figure 3: Illustrative synergies and conflicts between mitigation and adaptation – Source: TPT Adaptation Working Group (15)

Effective and resilient adaptation therefore requires a detailed understanding of local conditions, inclusive stakeholder engagement, and impact assessments that go beyond environmental considerations to capture social and economic dimensions and reduce the risk of maladaptation. As climate hazards and socio-economic conditions evolve, measures that were once effective may lose relevance or even become counterproductive. Preventing maladaptation therefore calls for dynamic, iterative approaches grounded in continuous risk assessment, learning and collaboration across communities, ecosystems and institutions.

2.2. Financial Inclusion and Adaptation: Breaking the Cycle to Strengthen Resilience

Intensifying floods in Bangladesh, recurrent droughts in the Horn of Africa, and increasingly frequent cyclones in Mozambique and Madagascar illustrate how climate hazards intersect with poverty and inequality (11). Disadvantaged communities are often more exposed to these risks, as they are compelled to live in high-risk areas such as flood-prone zones. Their vulnerability is compounded by fragile housing and precarious livelihoods—such as small farms, livestock, or informal businesses—while limited savings, insurance coverage, and access to financial services (i.e. financial inclusion[3]) constrain their ability to adapt and recover from climate shocks. **As a result, climate change and inequality reinforce one another in a vicious cycle, in which climate impacts further deepen socio-economic disparities (18).**

Regulatory responses and planned adaptation efforts may also unintentionally exacerbate exclusion if not designed with proportionality and inclusion in mind (19). High compliance costs or stringent due diligence requirements from financial institutions can make small loans unprofitable, excluding low-income households and microenterprises from access to credit. Climate change itself also threatens progress in financial inclusion: more frequent disasters destroy the assets—homes, farms, and businesses—that serve as collateral and undermine the livelihoods needed to repay loans.

In Pakistan, for example, 40% of Inclusive Financial Service Providers have reduced lending to climate-exposed sectors such as agriculture and livestock, while 20% have halted it entirely because of climate-related challenges (20). This dynamic can create a downward spiral, where climate shocks reduce financial access and weaken resilience to future crises. These impacts are particularly severe for women and girls, who play a central role in household and community resilience yet face persistent structural barriers. Women are overrepresented in climate-exposed sectors such as agriculture and informal trade while having lower access to credit, insurance, and financial decision-making. During crises they often bear disproportionate burdens, sacrificing income or education to protect their families. As climate impacts intensify, these dynamics risk reversing progress in women's financial inclusion, economic empowerment, and gender equality (21).

Breaking this cycle requires adaptation strategies that combine planned efforts, including infrastructure investment, early-warning systems, and policy reforms, with autonomous adaptation, empowering individuals, and small enterprises to respond to climate risks in ways that reflect local realities. By bridging top-down and bottom-up approaches and enabling the most vulnerable populations to pursue their own resilience strategies through services tailored to local contexts and linked to social protection, financial inclusion supports a decentralized and inclusive model of adaptation (see BOX 2).

BOX 2: FINANCIAL INCLUSION TO BRIDGE THE GAP BETWEEN PLANNED AND AUTONOMOUS ADAPTATION

In many Global South countries, adaptation efforts have traditionally focused on planned adaptation measures based on large-scale projects such as resilient infrastructure, irrigation systems or disaster response mechanisms led by governments and international donors. While essential, these large-scale interventions often struggle to reach the households, small enterprises and community institutions, where climate impacts are most directly experienced.

>

[3] Financial inclusion refers to a state where all individuals and enterprises have access to and are empowered to use affordable, responsible financial services—such as payments, savings, credit, and insurance—that meet their needs (21)."

< BOX 2: FINANCIAL INCLUSION TO BRIDGE THE GAP BETWEEN PLANNED AND AUTONOMOUS ADAPTATION

In contrast, **autonomous adaptation or locally led adaptation—the spontaneous, independent actions taken by individuals, households, small enterprises, and local communities in response to climate impacts** (see Figure 4)—has received far less attention (11), despite being the first line of defence for millions of people.

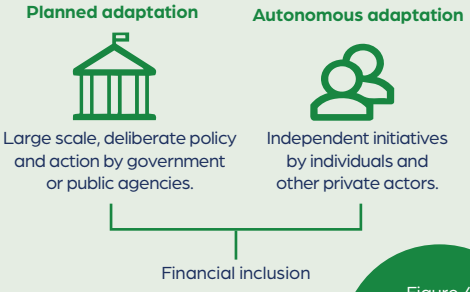


Figure 4: Planned vs. Autonomous Adaptation – Source: CGAP (21)

A context-specific understanding of climate impacts by affected communities should be the starting point for identifying adaptation needs, priorities, and solutions. Even within the same community, responses can vary widely: a cassava farmer in northern Nigeria may invest in drought-resistant seeds or solar irrigation, requiring targeted agricultural loans, while another may migrate to a nearby city and need start-up capital to develop a new livelihood (21). These diverse strategies represent legitimate forms of autonomous adaptation and depend on accessible financial tools, complemented by information and education services.

Local and Indigenous knowledge also plays a critical role in adaptation and resilience: in many regions, communities have long developed coping strategies to manage drought and climate variability, such as mixed cropping, soil conservation, and community-based water management. These practices often rely on affordable, locally available materials and are culturally embedded, enabling communities to reduce vulnerability and build resilience even in resource-constrained contexts. However, climate change is increasingly altering weather patterns and disrupting traditional indicators, reducing the reliability of some historical coping mechanisms. Strengthening resilience therefore requires integrating traditional knowledge with climate data, scientific forecasting, and participatory research (20).

The Principles for Locally Led Adaptation developed by the Global Commission on Adaptation emphasize shifting decision-making, finance, and knowledge closer to communities so that households, small enterprises, and local institutions can shape their own responses to climate risks (20). **The most significant outcomes of locally led adaptation are therefore institutional as much as technical: stronger local governance, greater voice and agency for vulnerable groups, and improved integration of community knowledge and priorities into national adaptation planning**. In this context, financial inclusion is a critical enabler of resilience. Access to savings, credit, insurance, and digital payment systems allows vulnerable populations to anticipate, absorb and recover from climate shocks in ways aligned with their livelihoods and priorities (21).

Ensuring that adaptation finance accounts for social dimensions—such as income, gender, and ethnicity—and meaningfully involves Indigenous Peoples, local communities and marginalized groups in the design of solutions is essential (20). Despite growing recognition of these links, progress at the intersection of financial inclusion, social equity and climate adaptation remains limited. Bridging this gap will require stronger local action as well as greater global solidarity, particularly from Global North actors whose historical and financial responsibility places them in a key position to support equitable adaptation.

2.3. Toward Just Adaptation: Differentiated Climate Responsibilities of the Global North and South

Adaptation strategies must begin with the recognition that the impacts of climate change are unevenly distributed. Vulnerable communities in the Global South, despite historically contributing the least to climate change, are disproportionately affected (11): over recent decades, around 90% of deaths from weather-, climate-, and water-related disasters have occurred in developing countries,

according to the World Meteorological Organization (22). Yet historically developed countries account for about 57% of cumulative CO_2 emissions since 1850, while the least developed countries (LDCs) contribute only around 0.4% (23). At the same time, many of these nations have limited fiscal and institutional capacity to respond, partly due to structural inequalities in the global financial system that restrict access to adaptation and mitigation finance (24). **Ensuring that adaptation is both effective and equitable therefore requires confronting these systemic disparities and acknowledging the differentiated responsibilities of the Global North and Global South in addressing the climate crisis.**

These disparities raise fundamental questions about the distribution of responsibility and capacity for climate adaptation, an issue that lies at the heart of global climate justice. The principle is explicitly enshrined in the United Nations Framework Convention on Climate Change (UNFCCC) since 1992 and the Rio Declaration on Environment and Development, which calls on states to protect the climate system *"on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities"* (CBDR-RC principle) (26). The IPCC Sixth Assessment Report identifies justice as a key aspect of climate action across governance levels and highlights three distinct but complementary dimensions that should be considered when evaluating adaptation options (12):

- **Distributive Justice** – concerns the fair allocation of adaptation resources, benefits, and burdens across individuals, communities, nations, and generations. It addresses questions such as who receives financial and technical support for adaptation, who bears the costs, and how climate risks are shared. In the context of climate change, distributive justice operates at multiple levels: within societies (ensuring vulnerable groups are not disproportionately burdened), between states (recognizing global inequalities in responsibility and capacity), and between generations, emphasizing the obligation to safeguard the well-being and opportunities of future generations.

- **Procedural Justice** – focuses on the fairness, transparency, and inclusivity of decision-making processes related to climate adaptation. It emphasizes the meaningful participation of affected communities—particularly marginalized and vulnerable groups—in defining priorities, designing policies, and implementing adaptation measures. Procedural justice requires access to information, accountability of decision-makers, and participatory governance structures that allow communities not only to be consulted but to actively influence adaptation outcomes.

- **Recognitional Justice** – emphasizes the acknowledgment and respect of diverse identities, values, and knowledge systems, particularly those of Indigenous Peoples and local communities. It highlights the importance of recognizing who is considered a legitimate stakeholder in adaptation processes and whose knowledge and experiences are valued. Recognitional justice therefore calls for adaptation strategies that are culturally appropriate, inclusive of traditional and local knowledge, and attentive to the social and historical inequalities that shape vulnerability.

In practice, however, the principles of global climate justice are only weakly reflected in adaptation efforts. While international negotiations increasingly recognise the need to support vulnerable countries, through initiatives such as the establishment of the Loss and Damage Fund at COP27 and the adoption of targets for the Global Goal on Adaptation at COP28, these efforts often focus narrowly on international distributive justice—that is, fairness between states and the allocation of climate finance to more vulnerable countries in the Global South. While this perspective is necessary, it is not sufficient, as it overlooks other interconnected dimensions of justice and the structural power relations that shape vulnerability and access to resources (25). In particular, explicit justice perspectives remain largely absent from national and international climate finance (see BOX 3).

Rather than treating adaptation as a purely technical or market-driven process, global climate justice calls for a broader transformation of the systems and power structures that both drive climate change and shape its impacts. In this sense, just adaptation seeks effectiveness while also advancing equity and ethical responsibility, even when this requires deeper institutional change or redistribution of resources. To achieve this, adaptation initiatives must explicitly address intersectionality and decolonial perspectives, which are essential for understanding and responding to climate vulnerability. Intersectionality highlights how vulnerability is shaped by overlapping inequalities related to gender, race, class, age and other social identities.

Adaptation policies must therefore address these compounded vulnerabilities through inclusive, context-specific interventions. Yet many local communities—particularly those most exposed to climate risks—remain excluded from adaptation planning and decision-making, contradicting principles of procedural justice (12). Strengthening the participation and representation of these groups is essential, both as a normative requirement of justice and because more diverse, representative decision-making produces more effective, context-appropriate outcomes.

