GLOBAL
CENTER ON
ADAPTATION

Handbook for Financial Institutions

Climate Adaptation Finance

Module 1

GLOBAL CENTER ON ADAPTATION

In collaboration with:

European Bank for Reconstruction and Development

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About the Global Center on Adaptation

The Global Center on Adaptation (GCA) is an international organization that promotes adaptation to the impacts of climate change. It works to accelerate action and support for adaptation solutions by shaping policy reforms and influencing investments made by international financial institutions and the private sector. The goal is to bring climate adaptation to the forefront of the global fight against climate change and ensure that it remains prominent. Founded in 2018, GCA ensures a continuous, two-way exchange of knowledge and best practices that empower communities and drive resilient and inclusive growth worldwide.

About the European Bank for Reconstruction and Development

The European Bank for Reconstruction and Development (EBRD) is a multilateral development bank founded in 1991 with a mandate to foster sustainable, well-functioning market economies. Its governance and mandate enable it to combine finance, policy support and capacity building – powerful tools for unlocking private investment and scaling adaptation finance in the financial sector.

The EBRD works closely with private-sector and public partners to complement its adaptation financing. The Bank has financed climate-resilient infrastructure in its regions, advanced nature-based solutions, and strengthened the management of physical risk across sectors. Through financial institutions, the EBRD channels green finance via hundreds of thousands of sub loans, an intermediation model that the Bank also leverages to expand adaptation lending.

Global Center on Adaptation
Rotterdam, The Netherlands

www.gca.org

European Bank for Reconstruction and Development
London, United Kingdom
www.ebrd.com

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Module 1

Investing in Adaptation

Why Financial Institutions Have a Pivotal Role and Opportunity in Building a Resilient Tomorrow

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The resulting Handbook reflects a **co-created approach**, shaped by valuable input and feedback from participating institutions. It draws on **real-world case studies, policy tools, financial instruments**, and **modelling techniques** relevant to FIs operating across both emerging and developed markets.

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European Bank for Reconstruction and Development: Sarah Duff, Principal, Climate Strategy and Delivery; Judi Diab, Associate, Green Financial Systems, Climate Strategy and Delivery; Maaytah Mohammad, Principal, Green Financial Systems, Climate Strategy and Delivery.

Frankfurt School of Finance & Management: Dr Christine Grüning, Director Green & Sustainable Finance, Executive & Professional Education; Jonas Hernán Fleer, Director Green & Sustainable Finance, Executive & Professional Education; Khayala Sadikhova, Programme Manager Green & Sustainable Finance, Executive & Professional Education; Dr Joachim Bald, Consultant; Thierry Senechal, Consultant, Finance for Impact.

Global Center on Adaptation: Thu Minh Ta, Specialist, Climate Adaptation Finance; Daniela Gheorghe, Senior Specialist, Climate Adaptation Finance; Margret Azuma, Program Officer, Climate Finance; Abraar Ahmad, Program Operations Officer; Julia Eichhorn, Program Officer, Climate Adaptation Finance; M. Mosleh Uddin, Senior Program Officer, Climate Finance, South Asia; Hans Muzoora, Senior Specialist, Climate Adaptation Finance; Adele Cadadio, Global Lead. Climate Adaptation Finance; Nitin Jain, Senior Director of Programs.

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Acronyms

AfDB	African Development Bank
ACBF	African Capacity Building Foundation
CBC	Commercial Bank of Ceylon
CRO	Climate-Resilience Outcome
DFI	Development Finance Institution
EBRD	European Bank for Reconstruction and Development
ESG	Environmental, Social, and Governance
FI	Financial Institution
GCA	Global Center on Adaptation
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
HR	Human Resources
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
KPI	Key Performance Indicator
MSME	Micro, Small, and Medium-sized Enterprise
NDC	Nationally Determined Contribution
PRB	Principles for Responsible Banking
SARB	South African Reserve Bank
SME	Small and Medium-sized Enterprise
TA	Technical Assistance
TCFD	Task Force on Climate-Related Financial Disclosures
ToC	Theory of Change
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resource Institute

Module Description

Module 1: Investing in Adaptation: Why Financial Institutions Have a Pivotal Role and Opportunity in Building a Resilient Tomorrow

Description

Climate change poses immediate material risks to economies, assets and long-term value creation. For financial institutions (FIs), especially those operating in climate-vulnerable regions, climate adaptation is not just about managing impacts. It is about protecting portfolios, unlocking new markets, and ensuring sustainable growth in the face of increasing climate variability and extreme weather events. Module 1 addresses the growing relevance of climate adaptation for FIs, as both a necessary response to intensifying climate risks, and a foundation for resilient and forward-looking financial decision-making. This Module introduces the concept of mainstreaming climate adaptation, explains what this process entails, and highlights the benefits it offers to FIs. It provides an overview of the building blocks for successfully developing a more climate-adaptive financing portfolio, as well as a climate adaptation finance pipeline. It further establishes the foundation for this Handbook and the subsequent modules.

Target group

This Module is designed for a broad range of professionals involved in shaping, implementing, or communicating institutional strategy, product development, lending practices, and risk management within FIs. The Module is particularly relevant for professionals in the following functions:

- Executive Management; Strategy Department
- Sustainability/Environmental, Social and Governance (ESG) Department
- Risk Management Department (incl. Credit Risk, Operational Risk, Market Risk) and Compliance Department
- Corporate/Wholesale, Small and Medium-sized Enterprise (SME) and Retail Banking Departments; Credit, Product and Structured Finance Departments
- Treasury and Asset Liability Management (ALM) Department
- Human Resources (HR)
- Corporate Communications and External Affairs Department
- Public- and private-sector practitioners involved in identifying, developing and financing adaptation projects at national, regional or local levels.

Learning outcomes

Chapter 1: The Case for Adaptation: Why Action Matters

- Explain why climate action is a financial imperative
- Discuss the materiality of climate risk and its impacts on assets and portfolios

Chapter 2: Benefits of Investing in Climate Adaptation

- Articulate the roles FIs can play in enabling resilience
- Understand how adaptation can improve risk-adjusted returns and generate new opportunities for FIs
- Assess the financial and operational value of implementing adaptation measures

Chapter 3: Building Blocks for Mainstreaming Climate Adaptation Finance in Financial Institutions

- Identify strategic and institutional components needed for scaling climate adaptation finance
- Understand how to translate commitment into adaptation strategy roadmaps with clear targets, governance and accountability

Chapter 4: Building Institutional and Human Capacity for Climate Adaptation Finance

- Assess the role of institutional frameworks and human capital in enabling FIs to effectively scale up climate adaptation finance
- Evaluate training and capacity-building approaches that support the organisational transformation required to integrate and mainstream climate adaptation considerations across FIs' strategies, operations and financing activities

01

The Case for Adaptation: Why Action Matters

Climate change presents material risks to economies, financial assets and long-term value creation. For FIs, especially those operating in climate-vulnerable regions, climate adaptation is not only about managing impacts; it is essential for protecting portfolio resilience, unlocking emerging investment opportunities, and ensuring sustainable growth in the face of increasing climate variability and extreme weather events. This chapter examines why the accelerating impacts of climate change are pushing climate adaptation to the forefront of financial sector priorities.

This chapter addresses the following questions:

- **Why is climate action a financial imperative for FIs?**
- **How can climate change be addressed?**

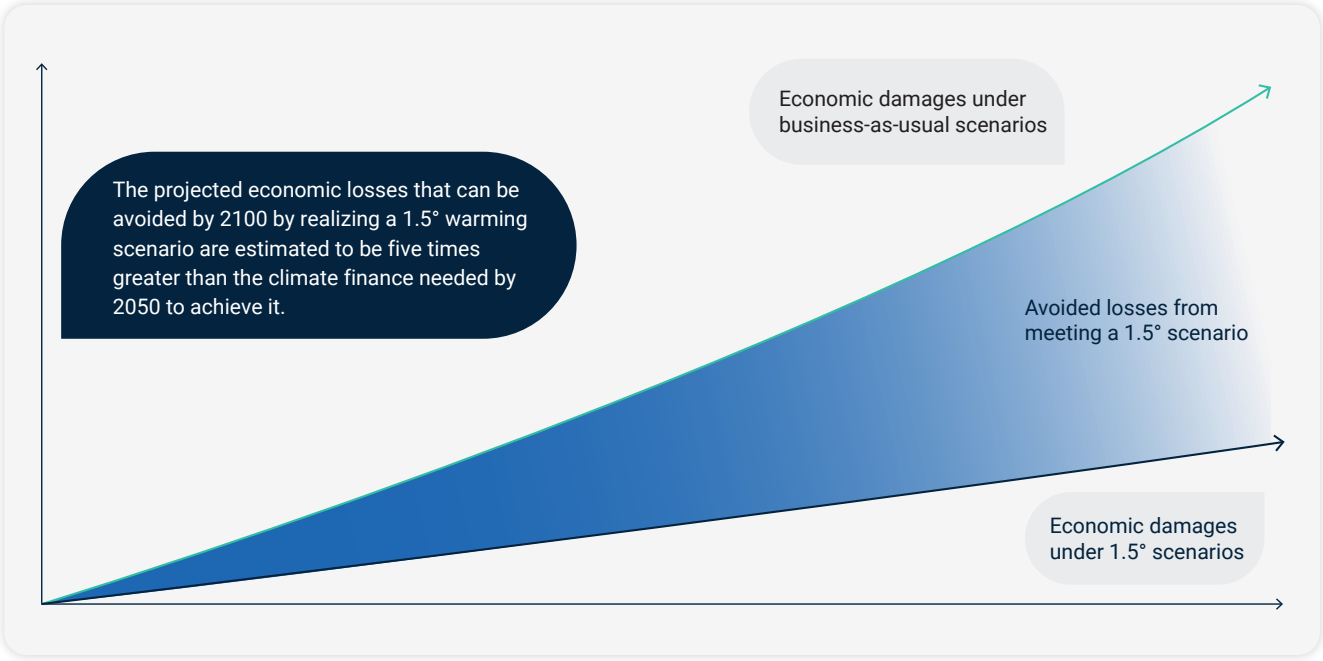
Target Group: Executive Management and Strategy Department.