A decolonial perspective draws attention to how colonial and neo-colonial power relations have produced uneven development and constrained adaptive capacity across many regions. These historical dynamics have shaped global economic hierarchies and patterns of resource extraction that continue to influence vulnerability today. A justice-based approach therefore requires confronting these legacies and reforming global financial and governance systems that perpetuate inequality. Within this perspective, compensatory justice mechanisms are essential, meaning that countries in the Global North bear responsibility to support and compensate Global South countries for the losses and damages they now endure (25).

BOX 3:
BREAKING INJUSTICE IN CLIMATE FINANCE: TOWARD EQUITABLE ADAPTATION

Despite growing awareness of climate risks, the global architecture of climate finance continues to reproduce, and in some cases exacerbate, deep-rooted inequalities and historic asymmetries of power between the Global North and South. **By treating climate risk only as a financial concern rather than a systemic challenge, conventional risk-management practices often penalize the most climate-vulnerable countries** (25), through divestment or credit rating downgrades linked to their exposure to physical risks despite minimal responsibility for them. These dynamics contribute to a "climate–public debt vicious cycle", raising borrowing costs and constraining governments' ability to invest in adaptation (24).

Adaptation finance can further reinforce these inequalities. It remains largely loan-based, with debt instruments accounting for around 58% of international public adaptation finance (13), raising concerns about an "adaptation investment trap" in which escalating climate impacts increase debt burdens and constrain fiscal space (12)—particularly in highly vulnerable contexts such as Small Island Developing States, many of which already have unsustainable debt levels (28). At the same time, closing the adaptation gap requires substantially more funding (see 1.3), including a greater role for private finance. To attract this capital, policy debates increasingly promote "climate de-risking" approaches, using public subsidies, guarantees and regulatory support to lower investment risks for private investors.

While effective in mobilising resources, these approaches raise significant justice concerns, as they risk reproducing post-colonial patterns in which institutions that historically financed carbon-intensive development now profit from the shift to climate-resilient infrastructure—often at the expense of the Global South and by capitalising on vulnerabilities created by the climate crisis (25). More broadly, the climate crisis exposes the limits of current financial systems >

< BOX 3: BREAKING INJUSTICE IN CLIMATE FINANCE: TOWARD EQUITABLE ADAPTATION

in allocating resources for resilience, pointing to the need for structural reforms to rebalance power and address Global North–South inequalities. These challenges have prompted calls for systemic reform, notably through initiatives such as the Bridgetown Initiative led by Barbadian Prime Minister Mia Mottley, which highlights how today's financial architecture remains ill-suited to address interconnected challenges of climate risk and inequality (29). It also highlights how colonial legacies shape unequal borrowing conditions, with significantly higher interest rates for poorer countries (30). In fact, countries in the Global South spend around five times more on debt servicing than on responding to the impacts of the climate crisis (31).

Ultimately, many approaches aim to close the financing gap *(who provides the money)* while overlooking the funding gap (*who ultimately pays*) often shifting adaptation costs onto governments, communities, or households in the Global South to secure returns for private investors (24). Moving toward a decolonial climate finance model requires substantial reforms, including a shift away from profit-driven lending (26). Although roughly 70% of international public adaptation finance was concessional in 2022–2023 (with grants only averaging 39%) (12), concessional finance still has limitations: terms may not reflect national or local priorities, may lack transparency and accountability, and do not always foster long-term resilience. In this context, debt cancellation without conditionalities could provide greater autonomy to nations but would remain only an interim solution.

Policy-linked climate finance mechanisms can help attract funding when designed around principles of procedural justice, initiated by the countries concerned, and aligned with a shift in entrenched power structures toward more equitable climate finance. For example, "Cap and Share" frameworks, such as those explored in Malawi, couple national fossil fuel extraction limits with revenue-sharing mechanisms to provide adaptation funding (27). When combined with redistributive measures recognizing the stewardship of Indigenous Peoples and Local Communities, who are often excluded from official climate finance, these mechanisms can enable flexible, rights-based, community-driven adaptation: households receive unconditional cash, empowering them to respond to climate risks in ways they consider most appropriate (28). These approaches explicitly link adaptation finance to broader climate justice, redistribution, and resilience, emphasizing the need for inclusive governance and collaboration across regulators, public and private actors.

This reality highlights that Just Adaptation is inherently contested and demands ongoing reflection on power dynamics. Global North countries bear a historical climate debt to the Global South, and climate finance should aim to repay this debt rather than impose new burdens on vulnerable countries. At the same time, climate risks and socio-economic vulnerabilities are unevenly distributed within the Global North, underscoring that inequalities and systems of domination operate at multiple levels and that local context and intersectionality are critical in adaptation planning (19).



Truly Just Adaptation requires moving beyond incremental fixes to address the social, economic, and political structures that drive inequality and environmental harm. Inclusive governance and locally led approaches empower the communities most affected by climate change to shape priorities, strengthening distributive, procedural, and recognitional justice. Decolonizing climate finance is essential in this process, embedding the Global South, Indigenous Peoples, and marginalized communities as equal partners in decision-making rather than treating them solely as victims or beneficiaries (26).

3 The Role of Private Financial Institutions

3.1. Financial Institutions as Systemic Risk Mitigators: Building Resilience against Physical Climate Hazards

Effectively assessing and managing climate-related financial risks requires a clear understanding of how acute physical hazards and chronic stresses, linked to long-term shifts in climate systems, interact with exposure and vulnerability, and ultimately translate into economic impacts. As highlighted by the Task Force on Climate-related Financial Disclosures (TCFD) framework, these risks are transmitted through the real economy via two interrelated channels: at the microeconomic (bottom-up) level, they manifest as direct damage to assets, infrastructure, and human capital, as well as indirect effects such as supply chain disruptions and shifting demand; at the macroeconomic (top-down) level, they affect growth and financial stability through productivity losses (for example due to heat stress), capital reallocation, inflationary pressures, or broader socioeconomic pressures such as migration and labor market disruptions (29).

For financial institutions, these physical climate risks are therefore both financially material and systemically significant (9). They translate into financial risks through exposures to vulnerable assets—such as households, corporates, and sovereigns—as well as to specific sectors and geographies, and through broader feedback loops that amplify financial vulnerabilities across the economy (30). These exposures translate into core financial risk categories: credit risk (rising default rates and deteriorating collateral), market risk (asset princing and volatility), liquidity risk (stress-induced withdrawals

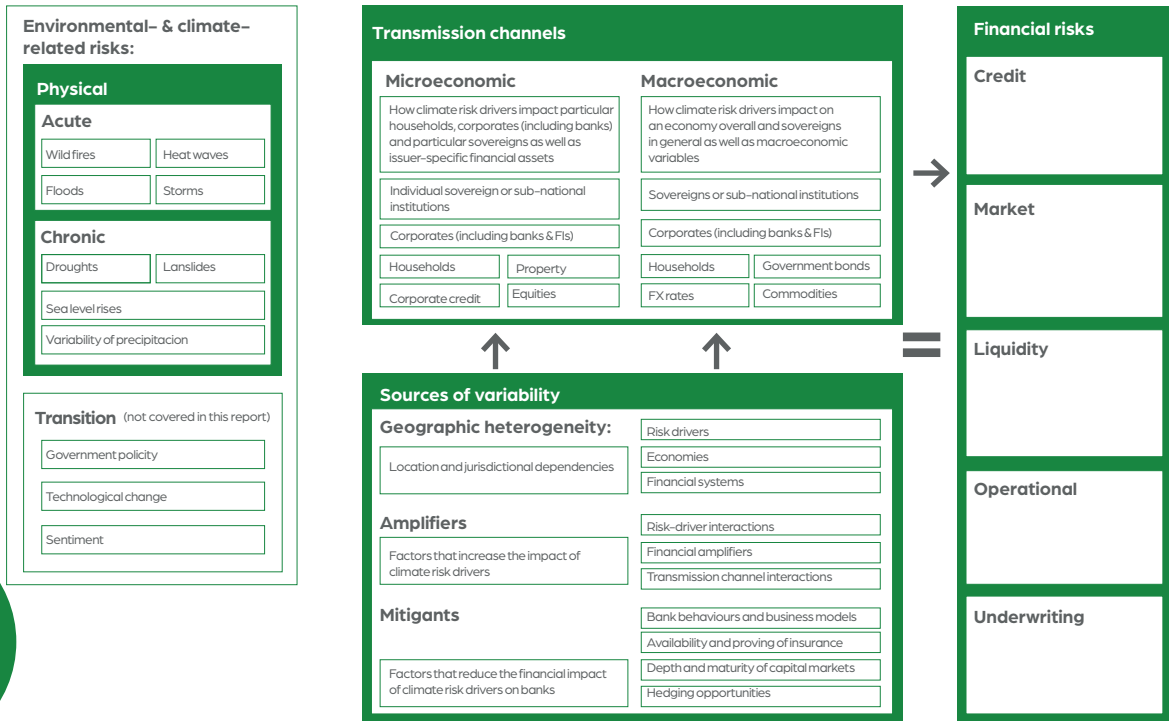


Figure 5: Transmission channels: climate-related risks to financial risks – Source: UNEP FI (29)

Note: ESG = Environmental, social, and governance; FX rates = Foreign exchange rates.

and drawdowns), and operational risk (damage to infrastructure and disruptions to business continuity) (see Figure 5). For instance, sea-level rise and extreme weather events can depress property values and increase losses in mortgage portfolios (29). When climate shocks affect multiple financial institutions and geographies simultaneously, they may also trigger procyclical financial responses—such as widespread credit tightening—that amplify stress and propagate instability throughout the financial system. This highlights how localized climate events can escalate into systemic financial risks, with implications for both financial stability and broader economic resilience.

In practice, **current approaches to managing physical climate risks remain largely reactive and grounded in traditional risk management framework**s, relying primarily on pricing adjustments and tighter lending conditions. Empirical evidence shows that banks are already charging higher interest rates to firms exposed to climate-vulnerable geographies, particularly for long-maturity loans and financially constrained borrowers, and adjust terms by increasing collateral requirements, reducing loan sizes, or raising fees (25). While financially rational, this approach remains narrowly focused on financial materiality and fails to capture how climate risk spreads across economies and communities. It creates a fundamental tension, as strategies that reduce exposure for individual institutions can increase vulnerability elsewhere in the system.