Why is climate action a financial imperative for FIs?

Climate change is an environmental concern for FIs and a driver of material, financial, and operational risks. Global temperatures have increased by approximately 1.44°C since the late 19th century World Meterological Organization [WMO], 2026), resulting in an unprecedented frequency and severity of extreme weather events that damage infrastructure, reduce productivity and displace communities (WMO, 2024). These shocks cascade directly into financial systems by reducing asset values, impairing borrower repayment capacity, and straining insurance reserves. For instance, Cyclone Gamane in Madagascar (March 2024) damaged over 5,000 homes and displaced more than 20,000 people (AfricaNews, 2024), underscoring the human and economic toll of climate shocks and how these impacts ultimately reverberate through balance sheets and local financial systems. Vulnerable populations and fragile systems are particularly exposed to these **impacts**, amplifying risks to institutional **resilience** and the stability of the wider financial system.

Immediate action is essential to limit escalating climate-related costs and prevent irreversible social and economic damage. Without substantial reductions in **greenhouse gas** (GHG) emissions, global temperatures are expected to exceed 1.5°C above pre-industrial levels within the coming decades. As climate change intensifies, climate-related risks become increasingly severe, increasing both the financial costs and the level of investment required for effective adaptation. Inaction is already leading to substantial economic losses, including reduced **gross domestic product** (GDP), damage to infrastructure and productive assets, and rising disaster recovery costs (see **Figure 1**). At the micro level, these impacts are reflected in higher non-performing loans, increased insurance claims, and weakened client creditworthiness. It also results in significant social consequences, including adverse health impacts, increased food insecurity and community displacement (Climate Policy Initiative [CPI], 2024b).

Figure 1: Cost of inaction



Source: (CPI, 2024b).

On average, African countries lose an estimated 2-5% of GDP annually due to climate-related impacts and divert up to 9% of national budgets to respond to climate extremes. Similar challenges are observed in many vulnerable regions worldwide, where climate impacts strain economies and budgets, particularly in low- and middle-income countries. Investing in climate **adaptation** and resilience today can help avert these impacts, while unlocking opportunities for long-term sustainable and climate-resilient growth (Global Commission on Adaptation, 2019; United Nations Environment Programme [UNEP], 2016). In sub-Saharan Africa, the cost of climate adaptation is estimated at US$ 30-50 billion annually over the next decade, equivalent to about 2-3% of the region's GDP (WMO, 2024). In Asia, developing countries will need an estimated US$ 102-431 billion annually between 2023 and 2030 to adapt to climate impacts, while failure to act could cut regional GDP by up to 17% by 2070 (Asian Development Bank [ADB], 2024). For FIs, these dynamics translate into systemic risks across lending, investment and insurance portfolios, underscoring that the cost of inaction is increasing for markets, institutions and their clients. Clients across a wide range of sectors are already experiencing growing pressure from changing weather patterns and recurring climate hazards, as discussed in Module 2. While smallholder farmers, micro- and small enterprises, and construction-related trades are among the most visibly affected, many other industries are exposed to similarly significant risks. Tourism is being disrupted by extreme events; transport systems are exposed to flooding, heat and infrastructure failures; real estate and housing markets are challenged by sea-level rise and storm damage; and manufacturing sectors such as textiles face supply-chain disruptions and water scarcity.

How can climate change be addressed?

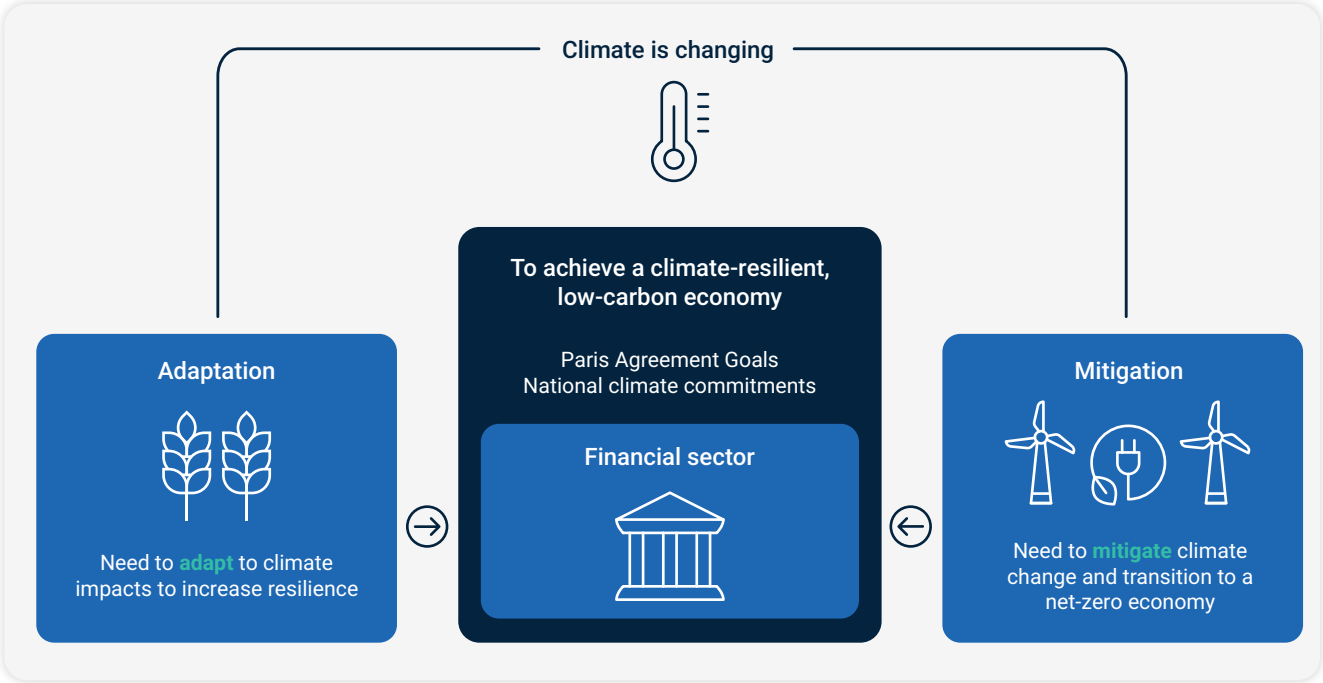
Climate change can be addressed through two main approaches (Intergovernmental Panel on Climate Change [IPCC], 2023). As illustrated in **Figure 2**, these strategies are distinct but complementary, and both are essential to managing climate risks, identifying opportunities, and advancing sustainable development.

Climate Mitigation refers to "human interventions to reduce emissions or enhance the sinks of greenhouse gases" (IPCC, 2023.). Investment opportunities include transitioning to renewable energy sources, enhancing energy efficiency, and implementing carbon capture and storage technologies.
Transition risks arise from shifts in policies, technologies and market preferences as economies move toward climate-resilient, low-carbon pathways. These risks are often associated with **mitigation** efforts but can also stem from adaptation policies and can alter asset values and affect the creditworthiness of clients, particularly in carbon-intensive sectors.

Climate Adaptation refers to "the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities". For FIs, adaptation is primarily about managing **physical risks**, which arise from direct climate **hazards** (such as heatwaves, floods, droughts and wildfires) and can cause property damage, business interruptions and insurance losses. By financing adaptation, FIs can support clients in strengthening resilience through measures such as rainwater harvesting, insulation and passive cooling systems, efficient irrigation systems, and cold storage for agricultural produce (further examples are provided in Module 4).

Certain investments can generate both mitigation and adaptation benefits, while generating wider economic and social co-benefits that can enhance a project's bankability. Co-benefits may include reduced operating costs, increased asset values, higher productivity, and improved business continuity, all of which can contributed to more stable cash flows and reduced credit risks. For example, financing energy-efficient, climate-resilient buildings can reduce energy consumption and emissions (mitigation) while simultaneously improving thermal comfort, reducing heat-related health risks, and enhancing resistance to extreme weather (adaptation). Similarly, investments such as efficient irrigation systems, climate-smart greenhouses and cold-storage facilities can lead to reduced greenhouse gas emissions and improved resource efficiency while protecting clients' business continuity from risks related to drought, heat stress and supply-chain disruption.

Figure 2: Addressing climate change and its impacts



Source: Authors .

For FIs, financing adaptation solutions requires a clear understanding of local vulnerabilities across key client sectors to manage risk exposure, design effective and tailored financial products, and respond to clients' resilience needs. The Handbook provides practical tools and strategies to help FIs navigate these risks, strengthen the resilience of their clients and portfolios, and unlock opportunities for sustainable growth.

02

Benefits of Investing in Climate Adaptation

As climate hazards intensify globally, FIs face an evolving landscape of risks, regulatory expectations and investment opportunities. Investing in climate adaptation solutions can help FIs and their clients manage climate-related risks across their portfolios while generating economic, financial, and reputational benefits. Beyond a conceptual understanding of climate adaptation, FIs must recognise the strong business case that these investments offer. This section highlights the strategic value of adaptation investments for FIs, including risk mitigation, the development of new revenue streams, and improved access to capital. In doing so, it lays the foundation for greater investment in, and engagement with, the adaptation solutions presented in Chapter 3.

This chapter addresses the following questions:

- **Why must FIs assess climate vulnerability in their operating contexts?**
- **What can FIs do to support climate adaptation?**
- **Why does adaptation matter for FIs?**
- **Why are these benefits strategically important for FIs?**

Target Group: Executive Management; Strategy Department; Sustainability/ESG, Corporate/Wholesale, SME, and Retail Banking Departments; Credit, Product and Structured Finance Departments.

The Role of FIs in Building Resilience

Why must FIs assess climate vulnerability in their operating contexts?

To make informed investment decisions and support long-term **resilience**, FIs must assess climate **vulnerability**. Climate impacts are uneven and vary significantly depending on local social, economic and environmental conditions (see Module 2). Understanding vulnerability requires identifying how geography, income levels, infrastructure quality and dependence on natural resources influence clients' abilities to cope with climate risks. Vulnerability depends on both **exposure** to climate hazards, such as droughts, floods or heatwaves, and the sensitivity of individuals and businesses, as well as their capacity to respond, adapt and recover. This includes access to resources, finance, institutional support, infrastructure and information, which shape resilience and the ability to bounce back from climate shocks. For example, a small enterprise relying on rain-fed agriculture in a drought-prone region is far more vulnerable than a diversified business operating in an urban area with more resilient infrastructure and services. In contexts where livelihoods rely heavily on climate-sensitive sectors and existing infrastructure is already under pressure, vulnerabilities tend to be significantly higher. Integrating vulnerability assessments into investment and lending strategies enables FIs to proactively manage climate risks, while strengthening their client and portfolio resilience (see Module 3).

What can FIs do to support climate adaptation?

FIs can accelerate climate adaptation through complementary measures by integrating resilience considerations into their lending, investment and advisory activities, while also strengthening their internal adaptation practices (see **Table 1**).

By developing financial products that address the resilience needs of their clients, FIs can effectively direct capital towards adaptation solutions at scale, reduce climate-related losses, and support more resilient, sustainable economic growth.

Table 1: How financial institutions can engage

How FIs Can Engage
Financing others' climate adaptation efforts, for example, providing capital for clients or government-led adaptation and resilience and developing and scaling financial products that directly address adaptation needs
Internal enabling activities, for example, integrating climate risk into lending or adopting disclosure standards and training staff on climate adaptation
Internal climate adaptation measures, for example, retrofitting branches and improving climate-related business continuity systems
Catalysing systemic change, for example, means aligning with global goals and promoting climate adaptation across the financial ecosystem

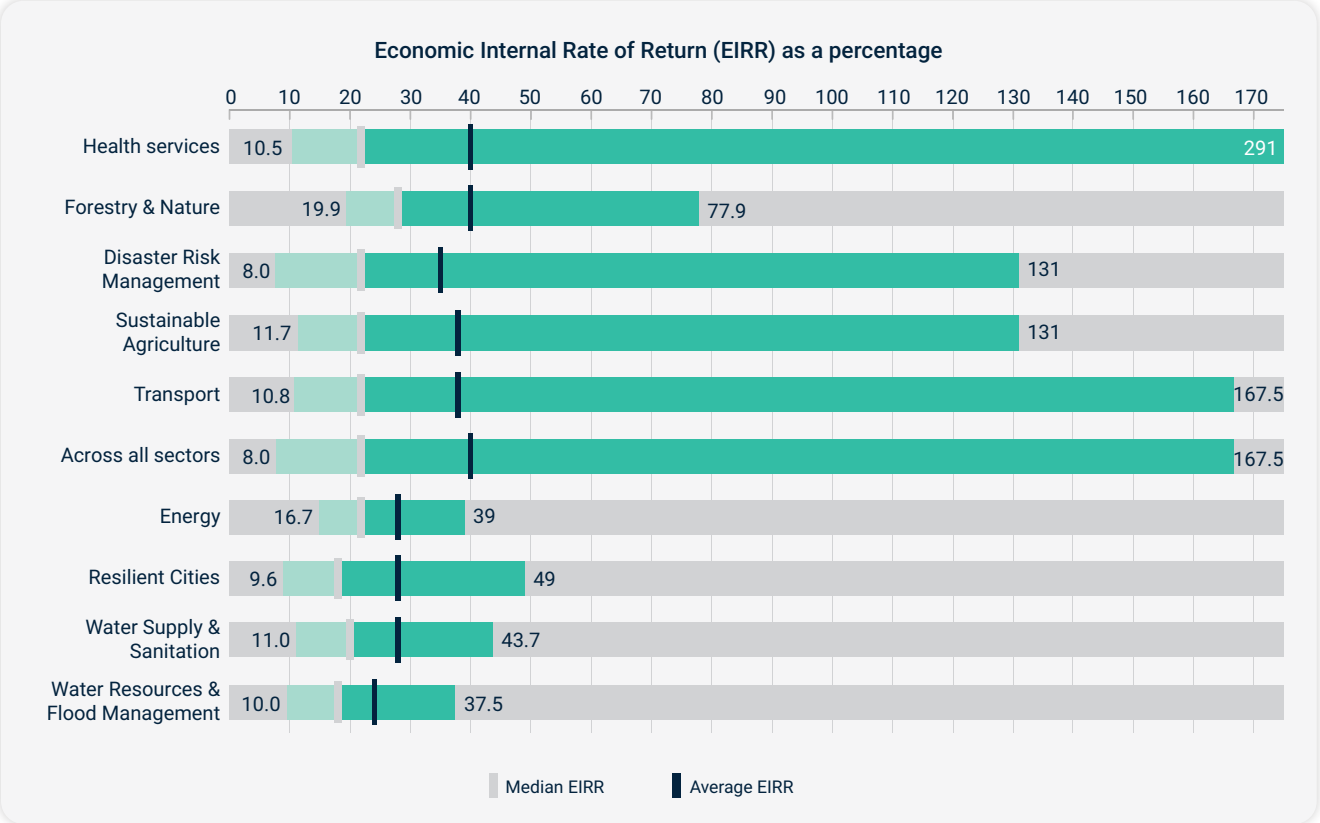
Source: Adapted from UNEP (2024).

Benefits of Adaptation Investments

Why does adaptation matter for FIs?

Adaptation to climate change offers wide-ranging financial, non-financial, and environmental and social co-benefits. A recent study by the World Resources Institute (WRI), which analysed 320 adaptation investments across sectors and geographies, demonstrated that adaptation investments deliver strong benefits across the **Triple Dividend**, a concept introduced and discussed in detail in Module 4. As illustrated in **Figure 3**, these investments can achieve average economic internal rates of return above 20% across sectors and countries, demonstrating the broad value of well-designed adaptation measures (WRI, 2025).

Figure 3: Overview of the range of potential benefits of adaptation investments



Source: WRI (2025).