As a result, **these defensive strategies can lead to risk-based exclusion**, with financial institutions withdrawing from highly exposed regions or sectors and increased cost of capital for those most in need of financing to invest in resilience. These dynamics are particularly pronounced in the Global South, where higher exposure to physical hazards compounds existing structural vulnerabilities, exacerbating global inequalities (21). At the sovereign level, this contributes to a "climate–debt vicious cycle": countries most exposed to climate risks face rising borrowing costs and shrinking fiscal space for adaptation, a trend reinforced by credit rating agencies incorporating physical climate risks into sovereign ratings. Recent examples include Fitch's downgrade of Namibia following severe drought (2019), Moody's downgrade of Sint Maarten after Hurricane Irma (2021), and Fitch's downgrade of Pakistan after the 2022 floods (24).

At the same time, the distinctive nature of physical climate risks challenges the adequacy of traditional risk management tools, which still rely heavily on backward-looking models and therefore fail to capture tipping points, feedback loops, and compound risks. These risks are inherently forward-looking, non-linear, and deeply uncertain, shaped by complex interactions between environmental and socio-economic systems (31). Their impacts can escalate rapidly, differ significantly across geographies, and disproportionately affect the most exposed regions. As highlighted by the Network for Greening the Financial System (NGFS), these dynamics can trigger cascading, system-wide disruptions, making incremental, portfolio-level adjustments insufficient (30).

These limitations highlight a growing mismatch between the nature of physical climate risks and the tools currently used to manage them, underscoring the need for more forward-looking and system-aware approaches to financial risk management (31). Yet the central and systemic role of financial institutions—particularly banks—in safeguarding financial stability and supporting the resilience of the broader economy in the face of climate change is increasingly recognized by central banks and regulators. This is reflected in ongoing progress on materiality and risk assessment through disclosure frameworks such as ISSB's IFRS S2, the European Sustainability Reporting Standards, and climate stress testing exercises (30).

However, evolving regulatory frameworks should not justify inaction: banks carry a responsibility to ensure that physical climate risks are identified, measured, and managed across balance sheets and lending portfolios, while also supporting real-economy resilience by helping corporates, SMEs, and households anticipate, understand, and adapt to climate-related financial impacts—for example by financing preventive measures such as climate-resilient infrastructure, risk-informed land-use planning, and improved building standards (32). This reflects the core function of financial systems: absorbing shocks and managing both systemic and client-level risks, particularly for vulnerable populations that rely on savings, credit, and insurance to cope with climate impacts (21).

Physical risk assessment should serve as the starting point for developing comprehensive adaptation strategies within financial institutions. From this basis, they can derive adaptation metrics from existing risk management frameworks, reflecting how their activities help preserve the value of physical assets, reduce the likelihood of credit losses, and limit disruptions to economic activity (30). Transition plans, as highlighted by the NGFS and the Transition Plan Taskforce (TPT), provide a practical tool to embed physical risks into business strategy and guide resource allocation. By incorporating climate hazards into decision-making processes, transition plans enable a structured, science-based forward-looking approach to managing physical risk while identifying key investment needs to strengthen resilience (15).

Despite progress, disclosure of physical climate risks still lags behind transition risk reporting, particularly in terms of decision-useful and quantitative information. UNEP FI's bank disclosure review shows that only about half of banks explain how physical risks translate into financial risks, and fewer than 10% disclose how they actively manage them (29). Early identification and measurement of these risks should therefore be central to banks' risk strategies, providing the foundation for a forward-looking approach that moves beyond defensive risk mitigation toward resilience-building investments. This requires tailored approaches aligned with each institution's business model, portfolio composition, and risk profile, for example, banks with significant mortgage exposure may need more granular data and enhanced physical risk frameworks. A phased integration, starting with heat mapping of vulnerable sectors and scenario analysis, and a client-focused approach that embeds climate expertise across lending, investment, and operations can help ensure that adaptation efforts are aligned with counterparties' vulnerabilities and capacities (33).

3.2. Financial Institutions as Capital Intermediaries: Financing and Fostering Adaptation and Resilience

While a substantial share of adaptation finance will continue to come from the public sector—particularly for public goods such as flood protection infrastructure and social safety nets—closing the adaptation gap will require stronger private sector engagement (13). These large-scale investments, often aimed at reducing exposure to climate hazards, are typically government-led but increasingly rely on private financial institutions as key partners, for example through co-lending or bridge financing for publicly supported projects (15). As climate risks intensify, regulatory frameworks are likely to evolve to incentivise greater private capital mobilisation, reinforcing the pivotal role of the financial sector.

Yet financial institutions are not merely intermediaries responding to market signals; beyond this supporting role, they are key actors in shaping adaptation outcomes. As risk managers and capital allocators, they are uniquely positioned to assess clients' exposure and vulnerability to physical risks and to direct capital toward resilience-enhancing investments. Through their client relationships, they can also develop targeted financial products and services that strengthen adaptive capacity across sectors, thereby helping address the different dimensions of physical climate risk (see Figure 6).

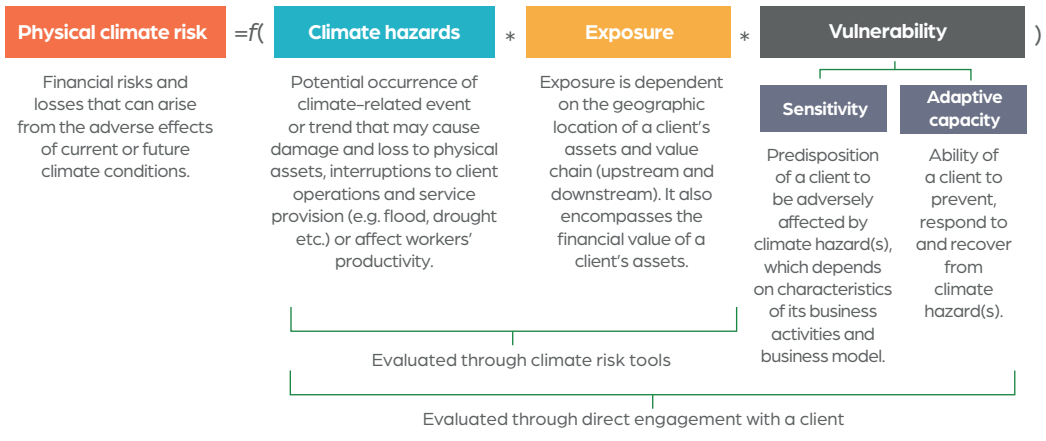


Figure 6: Understanding the components of Physical Climate Risk: Hazard, Exposure, Vulnerability – Source: UNEP FI (33)

In particular, commercial banks have a critical role to play through lending that supports households and businesses in responding to climate hazards (15). This requires embedding climate considerations into lending practices, including screening borrowers and projects for physical risks and integrating these into credit decisions. Banks can, for instance, require clients to adopt risk-reduction measures to remain bankable or identify opportunities where upfront adaptation investments lower long-term risks and costs—such as financing retrofits in hazard-prone areas or offering more favourable terms for resilience-enhancing projects, including flood-resistant infrastructure or drought-adaptive agriculture (35). By financing such measures, financial institutions can unlock otherwise unviable investments, playing a decisive role in scaling adaptation across the real economy.

BOX 4: FINANCING ADAPTATION & RESILIENCE IN PRACTICE

Unlike mitigation, where eligible investments are often clearly defined by technology or sector, adaptation is inherently context-specific. Whether an investment contributes to resilience depends on local climate risks, vulnerabilities, and socio-economic conditions. To guide investment decisions, widely used frameworks converge around three core criteria (34):

- **Resilience benefits**: the investment reduces sensitivity to physical climate hazards or strengthens adaptive capacity;
- ***"Do No Significant Harm"* (DNSH) principle:** it does not increase vulnerability for other communities or ecosystems;
- **Alignment with public strategies:** it is consistent with national or local plans (e.g., National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs) or National Disaster Reduction Strategies).

These principles, reflected in emerging taxonomies (e.g., EU Taxonomy, Climate Bonds Initiative/UNDRR framework (35)), help ensure that investments support adaptation while avoiding maladaptation. Such frameworks operate across multiple levels: they enable the identification and financing of specific resilience measures within assets and activities, while also assessing whether assets, projects, or entire entities contribute meaningfully to climate resilience and are therefore eligible for targeted financing. By providing a structured classification of adaptation activities, they help scale investment in climate and disaster resilience and guide investors toward relevant opportunities in a changing climate. Importantly, these frameworks can be translated into financial practice across a range of instruments, including loans incorporating climate risk into credit decisions, use-of-proceeds and other targeted debt instruments, sustainability-linked instruments tied to adaptation outcomes, and general-purpose debt or equity through the integration of resilience considerations into due diligence and portfolio allocation.

From a financing perspective, it is also critical to distinguish between two complementary types of investments (35):

- **Adapted investments**, which directly reduce the exposure or vulnerability of a specific asset or activity
- **Enabling investments**, which strengthen the climate resilience of other assets, activities, or entities (see examples in Figure 7)

>

BOX 4: BREAKING INJUSTICE IN CLIMATE FINANCE: TOWARD EQUITABLE ADAPTATION

	Measures	Asset	Activity	Entity
Adapted	• Upgrading an irrigation system to improve efficiency and reduce water losses • Upgrading local health clinics so they can remain open during extreme heat episodes	• Acquiring a closed-loop water-cooling system for installation in a thermal power station to reduce water consumption • Installing passive ventilation systems in buildings to maintain healthy interior temperatures during extreme heat episodes	• Agri-value chain (high-value perishable export crop) with cool logistics and storage • Telecoms services that ensure community connectivity even during extreme storms	• Company with corporate water footprint targets to reduce overall water consumption by [X]% year-on-year • City authority with comprehensive flood mitigation scheme including nature-based solutions and evacuation centres for affected communities
Enabling	• Launching a new product line of weather forecasting equipment for small farmers • Integrating desalination equipment facilities into municipal water supplies to ensure service continuity during droughts	• Setting up an additional weather monitoring station by a state meteorological agency that provides weather & climate information to farmers in a part of the country not previously covered • Constructing coastal defences to protect communities, businesses and infrastructure from increasing flood risk	• Producing heat-tolerant road surfacing materials that enable road transport to become more resilient to extreme heat events • Launching new immunization services to protect populations from infectious diseases with wider vector coverage due to by shifting temperature patterns	• Company that manufactures smart agriculture equipment that minimises water demand in crop production • State agency running a catastrophe risk pool mechanism that provides payouts to households affected by extreme weather events

Figure 7: Examples of the types of adapted and enabling investments – Source: UNDRR, Climate Bond Initiative (35)

In practice, many investments combine both dimensions—for instance, sustainable water management systems that address immediate risks while building long-term adaptive capacity. Building on these frameworks, financial institutions need to develop their own adaptation approaches—aligned with existing taxonomies but tailored to their portfolios, geographies and client needs. This involves prioritising sectors where climate risks are most material and where adaptation needs and financing gaps are greatest (39):

- Climate-related early warning systems, for instance, deliver some of the highest returns among adaptation measures but remain underfinanced due to their public-good nature, weak revenue models, and high upfront and maintenance costs. Private financial institutions can support scalable solutions by financing data infrastructure and weather forecasting tools that improve risk information and preparedness for clients.