Financial benefits arise at both the FI level and the client level. For FIs, integrating climate risk considerations into lending and investment decisions enhances portfolio resilience, reduces risk exposure, and supports long-term profitability. In regions facing a wide range of climate-related hazards (e.g., erratic rainfall, droughts, flooding and sea-level rise), proactive FIs strengthen their balance sheets, and lead innovation in financial product development tailored to their clients' evolving needs. For clients, adaptation investments can lower operational and maintenance costs, strengthen business continuity, and improve their financial stability. When climate risks are accurately assessed and managed, adaptation investments often yield better risk-adjusted returns by reducing losses and disruptions over the project lifecycle, reflecting the *first dividend* of avoided losses and enhanced investment performance.

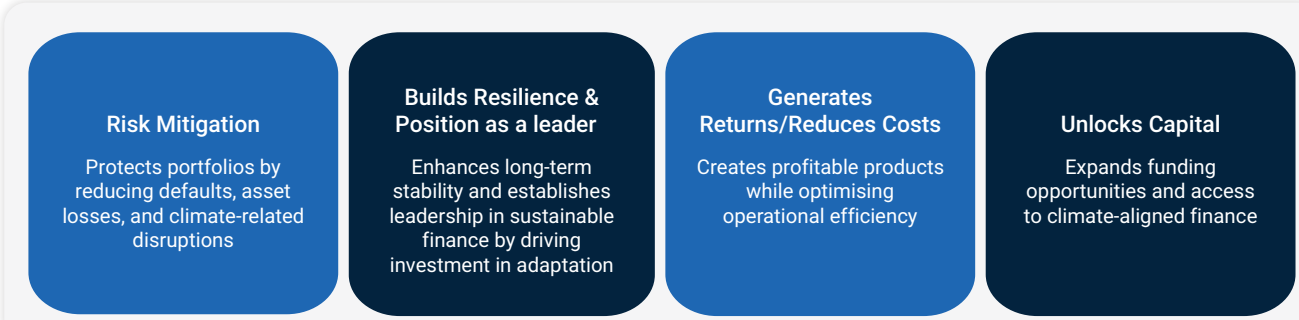
Non-financial benefits also accrue for both FIs and clients. For FIs, adaptation finance can strengthen client relationships, enhance competitiveness, support strategic capital allocation, and build greater confidence among investors and other stakeholders (UNEP, 2016). For clients and communities, adaptation actions improve resilience, reduce vulnerability, and enhance access to stable services. Although these outcomes may not appear directly in financial statements, they often translate into long-term financial value. These advantages align with the *second dividend* of operational savings and broader economic gains through improved creditworthiness, reduced default risks, and more resilient local economies.

Beyond institutional and client benefits, adaptation investments also generate **environmental and social co-benefits,** the *third dividend* of resilience. These include healthier ecosystems, restored natural buffers, improved livelihoods, and reduced public expenditure on disaster recovery. Quantifying the full Triple Dividend of Resilience requires a clear understanding of the climate risks faced, how adaptation measures reduce those risks, and which benefits can be monetised. Module 4 discusses this in greater detail at the transaction level.

Why are these benefits strategically important for FIs?

The strategic importance of investing in adaptation falls into four buckets: improved risk mitigation, building resilience and positioning as a leader, new revenue streams or avoided costs, and access to capital. These categories are explored in **Figure 4**.

Figure 4: Wider benefits of investing in climate adaptation for financial institutions



Source: Authors

Improved Risk Mitigation: Adaptation investments can strengthen borrower resilience and improve portfolio quality. For example, financing sustainable agricultural measures, such as drought-tolerant crops, irrigation systems, water-saving technologies, cold storage, or insulation enables clients to better withstand climate shocks . These measures can reduce the likelihood of production losses, business disruption, and asset devaluation, thereby lowering the risk of borrower default. While loan performance is influenced by multiple factors, integrating adaptation considerations into lending decisions can reduce the risk of non-performing loans in areas where physical climate risks are material. In addition, adaptation investments can help manage certain climate risks. As regulations, such as the EU's Corporate Sustainability Reporting Directive, increasingly require companies to disclose exposure to unsustainable or climate-vulnerable assets, FIs with climate-smart portfolios may be better positioned to comply with evolving disclosure requirements and attract capital from sustainability-conscious investors.

Builds Resilience and Positions as a Leader: Investing in adaptation enhances long-term stability and establishes leadership in sustainable finance. Proactive FIs demonstrate foresight by embedding resilience into lending and investment practices, positioning themselves as trusted partners in markets increasingly shaped by climate risks.

New Revenue Streams and Reduced Costs: Adaptation solutions are increasingly linked to viable business models that generate new revenue streams, while supporting client productivity and resilience. FIs can expand into new or evolving sectors, such as climate-resilient housing or climate-resilient logistics solutions. Beyond sector expansion, adaptation also creates opportunities to develop new financial products and asset-financing models within existing portfolios. For example, financing small and medium-sized enterprises (SMEs) to upgrade to climate-resilient assets, including, among others, energy-efficient cooling, water-efficient machinery and weather-proofed production facilities, can reduce operational disruptions while enabling equipment providers to develop leasing or service-based revenue models. Similar commercial opportunities are emerging through sanitation, transport, and energy.

Unlock Capital: Demonstrating leadership in adaptation finance can strengthen an FI's access to capital markets and unlock new funding opportunities. Investors, credit rating agencies and regulators are placing increasing emphasis on how FIs identify, manage and disclose climate-related risks. FIs that demonstrate robust climate risk management, through practices such as climate scenario analysis, the development of climate-resilient portfolios, and alignment with international disclosure standards, such as the International Sustainability Standards Board (ISSB), Sustainability Disclosure Standard 2: Climate-related Disclosures (IFRS S2) (building on the Task Force on Climate-Related Financial Disclosures [TCFD] framework), are often perceived as better governed, and more resilient to climate shocks This can lead to improved credit ratings, lower funding costs, improved access to sustainability-linked financing instruments, including green bonds or resilience-themed capital allocations from global investors. At the same time, these institutions may be better positioned to attract concessional finance, support from global climate funds, and impact investors seeking resilience-focused portfolios.

Together, these strategic advantages show that adaptation is not just about mitigating downside risk; adaptation is a pathway to competitive advantage. This strategic opportunity is explored further at the transaction level in Module 4.

03

Building Blocks for Mainstreaming Climate Adaptation Finance in Financial Institutions

To effectively respond to growing climate risks, FIs must develop strategic, institution-wide approaches. This chapter examines what it takes to scale climate adaptation finance from within. It examines the essential institutional and strategic elements required to help FIs establish clear and sustainable mission-aligned climate adaptation visions.

This chapter addresses the following questions:

- **Why is it important to mainstream climate adaptation within an FI?**
- **What are the main building blocks for mainstreaming climate adaptation in an FI?**
- **What does it take to embed climate adaptation into the strategic vision of an FI?**
- **How can FIs develop effective adaptation strategies?**
- **How does governance structure translate commitment into accountability within an FI?**

Target Group: Executive Management; Strategy Department; Sustainability/ESG, Risk Management (incl. Credit Risk, Operational Risk, Market Risk) and Compliance Departments; Treasury and ALM Department.

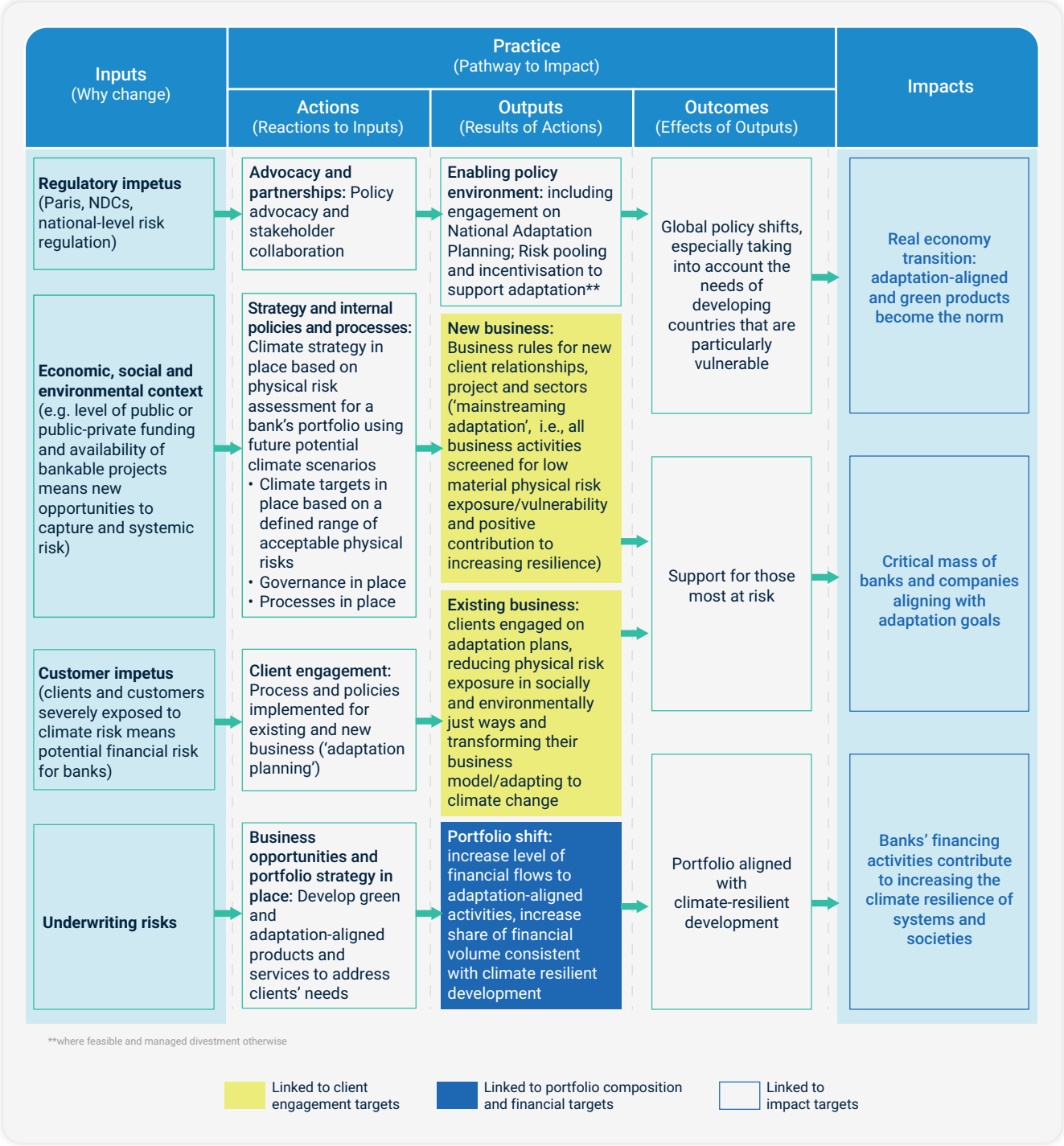
Understanding Core Concepts and Benefits of Mainstreaming Adaptation

Why is it important to mainstream climate adaptation within an FI?

The wide-ranging benefits of climate adaptation, from improved risk management to new revenue opportunities, can only be realised when adaptation is systematically mainstreamed within FIs. This involves systematically integrating climate risk and climate adaptation considerations into core business operations, governance structures, and decision-making processes, rather than treating them as standalone activities.

Figure 5 explores a Theory of Change (ToC) for climate adaptation for FIs (Mullan and Ranger, 2022; UNEP Finance Initiative, 2022). It provides a strategic pathway for this integration and illustrates how aligning adaptation with the core functions of FI can drive a transformative shift in financial flows towards climate-resilient investments. Embedding adaptation across risk assessment, lending and portfolio management transforms FIs from passive risk-takers into proactive enablers of resilience, positioning them as key actors in steering financial flows toward a climate-resilient economy and supporting clients and communities in building resilience (UNEP Finance Initiative, Principles of Responsible Banking, n.d.; UNEP Finance Initiative, 2023).

Figure 5: How financial institutions drive climate adaptation impacts



Source: UNEP Finance Initiative (2023).

The structure of this ToC demonstrates how mainstreaming climate considerations translates into practical outcomes. Factors such as enabling regulations, access to climate data, institutional capacity and leadership commitments create the foundation for action. These inputs support activities including the development of climate strategies, staff training, product innovation and client engagement on resilience. These activities translate into tangible outputs, including enhanced disclosure frameworks, tailored financial products for climate-resilient sectors, and systematic integration of adaptation in credit and investment processes. These outputs, in turn, lead to outcomes such as improved internal risk management, increased capital allocation to adaptation solutions, and strengthened client capacity to withstand climate shocks. Ultimately, these outcomes contribute to the development of a more

resilient financial system that safeguards the stability of commercial banks themselves and mobilises capital to build broader economic and societal resilience. Crucially, the ToC also acknowledges feedback loops: as adaptation finance expands, improved climate data and market experience enhance future risk models and investment decisions, reinforcing a virtuous cycle of resilience and sustainability (UNEP Finance Initiative, 2023).

What are the main building blocks for mainstreaming climate adaptation in an FI?

Effective climate adaptation mainstreaming within FIs can be built on six interconnected building blocks. Together, these building blocks enable institutions to integrate adaptation across strategies, systems and services, supporting the systematic management of climate risks while unlocking climate adaptation opportunities. Climate adaptation cannot be embedded through isolated measures or one-off initiatives; it requires coordinated action across internal strategy, operations and market-facing activities. Progress across the six building blocks is mutually reinforcing, with advances in one area often strengthening outcomes in others. Together, they provide a structured pathway for FIs to manage physical climate risks, strengthen resilience, and unlock new business opportunities, in alignment with global frameworks such as the TCFD framework.[1]

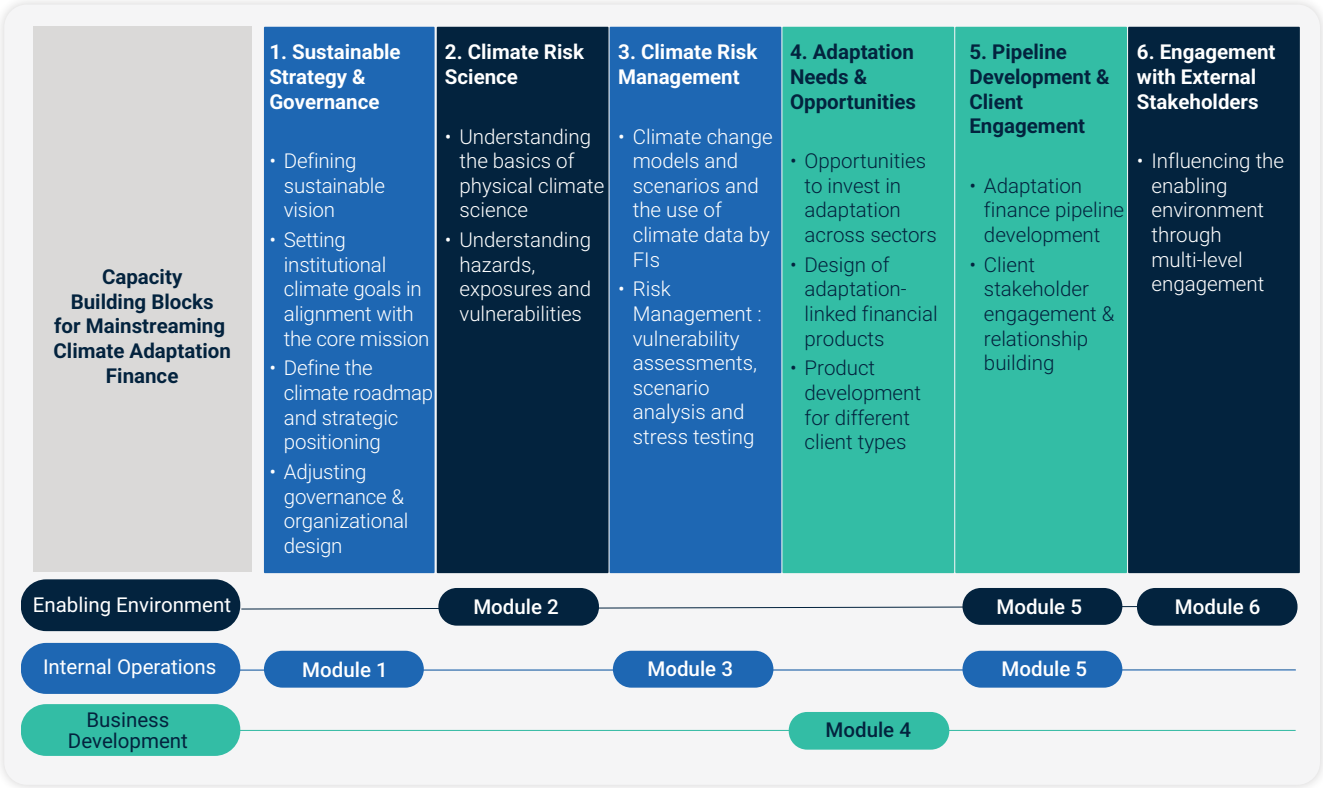
The six interconnected building blocks illustrated in **Figure 6** are **Sustainable Strategy and Governance, Climate Risk Science, Climate Risk Management, Adaptation-Linked Product Design, Climate-Forward Internal Processes,** and **External Stakeholder Engagement. Institutional and Human Capacity Building,** further discussed in Chapter 4 of this Module, is a cross-cutting enabler across all building blocks. These building blocks span three core operational layers, which are addressed across the Handbook modules:

- **Enabling Environment:** Strategic positioning and foundational knowledge:
- **FI Operations:** Internal systems, processes and governance; and
- **Transactions:** Design and delivery of climate adaptation-linked products and services.