- In agriculture, climate change is already driving yield volatility, resource degradation, and food system disruptions, with cascading impacts on livelihoods. Financing is constrained by high uncertainty and the fragmented nature of smallholder farming. Financial institutions can address this by developing innovative instruments, such as weather-index insurance, digital microcredit, or resilience-linked financing, tailored to the needs of smallholder farmers, and by incentivizing climate-smart and nature-based practices.

< BOX 4: BREAKING INJUSTICE IN CLIMATE FINANCE: TOWARD EQUITABLE ADAPTATION

- Infrastructure is both highly exposed to climate hazards and central to resilience, yet its capital intensity, long lifetimes, and uncertain returns create financing barriers. Banks can play a key role by supporting climate-resilient infrastructure through blended finance and public-private partnerships, adopting a systemic approach to assess interdependencies, and financing projects that integrate resilience from the design stage, alongside sustainable models for operation and maintenance.

- In the energy sector, climate risks affect generation, transmission, and demand simultaneously, while access gaps remain significant in many regions. Investments in resilient and distributed energy systems, such as renewables, storage, and energy efficiency, can simultaneously strengthen adaptation and energy security.

By focusing on these priority areas, financial institutions can target interventions where resilience gains are greatest while helping bridge the gap between private returns and broader societal benefits. Doing so requires building internal expertise across all activities, from risk assessment and product design to client engagement, and investing in staff training to effectively identify, assess, and finance adaptation opportunities.

Beyond redirecting capital, effective adaptation requires financial institutions to take responsibility for managing climate risks and to adjust their strategies, products, and services to support the real economy in addressing these challenges. Building on sustainable taxonomies, policy frameworks, and strong client engagement, financial institutions should develop a clear understanding of the different types of adaptation and resilience investments and clients' needs (see BOX 4) (33). By designing financial products and incentives tailored to these contexts, banks can play a catalytic role in scaling resilience.



To operationalize this, institutions should develop dedicated adaptation and resilience strategies, with clear investment priorities focused on reducing vulnerability, safeguarding livelihoods, and strengthening adaptive capacity over time. Financial products and services should be aligned to deliver tangible adaptation outcomes in the real economy while supporting strategic objectives. Although gaps in data, metrics, and clear targets remain a barrier to scaling adaptation, they should not delay action. Financial institutions can already set meaningful targets under uncertainty, using portfolio alignment, strategic direction, and proxy indicators as methodologies continue to evolve (32).

3.3. Financial Institutions as Corporate Citizens: Responsibility and Public Voice

Climate change will increasingly affect financial institutions' own operations, through impacts on infrastructure, business continuity, and employees. Rising temperatures already reduce productivity, while extreme events can disrupt operations or damage physical assets. As providers of essential services, such as payments, deposits, and access to cash—banks must ensure operational resilience so clients can access funds when they are most needed (17). As employers and corporate actors, financial institutions also have a responsibility to meet the same standards they expect from clients, adapting their own operations to protect their stakeholders and fostering a culture where staff understand their role in delivering resilience (33).

Investors	Managing relationships with the bank's capital providers. Includes reporting A&R performance, discussing strategy alignment with investor expectations, and potentially exploring A&R-themed funding.
Regulators	Proactive dialogue helps banks understand supervisors' views on physical climate risk and share practical insights as guidance evolves.
Industry peers	Working with peers via associations/forums allows sharing best practices, tackling common problems (like data gaps), and potentially developing joint standards.
Local communities and technical experts	Partnerships can provide local context and data (for physical climate risk assessment), opportunities to support community projects, or access to specialised knowledge (e.g. for nature-based solutions).
DFIs, multilateral development banks and climate funds	Working with DFIs, MDBs or Funds on blended finance, market insights, co-financing and technical assistance can scale up A&R finance, particularly in developing countries.
Policymakers	Engaging through policy advocacy (e.g. by providing practical, evidence-based insights on financing challenges/opportunities and enabling conditions), aligned with the bank's strategy helps foster supportive regulatory frameworks and public investment needed for adaptation. This can be done through collaborative industry platforms or direct dialogue.

Figure 8: Illustrative engagement with stakeholders – Source: UNEP FI (33)

Beyond internal operations, stakeholder engagement and partnerships are critical. Given the systemic and interconnected nature of climate risks, **effective adaptation requires collaboration across financial institutions, insurers, public actors, academia, and civil society** (see Figure 8). As highlighted by the NGFS, knowledge sharing on adaptation technologies, data, and emerging practices can strengthen collective resilience, particularly in emerging economies where access and capacity remain constrained (30). Financial institutions also have a role in ensuring that vulnerable households and businesses are not excluded from finance, by working with other FIs and partners—such as insurers and public institutions—to provide information, tools, and solutions that support adaptation decisions (17).



Finally, as corporate citizens, financial institutions carry responsibilities that extend beyond their core business activities, reflecting their influence not only as financial actors but also as participants in shaping broader economic and policy systems. This includes leveraging their influence through stewardship, engagement, and public advocacy to advance climate adaptation and resilience. In the context of asset management, this translates into actively exercising shareholder rights to influence portfolio companies. Initiatives such as Shareholders for Change (36)—a network of European institutional investors committed to responsible investment—highlight the importance of active ownership in addressing environmental and social risks, including climate change (17). Through coordinated engagement, voting policies, and escalation strategies, members encourage companies to better assess and disclose physical climate risks, integrate adaptation into their strategies, and strengthen resilience planning. Such stewardship is both a responsibility and a pragmatic risk management tool: by pushing investees to anticipate and manage climate risks, financial institutions can help reduce long-term financial vulnerabilities within their portfolios.



More broadly, **financial institutions can use their voice in policy and regulatory discussions to help shape an enabling environment for adaptation** (37). Institutions rooted in communities are particularly well positioned to ground their advocacy in local contexts. This proximity enables them to support context-based resilience efforts by convening public and private actors and highlighting key social dimensions of adaptation, including financial inclusion and just resilience. In fact, current policy priorities reveal important gaps: evidence from over 1,600 adaptation actions reported in NDCs and NAPs shows a strong focus on biodiversity, ecosystems, and sectors like agriculture and infrastructure, while areas such as health, poverty alleviation, livelihoods, and cultural heritage remain underrepresented (12), underscoring the need for more balanced, locally adapted, and socially inclusive policy approaches. Demonstrating business leadership is essential: by showing that they are already integrating climate risks and investing in resilience, financial institutions can strengthen the credibility of calls for more ambitious and coherent regulatory frameworks, while also leveraging their own data and disclosures (e.g., through TCFD) to build trust, demonstrate where climate risks are already material, and support evidence, based policymaking (39).

Ultimately, private financial institutions must recognize their role not only as financial intermediaries but as agents of systemic change, alongside regulators, private sector peers, and civil society. Supporting adaptation through stewardship, partnerships, and advocacy is essential to reshaping the financial system so that it better serves adaptation and resilience objectives—an approach consistent with the *GABV Manifesto for Sustainable Banking Regulation* (38).

The following section builds on these roles by examining how values-based banks can translate them into practice. Their experience is particularly relevant because their business models combine real-economy focus, long-term client relationships, stakeholder accountability and explicit social and environmental purpose. These characteristics do not remove the challenges of adaptation finance, but they provide practical foundations for moving from risk awareness to resilience-building action.

4 Resilient by Design: Lessons from Values-Based Banks on Advancing Climate Adaptation

Since the founding of the GABV movement, values-based banks have demonstrated that finance can be a force for good. The six Principles of Values-Based Banking (see Figure 9) not only distinguish them from the mainstream financial sector, but also underscore the critical role of finance in shaping economies, strengthening communities, and addressing pressing social and environmental challenges.

By anchoring finance in the real economy, prioritising long-term resilience over short-term returns, and aligning capital with social, environmental and community needs, many of these institutions are already moving beyond risk management and compliance to actively support adaptation in their communities.

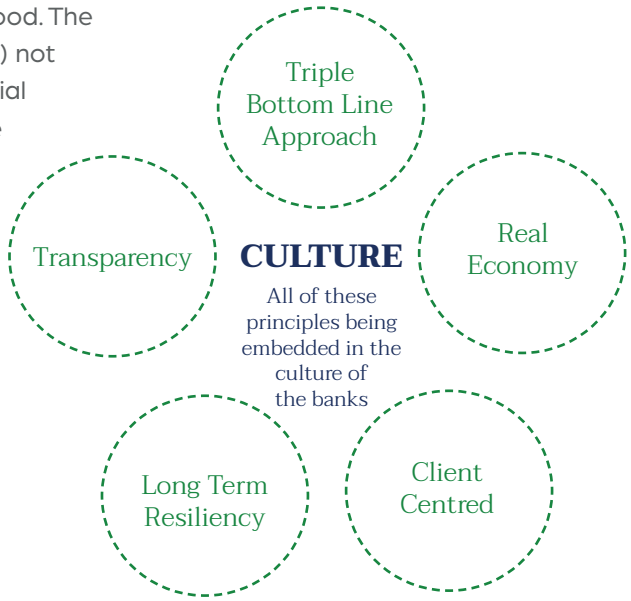


Figure 9: The Six Principles of Values-Based Banking – Source: GABV (1)

Recognising that GABV members operate within the broader financial system, are also exposed to the impacts of climate change and share responsibility for addressing these challenges, this section sets out six guiding principles—illustrated with practical examples— for a values-based approach to adaptation in banking.

- **Broaden the concept of risk to address climate-related uncertainty through mission and values**

For financial institutions, climate risk has moved from a peripheral sustainability issue to a core financial concern, directly affecting creditworthiness, asset values, operational continuity, and capital allocation. Yet integrating it into existing risk frameworks, often designed for short-term, linear risks rather than the long-term, non-linear and uncertain dynamics of climate change, usually leads to only incremental changes, reinforcing a defensive focus on limiting losses rather than building long-term resilience. Addressing this challenge requires institutions to broaden their understanding of risk to include uncertainty, systemic interdependencies, and real-economy impacts (31). In practice, this means complementing existing risk tools with forward-looking assessments and more adaptive decision-making approaches that prioritise robustness, flexibility, and resilience over optimisation against a single expected scenario.

Transition plans offer a practical way to operationalise this shift by embedding climate considerations into business strategy, risk management and capital allocation, starting with forward-looking assessments of material physical risks across portfolios and geographies. They translate these insights into strategic priorities that inform valuation, risk pricing and portfolio steering, support adaptive decision-making across a range of plausible futures, and embed climate considerations throughout lending, investment and client engagement (30).