While the process often begins with strategic ambition at the leadership level, it cannot advance without parallel action on internal capacity, risk diagnostics and operational tools. Therefore, mainstreaming climate adaptation is iterative and integrated, rather than linear. The sections that follow offer practical guidance and actionable insights into each building block.

1 www.fsb-tcfd.org/recommendations/

Figure 6: Strategic and institutional components for mainstreaming climate adaptation finance



Source: Authors.

Sustainable Strategy and Governance: Develop a climate-aligned institutional strategy that defines long-term adaptation goals, embeds climate in governance structures, and integrates climate objectives into business planning and oversight.

Rationale: For FIs, developing a sustainable vision aligned with climate adaptation is a strategic imperative. This building block provides direction and coherence across the institution by embedding long-term adaptation goals into the core mission and mandate. Strong governance frameworks, such as board-level oversight and climate committees, ensure that adaptation is not treated as a siloed issue, but rather as an integral part of business strategy and risk management. Positioning adaptation explicitly within the institution's sustainability agenda reinforces its role in protecting financial stability and advancing broader societal and environmental objectives. A well-articulated, climate-aligned strategy mobilises internal and external stakeholders, supports regulatory compliance and climate-related financial disclosures and signals long-term value to investors, clients, and development partners. This strategic alignment serves as the foundation upon which all other building blocks are built *(Delivered in Module 1.)*

Climate Science: Establish a working understanding of physical climate science, including hazard types, exposure patterns and vulnerability drivers relevant to the FI's portfolio and operations as a foundation for risk assessment, strategy formulation and opportunity identification.

Rationale: Understanding the fundamentals of physical climate science is an essential enabler for FIs. It provides the scientific basis for strategic planning, effective client engagement, advisory services and product development. Equipping FI staff with this foundation supports more accurate risk assessment, data-driven decision-making, and the identification of climate adaptation opportunities. Anchoring climate science within the FI's sustainability agenda ensures that strategic decisions, whether in defining long-term vision, managing risks, or designing adaptation-linked products, are grounded in robust evidence *(Delivered in Module 2)*.

Climate Risk Management: Integrating risk analysis tools, such as climate vulnerability assessments, scenario modelling and stress testing, into core risk functions to assess and manage climate-related impacts on portfolios, operations and clients. These tools support more robust decision-making processes, and help identify adaptation opportunities across sectors, geographies and asset classes.

Rationale: Climate risk presents material financial, operational, and reputational challenges for FIs. This building block enables institutions to systematically identify, assess and manage these risks by integrating climate analysis into core risk functions. Tools such as scenario modelling, stress testing, and vulnerability assessments help quantify risks and pinpoint areas of concentrated risk exposure across portfolios. By integrating risk management within the adaptation agenda, FIs can be better positioned to meet evolving regulatory requirements, make evidence-based lending and investment decisions, and deliver meaningful adaptation solutions to clients *(Delivered in Module 3)*.

Adaptation Needs-Linked Product Design: This building block focuses on the development of financial products that respond to clients' climate adaptation needs and resilience opportunities across sectors. These may include loans and financing solutions for climate-resilient agriculture, water and sanitation systems, and resilient infrastructure, as well as risk-sharing, insurance and blended finance instruments.

Rationale: To meet growing client demand and development needs, FIs must translate adaptation strategies into tangible, bankable products. This building block focuses on designing and deploying financial solutions linked to clearly defined adaptation objectives, such as reducing climate-related losses, improving water security and strengthening infrastructure resilience, enabling FIs to meet evolving client demand while supporting development outcomes. Innovation in areas such as concessional financing, micro-insurance, performance-linked loans and adaptation-focused bonds can help mobilise blended finance, broaden access to finance and provide a structured way for FIs to demonstrate adaptation-related impact. A critical step in this process – before designing the products – is establishing systems to understand client profiles and needs, such as sector vulnerabilities, income dynamics and resilience priorities. This ensures that solutions are demand-driven, accessible, and aligned with existing adaptation challenges. When done well, adaptation-linked product design enhances client value and portfolio diversification, contributing to climate-resilient economic growth *(Delivered in Modules 4 and 5)*.

Pipeline Development and Client Engagement: Strengthen internal systems and workflows to support climate adaptation finance, including loan origination pipelines, impact monitoring systems and client relationship management.

Rationale: Institutional readiness for adaptation finance depends on internal systems and processes. This building block focuses on equipping FIs with the operational capabilities required to scale adaptation financing, ensuring that day-to-day operations align with broader sustainability goals. Alignment ensures consistent and efficient delivery of climate-resilient finance while enabling more accurate tracking of results. Effective client engagement complements these internal improvements. By deepening their understanding of client vulnerabilities and needs, FIs can ensure that climate-resilient products build targeted pipelines, design relevant products, and deploy them at scale within a supportive client ecosystem *(Delivered in Module 5)*.

External Stakeholder Engagement: Collaborate with policymakers, regulators, Development Finance Institutions (DFIs), and Technical Assistance (TA) providers to foster an enabling environment for climate-resilient development and unlock financing through strategic partnerships.

Rationale: FIs operate within broader ecosystems that shape opportunities and risks. Engaging with external stakeholders, including regulators, policymakers, DFIs and TA providers, is crucial for enabling a supportive environment for adaptation finance. This building block helps FIs identify strategic partnerships to unlock concessional financing, TA, policy alignment, and data access. For instance, collaborating with organizations like GCA can enhance institutional capabilities and credibility. Proactive engagement also allows FIs to influence policy, anticipate regulatory trends, and co-create solutions with DFIs and development actors. By embedding external partnerships into their adaptation strategies, FIs ensure that internal efforts are amplified by systemic change, reinforcing both institutional resilience and the broader sustainable development agenda *(Delivered in Module 6)*.

Defining a Strategy for Climate Adaptation

What does it take to embed climate adaptation into the strategic vision of an FI?

Mainstreaming climate adaptation finance begins with a strong institutional commitment, rooted in the FI's overarching mission, strategy and mandate. This commitment must be translated into a climate or sustainable finance strategy that makes climate adaptation an explicit pillar of the institution's core business and contribution to sustainable development. While many FIs already engage in sustainable finance through mitigation products such as energy efficiency loans, this foundation should be leveraged to expand into adaptation finance. Positioning adaptation as central to an FI's sustainability agenda ensures it is not treated as a siloed or niched initiative but as a driver of resilience and competitiveness. Embedding adaptation into strategy involves three interconnected steps:

Connecting Sustainability and Climate Action to the Institutional Mission: FIs begin by analysing their external context and portfolios to qualify and quantify physical climate risk materiality and identify adaptation opportunities. Analysis involves assessing evolving policies, market dynamics and sectoral vulnerabilities, evaluating portfolio exposure to hazards, and establishing systems to monitor adaptation progress over time.

Prioritisation and Validation: Insights from the assessment must then be translated into a strategy. This means defining clear adaptation priorities, articulating a risk appetite, setting measurable targets, and validating these choices against the bank's business model, client needs and regulatory context. Strategic ambition should be supported by robust governance mechanisms, such as board-level oversight and climate committees, to ensure accountability and integration into decision-making.

Sustainable Governance and Operationalisation: Finally, strategy is operationalised through tangible actions. This includes reshaping portfolio composition, developing adaptation-linked financial products, engaging clients to assess, understand and support their resilience needs, and strengthening internal enablers such as policies, processes, data systems and staff capacity. Governance plays a continuous role in monitoring outcomes, validating progress, and ensuring that adaptation remains embedded as part of the institution's sustainability pathway.

In this context, a realistic strategy should be built from the institution's current client base, portfolio composition, and operational capacity. Although strategic repositioning will look different for each institution, the goal is clear: to embed climate adaptation as a core pillar of the FI's sustainability strategy, aligning institutional growth with long-term resilience and sustainable development.

How can FIs develop effective adaptation strategies?

The strategy focuses on translating assessment insights (e.g., covering policy trends, market needs, sector vulnerabilities, and the FI's own risk profile) into a clear roadmap for managing physical climate risks and financing adaptation opportunities. It focuses on two priorities: (1) defining a coherent adaptation strategy and (2) establishing governance structures and targets to ensure accountability and progress. Guided by strategic pillars such as demonstrating urgency, operationalising ambition, ensuring accountability, and tracking progress (see **Figure 7**). The strategy should reflect the FI's business model, portfolio composition, operating regions, and regulatory environment. Aligning with national adaptation priorities and policy directions is essential for consistency with national climate goals and identifying opportunities for public-private partnerships) (UNEP Finance Initiative, 2025).