Beyond internal risk management, well-designed transition plans can help channel capital toward resilience-building investments and improve market understanding of adaptation needs. However, realising this potential requires a clear strategic commitment that goes beyond regulatory compliance: financial institutions must align their risk frameworks with their missions and values, recognising that managing climate risk is inseparable from supporting long-term economic resilience.

By anchoring decision-making in a clearly defined mission aligned with long-term societal and environmental goals, values-based institutions are, by design, better positioned to navigate climate uncertainty. Rather than responding primarily to market signals or regulatory pressure, they act with purpose and consistency, strengthening resilience without becoming overly risk-averse, showing that this shift is both feasible and strategically sound. In this context, climate uncertainty is less destabilising, even when risks are novel, because decisions are grounded in shared values that support constructive engagement with clients and stakeholders. The experience of Ecology Building Society (see BOX 5), illustrates how **a broader assessment of physical climate risks can promvvvvpt financial institutions to go beyond a purely technical response and reassess the relevance and robustness of their mission and role in addressing emerging challenges**, ultimately encouraging strategic realignment to better support adaptation needs.

BOX 5:
ECOLOGY BUILDING SOCIETY (UK) – FROM RISK ASSESSMENT TO COMPREHENSIVE ADAPTATION & RESILIENCE PLANNING

Ecology Building Society places the climate emergency at the core of its mission and strategy, using mortgages and savings to finance sustainable homes, low-impact construction, and community-led projects that promote environmental stewardship, social justice, and long-term resilience in the housing system. In March 2025, it published its Net Zero Transition Plan (39), outlining progress, targets, and its approach to achieving net zero across both operations and lending in line with emerging best practice in transition planning.

Operating exclusively in the real estate sector, Ecology faces distinct adaptation challenges, as physical climate hazards such as flooding, subsidence, coastal erosion and overheating can materially affect property values, insurance availability and community stability. At the same time, assessing and monitoring these risks across a geographically diverse mortgage portfolio is complex, requiring the aggregation and interpretation of large volumes of location-specific data. To address this, the Society commissioned third-party analyses of its portfolio under multiple climate scenarios and time horizons (present day to the late 2080s, using IPCC's RCP pathways), ultimately finding that under a medium-emissions scenario (RCP6.0) only a small share of exposures faced high flood or subsidence risk and none was affected by coastal erosion within mortgage terms. However, Ecology emphasises that scenario analysis alone is insufficient given deep scientific and policy uncertainty, prompting a broader reflection on its role in managing climate risk and supporting adaptation.

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BOX 5: ECOLOGY BUILDING SOCIETY (UK) – FROM RISK ASSESSMENT TO COMPREHENSIVE ADAPTATION & RESILIENCE PLANNING

Ecology's Transition Plan identifies three areas of action that reflect its values-based banking approach:

- **Impact-led products and services:** Ecology's strategy addresses both mitigation and adaptation, with a clear emphasis on retrofit lending, recognizing that most UK homes in 2050 already exist and will require upgrading. It supports energy-efficiency improvements and low-carbon heating through targeted incentives, while strengthening lending processes by integrating flood, subsidence, and coastal erosion risk assessments. The Society also avoids lending on properties that are uninsurable under standard conditions.

- **Collaboration and knowledge-sharing:** Recognising that relying solely on exclusion of clients due to heightened physical climate risk exposure is insufficient and inconsistent with its mission, Ecology prioritises constructive engagement with borrowers and partners to develop practical adaptation solutions. It is working with the Building Societies Association and the Centre for Greening Finance and Investment to support property-level adaptation—such as flood protection and cooling—while highlighting the need for coordination across valuers, conveyancers and insurers. In doing so, it positions itself as both risk manager and catalyst for financing adaptation.

- **Agitation for change:** Ecology also addresses systemic barriers by advocating for stronger building standards, improved Energy Performance Certificates (EPCs) and more robust regulation. It contributes to initiatives such as the National Retrofit Hub and Bankers for Net Zero (B4NZ), and has called in the UK EPC reform consultation for a dedicated "resilience score" to better reflect flood and heat risks and inform adaptation planning.

Climate-related risk category	Examples of the potential impact caused by climate change	Time horizon	Potential climate risk indicator	Our 2030 Strategy response
Conduct and compliance risk (continued)				
Physical	Members may be disproportionately impacted by the physical impacts of climate change depending on the location. Energy efficiency and climate resilience of their homes. Members need information to understand how their property may be affected under future climate risk scenarios to make informed decisions. Members require help to build their resilience and adapt their homes and communities to climate change.	Medium–long	High	Impact-led products and services Collaboration and knowledge sharing Agitation for change

Figure 10: Example of a potential impact of climate change, as identified by Ecology, and its strategic response – Source: Ecology Building Society (39)

- **Deliver adaptation and resilience through client-centred, real-economy products and services**

Beyond managing existing risks, financial institutions also have a role in identifying and financing opportunities that support clients and advance a climate-resilient economy. As highlighted in UNEP FI's Practical Guidance on Implementing Adaptation and Resilience for Banks, operationalising an adaptation and resilience strategy requires active portfolio management, tailored financial product development, and a shift from a risk-centric to a more impact-oriented approach (38). While adaptation finance is often associated with large-scale infrastructure requiring specialised expertise, blended finance structures and coordination with public actors such as development finance institutions and governments, most financial institutions will generate greater impact by embedding adaptation across existing products and client relationships. This means integrating climate resilience throughout the credit lifecycle and designing solutions that reflect clients' capacities and risk profiles.

In practice, this involves assessing the entire portfolio in relation to climate risks and identifying potential risks of maladaptation or increased vulnerability within existing exposures, alongside developing targeted products that strengthen resilience across different client segments. A broad set of financial instruments already exists to support this integration in ways that align client needs with institutional strategy (see Figure 11).

Financial Product	Description
Incentivized loans	Offering attractive lending terms (e.g. reduced interest rates, longer tenors, grace periods) for loans financing specific, verified adaptation measures (e.g. mortgages for certified resilient homes, loans for drought-resilient farming prectices)
Sustainability-linked loans	Linking loan terms (e.g. interest rate) to the borrower's achievement of pre-defined adaptation or resilience KPIs
Investors	Green or Sustainability Bonds/Loans where proceeds are explicitly earmarked for eligible adaptation projects, often defined by reference frameworks or taxonomies
Specialized credit facilities	Providing working capital or bridge loans to support clients during periods of transition toward more resilient operations or infrastructure
Risk-mitigation and transfer products	Collaborating with insurers or using guarantees to offer products that manage residual climate risks (e.g. loans linked to maintaining insurance cover, exploring parametric solutions tied to loans, facilitating access to climate-risk insurance)

Figure 11: Common types of financial products used to support climate adaptation – Source: UNEP FI (33)

Rooted in the communities and sectors they serve, values-based banks build long-term, trust-based client relationships that support a deeper understanding of real economy activities and associated risks. As illustrated by Opportunity Bank Uganda (see BOX 6), this proximity enables meaningful engagement on climate adaptation and resilience and the co-development of tailored solutions across diverse sectors. Client engagement thus becomes a key lever for effective implementation. Over time, these discussions can become embedded in day-to-day relationship management, integrating adaptation and resilience into core banking practice.

BOX 6: OPPORTUNITY BANK (UGANDA) – A CLIENT-CENTRED APPROACH TO ADAPTATION AND RESILIENCE

Opportunity Bank Uganda offers a range of agriculture-focused financial products designed to support smallholder farmers and agribusinesses, reflecting the sector's central role in Uganda's economy and the barriers many clients face in accessing finance. These include individual agriculture loans for inputs, production and marketing, SME loans for equipment and expansion, and group loans for community-based farming, with agriculture accounting for over 35% of >

< BOX 6: ECOLOGY BUILDING SOCIETY (UK) – FROM RISK ASSESSMENT TO COMPREHENSIVE ADAPTATION & RESILIENCE PLANNING

the bank's portfolio (40). Products are structured with flexible loan sizes and repayment terms aligned to seasonal cash flows. However, Uganda's largely rain-fed agricultural system is highly exposed to climate risks such as droughts, erratic rainfall and soil degradation (41), creating new constraints for the sector. While climate-smart practices—including crop diversification, conservation agriculture, agroforestry and small-scale irrigation—can enhance resilience and food security, their uptake depends on both financing and technical support.

To address this, Opportunity Bank Uganda developed its Climate Proofing Tool, which integrates climate-smart practices directly into existing lending processes rather than creating separate green products. At loan origination and renewal, borrowers are assessed using a structured decision tree tailored to specific activities such as coffee, maize, dairy and aquaculture, and work with loan officers to identify practical adaptation measures, including cover cropping, drainage improvements, water harvesting, crop switching, zero-tillage, swales, and agroforestry. These measures are translated into measurable targets, such as tree planting, adoption of intercropping or mulching, and reductions in chemical inputs, and their implementation is incentivised through more favourable loan conditions.

Supported by staff training and enhanced data systems to integrate climate considerations into credit monitoring, the tool demonstrates how adaptation can be embedded into client relationships and core banking operations. By linking finance to concrete resilience-building actions, it enables farmers to address climate risks in ways that are practical, locally relevant, and often beneficial for climate change mitigation and biodiversity, reflecting the bank's pragmatic approach to climate risks.

- **Ensure inclusive and just adaptation efforts at the local level**

To ensure adaptation is both inclusive and effective, financial institutions should embed justice and financial inclusion objectives within climate risk frameworks, proactively identifying and managing trade-offs between resilience measures and access to finance. Frameworks such as the European Investment Bank's Just Resilience Investment Approach (see Figure 12) provide a valuable model for integrating social and environmental safeguards into investment screening and impact assessment, helping direct financial flows toward those most exposed to climate risks. In practice, this means assessing whether measures such as risk-based pricing, portfolio reallocation or withdrawal from high-risk areas could unintentionally reduce financial access for vulnerable groups, and designing mitigation strategies to avoid exclusion (42). Private financial institutions should adopt or adapt similar approaches, recognising that inclusive adaptation is essential not only from an equity perspective, but also for building effective and lasting resilience.

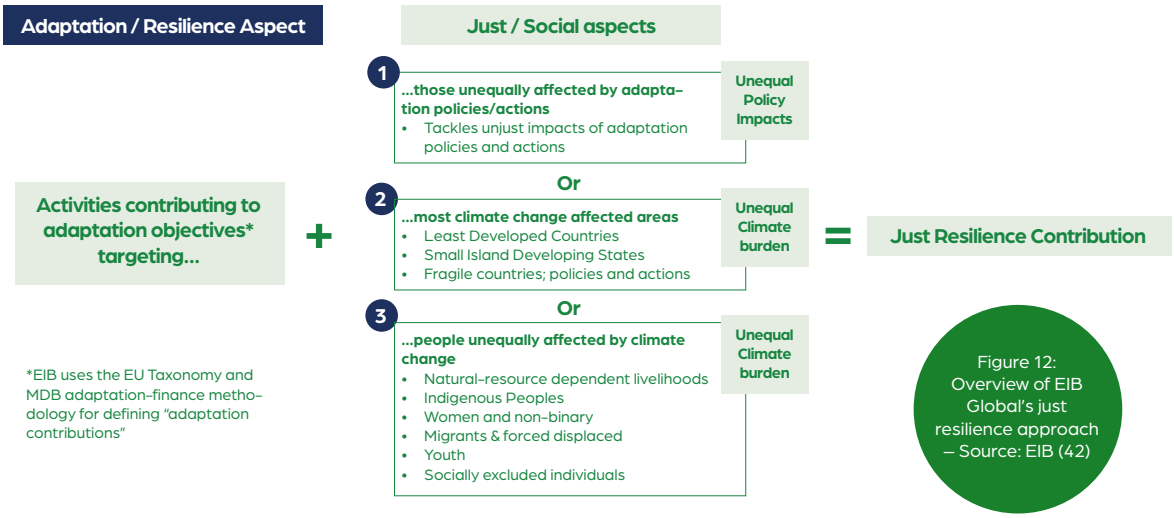


Figure 12: Overview of EIB Global's just resilience approach – Source: EIB (42)

Acknowledging the intersectional and evolving nature of vulnerability, where overlapping factors such as gender, ethnicity, income or geography can amplify climate risks, shape adaptive capacity over time and heighten the risk of maladaptation (21), financial institutions should prioritise locally led adaptation approaches. These approaches empower affected communities to define resilience strategies in line with local needs and priorities by shifting finance, decision-making and implementation closer to those most impacted (20). In doing so, they enhance both distributive and procedural justice by channelling resources toward the most climate-exposed groups while strengthening their participation in decisions affecting livelihoods and ecosystems.

For financial institutions, prioritising the real economy, long-term client relationships and transparency with stakeholders improves understanding of local vulnerabilities, which in turn supports the development of more tailored financial solutions and participatory approaches to adaptation. By embedding climate resilience within a broader framework of inclusivity, justice and alignment that speaks to their missions and values (see BOX 7), values-based banks also help ensure that adaptation finance does not exclude those it seeks to support.

BOX 7: CENTENARY BANK (UGANDA), SUNRISE BANKS (USA) AND BANFONDESA (DOMINICAN REPUBLIC) – EMBEDDING CLIMATE ADAPTATION WITHIN INCLUSIVE AND JUST RESILIENCE PATHWAYS

Climate change is increasingly recognised as a driver of migration and displacement, with the World Bank estimating that up to 216 million people could become internal climate migrants by 2050 due to slow-onset environmental changes and extreme weather events (43). Yet environmental changes do not affect mobility uniformly and can also constrain the ability to relocate, particularly for low-income populations, creating a structural imbalance in which those most exposed to climate risks are often least able to move (44). **Adaptation efforts therefore need to recognise mobility as a legitimate resilience pathway**, including by supporting displaced populations in rebuilding livelihoods and accessing financial services across both origin and destination contexts.

In Uganda—Africa's largest refugee-hosting country with more than 1.5 million refugees (45)—Centenary Bank has developed tailored financial products for refugees, including savings accounts and microloans adapted to their circumstances and accessible through alternative forms of identification such as refugee IDs (46). Delivered directly within refugee settlements through agent banking and community-based channels, these services are complemented by financial literacy and business training programmes that support income generation, savings and small enterprise development. By integrating displaced populations into the formal economy rather than treating them solely as recipients of humanitarian aid, Centenary Bank demonstrates how supporting mobility, livelihood rebuilding and economic participation can advance adaptation, long-term resilience and climate justice.

Similar inequalities shape vulnerability in the built environment, where access to adaptation measures is closely tied to housing security and homeownership. In the United States, resilient building upgrades, retrofits and renewable energy installations often remain inaccessible to low-income households, while racial and socioeconomic disparities continue to limit access to homeownership. Sunrise Banks addresses these structural barriers by combining inclusive homeownership finance with climate-aligned lending. Through its Pathway2Home programme, the bank supports underserved communities—particularly immigrants—by reducing barriers linked to credit history, documentation requirements and upfront capital (52). This complements

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< BOX 7: CENTENARY BANK (UGANDA), SUNRISE BANKS (USA) AND BANFONDESA (DOMINICAN REPUBLIC) – EMBEDDING CLIMATE ADAPTATION WITHIN INCLUSIVE AND JUST RESILIENCE PATHWAYS

Sunrise Banks' Net Zero Financing Framework (53), which finances climate-aligned investments such as energy-efficient retrofits and green buildings. Together, these initiatives expand access to homeownership as a foundation for resilience, ensuring adaptation is not limited to existing property owners.

In other contexts, **adaptation priorities may begin with securing access to essential services such as energy and water**. In the Dominican Republic, where tropical storms, droughts and land degradation disproportionately affect low-income households and small rural producers, Banfondesa's *Renovable* programme illustrates how inclusive finance can strengthen resilience for households, micro-enterprises and small farmers (47). Combining credit, technical assistance and client training, the programme supports investments in solar panels, photovoltaic irrigation pumps, electric mobility and energy-efficiency improvements that help reduce energy costs, improve water availability for agriculture and strengthen resilience to climate-related shocks.

Together, these examples show how adaptation finance can help address structural inequalities by combining tailored financial products with technical support and strong local engagement. **Whether supporting mobility, housing security, or access to energy and water, these approaches situate adaptation within a broader framework of justice and resilience, enabling vulnerable communities to meet essential needs while also strengthening their ability to build their own adaptive capacity.**

- **Build broader resilience through multi-benefit adaptation solutions**

The scale of the adaptation finance gap, combined with the interconnected risks of climate change, biodiversity loss and socio-economic inequality, reinforces the importance of **prioritising multi-benefit approaches that offer potential to address multiple challenges simultaneously, helping avoid maladaptation and strengthen resilience over the long term (33).**

As Triodos Bank's experience illustrates (see BOX 8), nature-based solutions (NbS) are well suited to this integrated approach, with strong potential to increase the resilience of both ecosystems and human livelihoods. However, like many adaptation investments, they face structural barriers within conventional financing systems. Costs are immediate, while benefits materialise over long horizons that rarely match short-term lending models, and often through avoided losses or improved resilience rather than predictable revenues (48). In addition, systemic and cascading risks extend beyond any single entity's control, requiring more collaborative and flexible financing approaches (15). As a result, many multi-benefit adaptation investments remain underfinanced or mispriced under traditional, backward-looking risk frameworks.

This gap also creates an opportunity for financial institutions to play a catalytic role by integrating approaches such as NbS into core strategies and supporting investments that conventional finance often overlooks. Because they prioritise long-term social and environmental value over short-term risk-return logic, financial institutions with a values-based approach may be able to support high-impact projects, even when returns are uncertain, delayed or non-traditional, while fostering more collaborative approaches that generate shared long-term value.



Scaling these innovative, multi-benefit solutions will require financial institutions to develop new business models. While data and metrics remain a challenge, uncertainty should not delay action. The UNEP FI Adaptation Target-Setting Guidance shows that credible targets can still be defined through portfolio alignment and proxy indicators, even as methodologies evolve (32). Triodos Bank's Climate and Nature Strategy, which integrates climate and biodiversity goals into a single framework through 2030 and commits to channel EUR 500 million into high-integrity NbS (49), illustrates how such ambition can be operationalised through clear targets, reflecting an ambitious, values-driven approach while acknowledging the experimental nature of these emerging models.

BOX 8: TRIODOS BANK (THE NETHERLANDS) – INTEGRATING NATURE-BASED SOLUTIONS INTO A HOLISTIC ADAPTATION AND RESILIENCE STRATEGY

The IPCC defines nature-based solutions as *"actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"* (6). Mangrove ecosystems illustrate this potential: they function as natural coastal defences, reducing erosion and storm surges while protecting infrastructure and livelihoods (50). They are also among the most effective carbon sinks, storing up to four times more carbon per hectare than terrestrial tropical forests, and they support biodiversity and food security by serving as nurseries for marine species and linking ecosystems such as coral reefs and seagrass beds (51). As such, mangrove conservation can deliver both adaptation and mitigation benefits while strengthening coastal resilience.

By addressing underlying drivers of climate vulnerability, NbS can offer a cost-effective pathway to building resilience. However, scaling them typically requires coordination across multiple stakeholders to mobilise finance, identify shared adaptation benefits, and develop value propositions that distribute costs and benefits among the private sector, public actors and local communities (see Figure 13).

Triodos Bank has placed NbS at the centre of its climate and resilience strategy, recognising the close links between climate mitigation, adaptation, biodiversity restoration and socio-economic stability. A key example is Triodos Bank UK's loan to the environmental consultancy Nature Impact to support the creation and restoration of biodiversity habitats, including native wildflower meadows, traditional orchards, woodland, scrub, ponds, wetlands and hedgerows >

< BOX 8: TRIODOS BANK (THE NETHERLANDS) – INTEGRATING NATURE-BASED SOLUTIONS INTO A HOLISTIC ADAPTATION AND RESILIENCE STRATEGY

(52). Beyond biodiversity gains, these interventions strengthen ecosystem functions including flood mitigation, water regulation, soil restoration and habitat connectivity—critical for climate adaptation. This project, based on a Biodiversity Net Gain (BNG) unit model and leveraging the UK requirement for property developers to demonstrate a net increase in biodiversity or purchase BNG units from local nature projects, illustrates how banks can translate regulatory frameworks into viable financing opportunities that deliver measurable impact.