Figure 7: Elements of an adaptation strategy

Portfolio risk screening clarifies client needs.	**Strategic priorities** guide where to act.	**Market approach** turns needs into opportunities.	**Portfolio balancing** aligns financing with resilience outcomes.	**Systemic contribution** measures impact and feed learning back into strategy.
• Assess climate vulnerabilities across sectors and client groups to understand where impacts are most material. • Identify client needs and resilience gaps that can be addressed through financial and non-financial solutions. • Use screening insights to inform product design, client engagement, and pipeline development.	• Identify priority sectors, geographies, and client segments for adaptation support. • Align focus areas with national adaptation plans and FI strategic goals. • Direct early efforts toward markets with high vulnerability and strong client demand.	• Define the FI's ambition for growing adaptation finance and its target market opportunities. • Develop pathways for new products, services, and partnerships that support client resilience. • Focus on commercially viable solutions that address priority client needs (e.g., climate-smart equipment, water efficiency, resilient infrastructure).	• Ensure adaptation financing reaches vulnerable clients and sectors identified through screening. • Balance near-term client support with long-term resilience-building objectives across the portfolio. • Integrate climate-related insights into origination, credit processes, and client advisory to drive uptake of adaptation solutions.	• Track how adaptation finance activities contribute to broader resilience outcomes. • Use KPIs to monitor client resilience improvements, uptake of adaptation solutions, and alignment with national goals. • Strengthen market resilience by collaborating with government, industry platforms, and development partners.

Source: Authors based on UNEP Finance Initiative (2025).

The five pillars illustrated in **Figure 7** provide the institutional discipline needed to embed adaptation into practice.

- **Portfolio risk screening,** for instance, applying scenario testing to real estate or agricultural portfolios, helps FIs understand where climate impacts are most material and where clients face the greatest vulnerabilities. This enables the FI to identify priority sectors and client groups, such as coastal SMEs, heat-exposed farmers or water-stressed manufacturers, and to shape product development and client engagement accordingly.
- Translating these insights into **strategic priorities** allows the FI to align targets with government and market needs. For example, an FI operating in a drought-prone region might fast-track lending programmes for water-efficient irrigation or climate-resilient seeds, directly supporting national adaptation plans and addressing immediate client vulnerabilities.
- The **market approach** then turns the identified needs into concrete adaptation opportunities. An FI might launch an adaptation credit line for micro, small and medium-sized enterprises (MSMEs) in the textile sector to

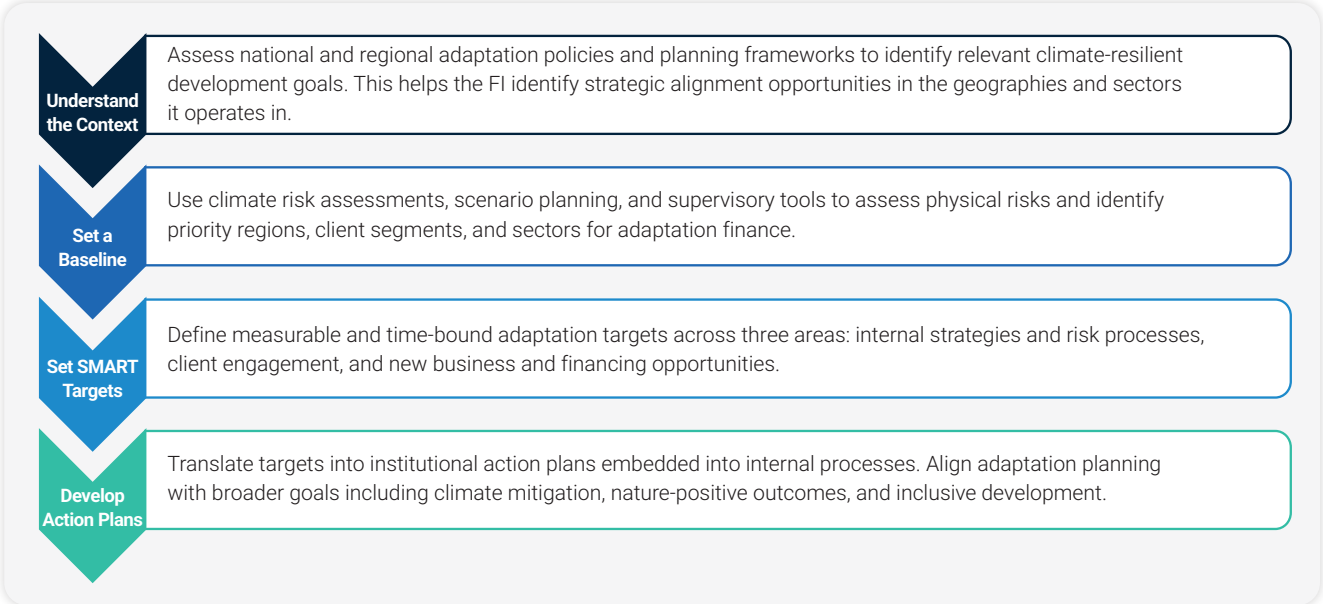
adopt water-efficient technologies, develop financing packages for agribusiness clients to access climate-smart equipment, or invest in resilience-enhancing infrastructure such as climate-resilient cold storage facilities or climate-proof transport systems.

- **Portfolio balancing** ensures that these solutions reach the vulnerable sectors highlighted through screening and prioritisation. This can involve integrating climate screening tools into origination, tailoring lending terms to support clients' resilience transition plans, or partnering with public or blended-finance sources to expand affordable adaptation offerings across high-risk sectors.

- Tracking progress through adaptation-linked key performance indicators (KPIs) enables FIs to assess how effectively their activities contribute to climate resilience. Insights can then be used to refine eligibility criteria, prioritisation, and product design over time. Examples of such KPIs include the volume of adaptation-linked loans disbursed, the number of clients supported with resilience solutions, adoption rates of climate-smart technologies, reductions in exposure to climate risk, and other climate-resilience outcomes (CROs). CROs refer to measurable improvements in a system's ability to withstand, adapt to, or recover from climate-related physical hazards, for example, increased water availability, reduced weather-related disruption, and enhanced agricultural potential.

The next step is to translate this strategic vision into specific adaptation goals and targets that can guide implementation and track progress over time. The Principles for Responsible Banking (PRB) adaptation target-setting approach offers a useful framework, grounded in a ToC, which outlines a step-by-step pathway to align finance and investment with climate-resilient development (see **Figure 8**; UNEP Finance Initiative, 2023).

Figure 8: UNEP Finance Initiative PRB (2023) adaptation framework for target setting



Source: Authors based on UNEP Finance Initiative (2023).

Broader enabling actions can help to bring the adaptation strategy to life. These, as per UNEP Finance Initiative (2023), can include:

- Embed climate adaptation in internal policies, systems, and credit processes
- Engage stakeholders and clients in adaptation dialogue and co-design
- Identify and finance viable adaptation opportunities
- Participate in public-private partnerships and blended finance platforms

Depending on the institutional context, FIs may choose to create standalone adaptation action plans or integrate adaptation measures into their broader climate transition plans or sustainability strategies. Action plans serve as a tangible roadmap for achieving adaptation targets, while KPIs allow for tracking progress and identifying the need for adjustments over time.

How does governance structure translate commitment into accountability within an FI?

Governance reform is a critical enabler of embedding adaptation into FIs. According to UNEP Finance Initiative (2025), effective governance ensures that strategic commitments are translated into accountability through clear structures, defined responsibilities and robust information flows. Ownership and oversight typically reside at senior levels (e.g., Board and/or Executive Committees) supported by executive leadership and shareholders. Many institutions choose to establish a dedicated Sustainability Committee at the board level. In contrast, at the executive level, creating a sustainability department or appointing a Chief Sustainability Officer is increasingly common. This role coordinates climate initiatives, oversees the development of metrics and reporting systems, and supports institution-wide capacity building. The specific structure will vary by FI, but the principle is consistent: roles and responsibilities for adaptation strategy must be clearly defined, mapped across functions and geographies, and embedded into existing committees, mandates and job descriptions. Internal reporting systems consolidate data on climate risks, progress toward adaptation targets, and emerging opportunities to inform decision-making at the highest level. This creates a feedback loop where governance bodies oversee strategy, adjust direction, and allocate resources based on evolving evidence. Ultimately, effective governance avoids unnecessary bureaucracy by leveraging existing structures while creating clear accountability points that drive adaptation forward across departments (UNEP Finance Initiative, 2025).

Box 1: FirstRand (South Africa) – Advancing a climate strategy

Context analysis. FirstRand is one of South Africa's largest banking groups, with retail, commercial, and investment operations. It operates in South Africa and across Africa, where rising temperatures, water stress, energy insecurity, and increasing frequency of extreme weather events directly affect clients in agriculture, infrastructure and industry. At the same time, South Africa's regulators, including the South African Reserve Bank (SARB), are tightening expectations on climate risk governance and disclosure through instruments such as the *Proposed Guidance Note—Climate-Related Risk Practices for Banks* (South African Reserve Bank [SARB], 2023) and *G2-2024—Guidance on Climate-Related Governance and Risk Practices for Banks* (SARB, 2024). These dynamics place climate considerations at the centre of FirstRand's risk management and business strategy.