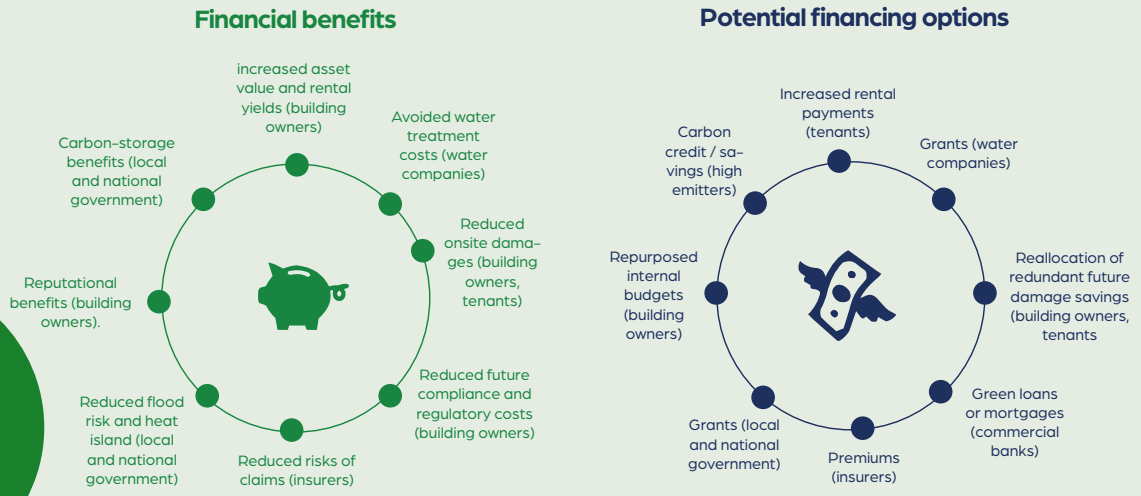


Figure 13: Resilience benefits and co-benefits of installing NBS for adaptation (left), and how co-beneficiaries can help pay for built environment resilience (right) – Source: TPT Adaptation Working Group (15)

Triodos Bank's systemic approach extends beyond lending. The bank also plays an advisory, project-development and ecosystem-building role in designing new financing models for nature. It supported the Wyre catchment natural flood management project in North Lancashire, which includes more than 1,000 interventions—such as wetlands, grasslands and woodland construction—to slow water flows, reduce downstream flood risk and restore natural river functions (53). Alongside protecting communities and businesses, the project also improves biodiversity, water quality and climate resilience. It pioneered a blended-finance model in which public and private beneficiaries—including utilities, insurers and local authorities—help repay upfront investment through payments for ecosystem services, while land managers receive annual maintenance payments (54). Triodos also mobilises private capital through its asset management activities alongside public funding to unlock new NbS projects (55), for example investment in a green bond issued by NRW.BANK to support the renaturation of Germany's Emscher River, improving flood absorption, resilience to extreme rainfall and biodiversity recovery through the restoration of natural waterways and hydrological processes (56).

Triodos Bank addresses barriers to financing NbS through a values-based model that prioritises impact alongside financial sustainability, supported by innovative financial structures, partnerships and collaboration. Rather than treating adaptation as a standalone technical issue, it places ecological regeneration at the centre of long-term resilience and promotes multi-benefit solutions through an integrated strategy spanning its banking, asset management and advisory functions.

- **Strengthen stakeholder engagement for a long-term, cooperative pathway to adaptation**

Climate-related physical impacts often affect multiple stakeholders across sectors and regions simultaneously, making it difficult for any single entity to secure the resilience of its assets or operations in isolation. As inter-dependencies deepen, effective adaptation increasingly relies on collaboration among governments, financial

institutions, businesses and civil society to manage systemic risks and build long-term resilience. This need for a cooperative approach is increasingly reflected in transition planning frameworks, which recognise stakeholder engagement as a core strategic component (33).



This requires financial institutions to **move beyond client-by-client approaches and adopt a more systemic perspective that accounts for value chains, territories and ecosystem dependencies**. In practice, this means developing sector-specific expertise to understand how climate risks propagate through supply chains and local economies, and aligning financing strategies to support system-wide resilience rather than isolated improvements.

In the agriculture sector—where global yields could decline by up to 30% by 2050 without adaptation (30)—the examples of ESAF Small Finance Bank and BRAC Bank (see BOX 9) demonstrate how banks can put collaborative adaptation approaches into practice. Mission-driven governance, long-term client relationships and local embeddedness are key to building trust and enabling the co-development of solutions across value chains and communities. Ultimately, technical measures, from flood defences to climate-smart agriculture, are more likely to deliver lasting impact when communities have the knowledge, networks and agency to shape decisions and share responsibility for maintaining these efforts (20). To sustain this over time, stakeholder engagement should be embedded in governance, operations and reporting to strengthen accountability, support collective learning among financial institutions, policymakers and funders, and help shape enabling policy environments (15).

BOX 9: ESAF SMALL FINANCE BANK (INDIA) AND BRAC BANK (BANGLADESH) – FOSTERING LONG-TERM, COOPERATIVE APPROACHES TO ADAPTATION IN THE AGRICULTURE SECTOR

Smallholder farmers produce around one-third of the world's food, yet remain among the most exposed to climate risks, including erratic rainfall, soil degradation and extreme weather, making their resilience a systemic priority (57). Yet, high costs, limited information, uncertain benefits of these new methods and weak bargaining power, combined with limited access to tailored, context-specific finance, constrain the adoption of climate-adaptive practices and technologies (20). Financial institutions therefore have an important role in strengthening agricultural resilience, but effective responses must go beyond lending alone.

In India, Small Finance Banks play a key role in reaching underserved farming communities. ESAF Small Finance Bank illustrates how targeted financial products can serve as an entry point for supporting adaptation. Its offering includes seasonal crop loans, equipment financing and working-capital support that help farmers manage cash-flow cycles and invest in improved

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< BOX 9: TESAF SMALL FINANCE BANK (INDIA) AND BRAC BANK (BANGLADESH) – FOSTERING LONG-TERM, COOPERATIVE APPROACHES TO ADAPTATION IN THE AGRICULTURE SECTOR

technologies, complemented by green loans that support practices such as organic fertiliser use, transition to organic farming and crop rotation (58). However, lending alone cannot address structural constraints such as limited knowledge, infrastructure and market access, underscoring the need for complementary support. Since 2020, the bank has expanded its agricultural portfolio from seven products to a broader range, supported by agri-relationship officers, and has strengthened engagement with Farmer Producer Organisations and Farmer Interest Groups through awareness-raising, training on climate-smart agriculture and policy support initiatives (58).

This is further illustrated by BRAC Bank in Bangladesh, which works with Bangladesh Agricultural University and NGOs to support research and farmer training on climate-resilient crops and improved cultivation techniques in the coastal belt of southern Bangladesh, where rising soil salinity has reduced productivity and often limited farmers to a single annual harvest. In partnership with BRAC—the world's largest development NGO—the bank has established a CSR fund to equip 2,500 farming households with adaptive tools and resources, strengthening local capacities and food security, with a particular focus on women, who are often disproportionately affected by climate change (59). BRAC's extensive field presence and deep engagement with smallholder farmers are key for the bank in guiding a beneficiary selection process based on climate exposure, sensitivity and adaptive capacity, ensuring support reaches those most in need.

These initiatives show how **banks can act not only as financiers, but also as conveners of broader adaptation ecosystems.** Taken together, ESAF and BRAC Bank demonstrate that agricultural adaptation requires more than tailored financial products. While lending is an essential entry point, lasting resilience depends on integrated approaches that combine finance with research, training, community engagement and institutional partnerships to strengthen agricultural systems as a whole.

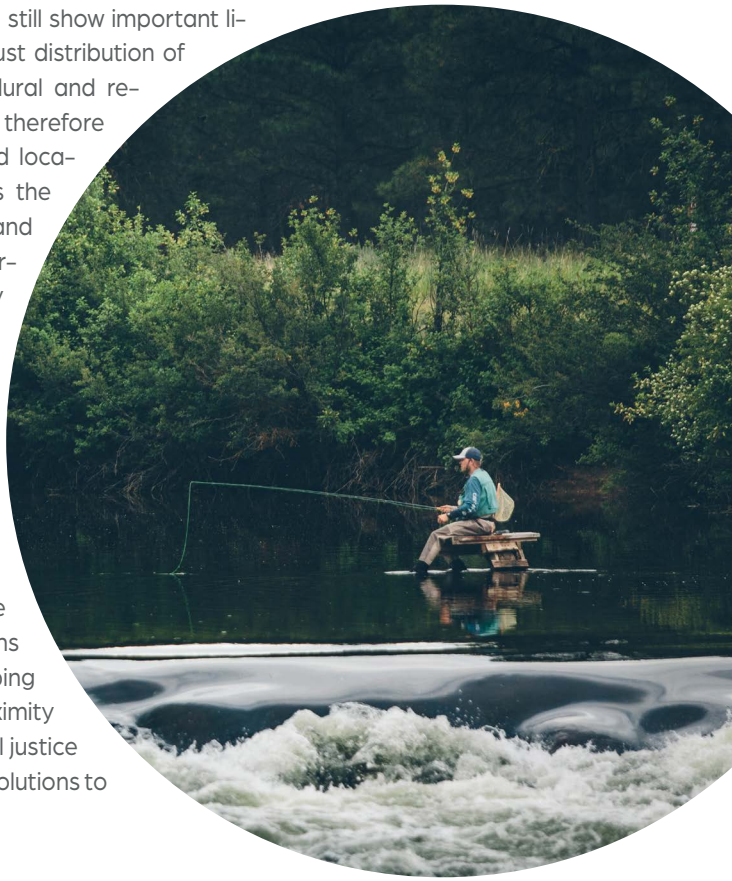
- **Integrate a decolonial, historically grounded climate justice lens into adaptation finance**

Climate adaptation is not only an environmental or technical challenge, but fundamentally a question of justice. Rooted in economic systems that have created unequal distributions of wealth, power and vulnerability, climate change both reflects and reinforces these inequalities: countries and communities that have contributed least to the crisis—often in the Global South—are among the most exposed to its impacts while facing the greatest barriers to the resources, finance and decision-making power needed to adapt (11). Yet only a limited share of adaptation plans explicitly incorporate justice objectives or meaningfully involve vulnerable groups, including women, Indigenous peoples and low-income communities in climate-exposed areas (19).

Against this backdrop, financial institutions have a critical role to play in embedding a stronger climate justice lens into adaptation finance. This must begin with explicitly recognising the disproportionate responsibility of Global North actors and the structural financing constraints faced by the Global South, and moving toward a more equitable distribution of adaptation burdens, which currently fall disproportionately on vulnerable groups. Risk-based allocation approaches can unintentionally reinforce these inequalities—for example, when institutions prioritise self-protection from climate risks in ways that effectively shift vulnerability onto already exposed regions (24). Addressing this requires differentiating responsibilities within financial architectures, including permanent mechanisms through which Global North actors support climate spending in the Global South via concessional finance, increased capital flows, and risk-sharing instruments targeted at the most climate-vulnerable countries and communities.

This is particularly critical for Global North-based institutions, given their historical responsibility for greenhouse gas emissions and the structural imbalances embedded in the global financial system. In practice, this requires engaging with the climate crisis in all its complexity, including its intersections with socio-economic and political power imbalances that shape vulnerability, and recognising the role financial institutions themselves may play in reproducing or reinforcing these dynamics (26). Triodos Bank, for instance, explicitly recognises the *"historical patterns of systemic injustice and the unequal power embedded in global economies"* that cause *"vulnerable communities to bear the worst impacts [of climate change]"* (49). Through its investment arm, it supports blended finance initiatives such as the Hivos-Triodos Fund, which operationalises a climate justice lens by redirecting financial flows toward locally driven solutions that strengthen resilience among smallholder farmers, low-income households and SMEs in the Global South (60) (61).

Building on this, current climate justice approaches still show important limitations, as they tend to focus primarily on the just distribution of solutions while overlooking dimensions of procedural and recognitional justice (20). Advancing climate justice therefore requires moving beyond top-down models toward locally driven adaptation that recognises and values the histories and lived experiences of marginalised and Indigenous communities, while strengthening participatory governance to ensure they are not only beneficiaries but active decision-makers (21). In the cases of Vancity and Bank Australia (see BOX 10), **a decolonial climate justice approach translates into climate change responses that shift power, resources and decision-making toward Indigenous communities, recognising their rights and knowledge systems while supporting locally led adaptation that addresses historical injustices.** For values-based institutions, climate justice is embedded in mission, governance and operations and reflected across reporting and practice, helping to reshape dominant climate narratives. Their proximity to local communities enables them to bridge global justice principles with concrete, locally grounded financial solutions to support long-term adaptation and resilience.



BOX 10: VANCITY (CANADA) AND BANK AUSTRALIA – ADVANCING DECOLONIAL CLIMATE JUSTICE THROUGH INDIGENOUS RELATIONS

Indigenous Peoples and their knowledge systems offer deeply contextual and holistic understandings of environmental change, integrating ecological, cultural and social dimensions that are essential for effective climate adaptation. Yet these perspectives remain >

underrepresented in climate science and policy, where dominant frameworks continue to privilege Western methodologies and marginalise Indigenous ways of knowing (62). At the same time, Indigenous communities are disproportionately exposed to climate impacts due to historical and ongoing colonial processes of dispossession, exclusion and structural inequality. A decolonial climate justice approach therefore requires embedding procedural, recognitional and epistemic justice into adaptation finance by supporting solutions aligned with Indigenous governance systems, knowledge traditions and self-determination.

In Canada, climate-related floods and extreme temperatures disproportionately affect First Nations, Inuit and Métis communities, sometimes forcing evacuations that threaten their ability to remain on ancestral lands and pass on land-based knowledge to future generations. Operating in a region that is home to more than one-third of British Columbia's Indigenous population, Vancity integrates reconciliation, climate adaptation finance and financial inclusion into its core strategy (63) (64). Through partnerships with First Nations communities including Musqueam, Tsawout, 'Namgis and Heiltsuk, Vancity co-develops housing retrofit and climate preparedness programmes that combine tailored financing, including energy-efficiency upgrades and heating system replacements, with technical support (65). Developed in collaboration with Indigenous partners, its Indigenous Advisory Committee and dedicated Indigenous Banking team, these place-based initiatives strengthen housing resilience while helping communities remain on their ancestral lands.

Beyond their heightened exposure to climate impacts, Indigenous stewardship practices developed over generations have helped conserve a significant share of the world's remaining biodiversity and carbon-rich ecosystems, underscoring their critical role in sustaining climate resilience within their territories. Indigenous Peoples' lands, for example, cover more than a quarter of the Earth's land surface and overlap with over 40% of protected areas globally (62). This calls for **moving beyond viewing Indigenous Peoples solely as vulnerable populations toward recognising them as rights-holders, knowledge holders and decision-makers in the design of adaptation responses.**

Bank Australia's First Nations Recognition and Respect Strategy reflects this perspective by emphasising the development of partnerships, relationships and trust with First Nations to advance its broader priorities on climate action, biodiversity and affordable housing (66). This is reflected in its partnership with the Bidyadanga Aboriginal Community, the largest remote Aboriginal community in Western Australia, where Bank Australia's impact loan supported the acquisition of a horticultural property to develop community-owned agricultural production and local employment (67). By respecting Indigenous governance and ensuring that benefits remain within the community, the initiative supports climate resilience, economic justice and self-determination.

Rooted in long-standing systems of territorial stewardship, Indigenous strategies reflect a distinct pathway of resilience, adaptation and collective autonomy that can help address multiple dimensions of the climate crisis beyond environmental impacts alone. Together, these examples show that **effective adaptation finance is not only about reducing climate risk, but also about redistributing power, supporting self-determination, and enabling locally grounded, long-term resilience.**



5 Call to Action

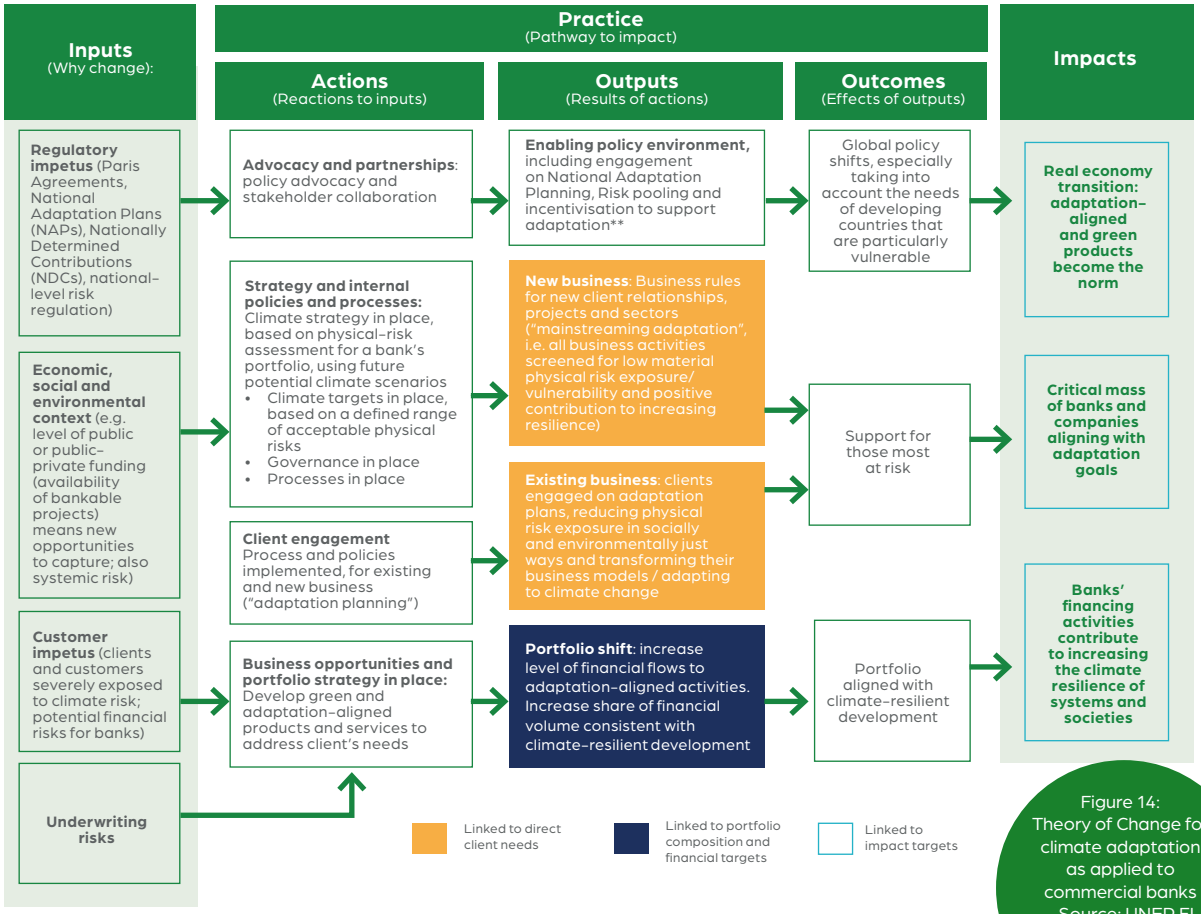
Private financial institutions can play a decisive role in advancing climate adaptation and resilience. To do so effectively, they must act across their core functions: managing risks, mobilising capital and helping shape the conditions for resilient outcomes. The example of climate-resilient mortgages illustrates how these roles can translate into practice (15): by assessing location-specific physical risks, banks can help borrowers better understand and manage climate hazards, thereby strengthening household and community resilience; by developing mortgage products that incentivise resilient construction and retrofitting, they can channel capital toward adaptation; and by working with insurers, regulators and policymakers in high-risk areas such as flood zones, they can support more coordinated resilience-building efforts. Together, these actions demonstrate **how financial institutions can move beyond climate risk analysis to actively enable resilience in the real economy.**

The economic case for adaptation is clear: the costs of inaction far exceed the costs of investing in resilience (10)—for example, every US$1 invested in coastal protection can avoid up to US$14 in damages (13). Yet climate change cannot be addressed solely through a financial lens, as it is fundamentally a question of equity, power and responsibility, with those least responsible for emissions often facing the greatest impacts. Focusing exclusively on costs and returns risks overlooking the structural, social, political and historical drivers of vulnerability, making a climate justice perspective essential.

Effective adaptation therefore requires shifting away from economic models that prioritise short-term returns at the expense of ecological limits, social well-being and long-term resilience. Financing mechanisms must strengthen local communities, expand access to finance and foster inclusive, collaborative decision-making rather than perpetuate exploitative dynamics or existing inequalities. Through their financing decisions, partnerships and engagement with policymakers, civil society and research institutions, financial actors can help amplify underrepresented voices, strengthen accountability and contribute to broader systemic change.



As climate impacts intensify across borders and generations, finance faces a fundamental question: *what role can it play in helping communities adapt, build resilience and thrive in a changing climate*? Answering this question will require more than new products and partnerships. Integrating resilience across strategy, operations and stakeholder engagement—as highlighted in UNEP FI's Theory of Change (see Figure 14)—offers financial institutions an opportunity to reassess their role in society and their contribution to systemic transformation. Adaptation should not be treated as a standalone risk-management exercise, but as part of a broader transition towards an economy that is resilient, inclusive and aligned with environmental limits and justice objectives.



** Note: where feasible and managed divestment otherwise.

Figure 14: Theory of Change for climate adaptation as applied to commercial banks – Source: UNEP FI. Climate Adaptation Target Setting. 2023 (32)

The practical experience of values-based banks demonstrates that such a transition is possible. By anchoring decision-making in clear missions and principles, these institutions seek to align finance with long-term resilience, justice and societal needs. While their approaches remain partial and evolving, they illustrate how financial institutions can use their purpose, governance and relationships to engage with the systemic challenges of climate change and contribute to more equitable and resilient futures.

The success of adaptation finance should therefore be measured by whether it strengthens the capacity of communities, ecosystems and economies to respond to a changing climate, not simply by the volume of capital mobilized. **Finance can either reinforce existing vulnerabilities or help transform the conditions that create them.** A values-based approach points toward the latter: one in which financial institutions support the resilience of people and places with dignity, agency and justice.



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