Connecting sustainability and climate action to the institutional mission. FirstRand has positioned sustainability as part of its broader mission to support long-term shared prosperity (FirstRand, 2024b). Climate action is framed not as compliance, but as integral to financing Africa's growth, aligned with national priorities such as South Africa's Just Energy Transition and growing client demand for climate-aligned finance (FirstRand, 2021). The group has committed to net-zero by 2030 for its own South African operations and by 2050 for financed emissions. Operating across multiple jurisdictions, it tailors its approach to country contexts, considering nationally determined contributions (NDCs), transition pathways, and adaptation strategies, while drawing on guidance from regulators, industry bodies, and international expert groups (FirstRand, 2024a).

Climate strategy. FirstRand has articulated a climate strategy that integrates risk, opportunity and product innovation. Through its *Sustainable Finance Framework*, the group commits to facilitating ZAR 200 billion in sustainable and transition finance by 2026 (FirstRand, 2024b).

Figure 9: FirstRand's response to climate change

1 Foundational belief

FirstRand believes climate change is a significant challenge to the:

- wellbeing of people;
- social and economic fabric of communities; and
- sustainability of the planet and biodiversity.

Therefore, the group must deliver solutions for climate resilience and a just transition to a low-carbon world.

2 Grounded in science

FirstRand's climate change strategy is guided by science and well-researched transition pathways, defined by international bodies and tailored to country context, and captured in the Nationally Determined Contributions (NDCs) submitted to the United Nations.

3 Climate change impacts

A key focus for FirstRand is reducing emissions whie managing the impact of climate risk on the group's portfolios.

4 Key sectors

The group is committed to facilitating financial flows in support of the transition with its focus on eight key sectors.

5 Just transition

FirstRand believes the transition to a low-carbon economy will result in a net overall gain. However, the transition needs to be approached in a measured manner to ensure sustainable livelihoods.

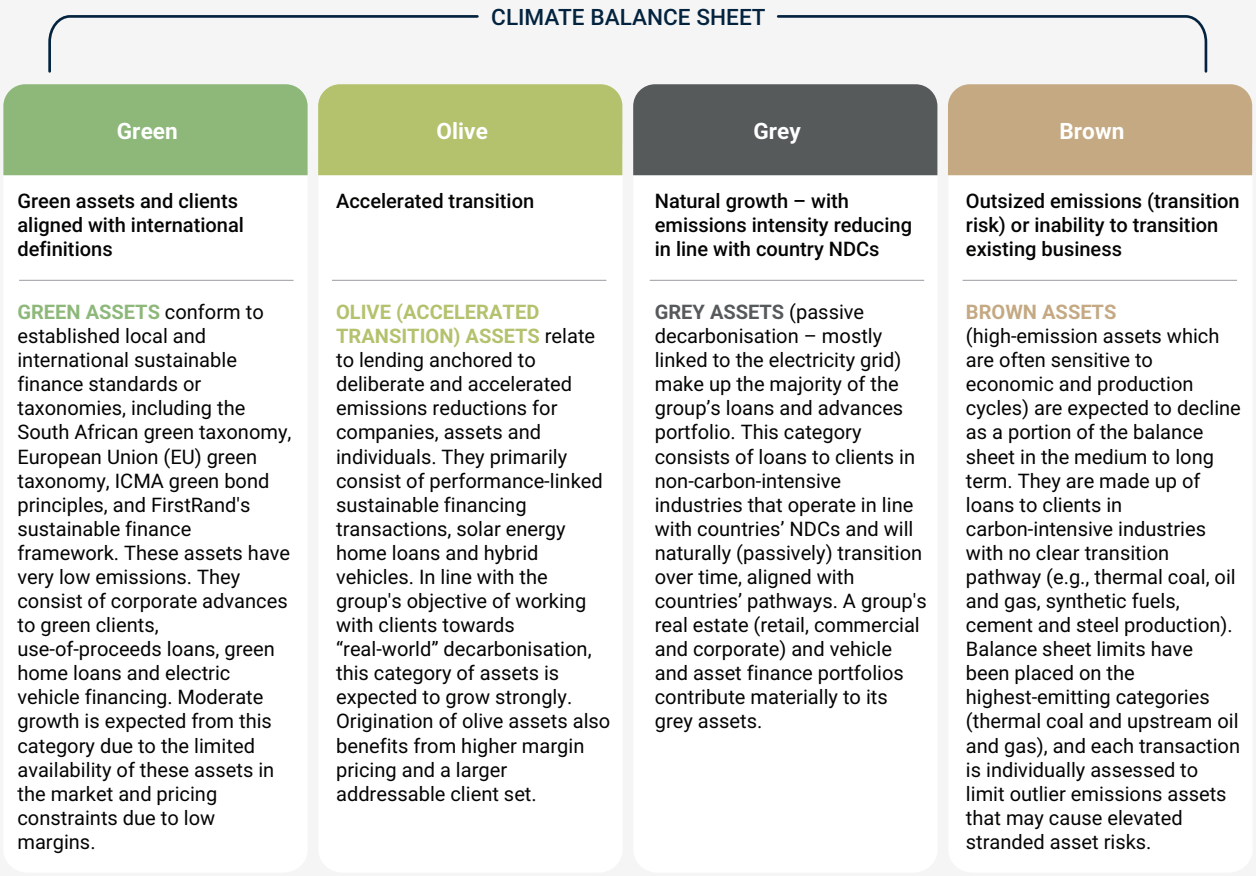
6 FirstRand's strategic mechanisms

- Balance sheet deployment in sustainable and transition financing.
- Appropriate capital allocation to climate initiatives through financial resource management (FRM).
- Effective climate risk management, including credit origination.
- Resilience of own operations.

Source: FirstRand (2024a).

Its strategy covers climate change mitigation, adaptation, and resilience, with sector-specific approaches and climate balance sheet classification (green, olive, grey, brown) to guide capital allocation. The climate balance sheet separates the lending book into four main categories, each with differing emissions intensity levels and growth trajectories (FirstRand, 2024a).

Figure 10: FirstRand's climate balance sheet

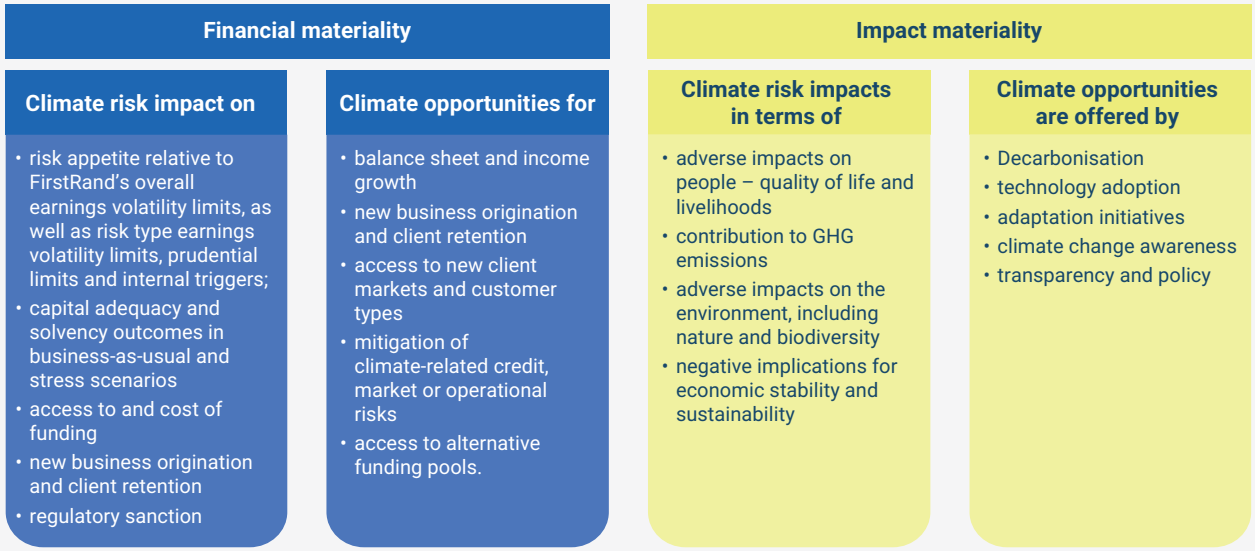


Source: FirstRand (2024a).

The group is also developing climate alignment pathways for high-impact sectors, including energy and heavy industry, supported by scenario analysis and transition risk assessment. FirstRand follows a dual focus by developing solutions to assist clients in mitigating climate change through lowering their GHG emissions (transition) and adapting to climate change by improving their climate resilience (FirstRand, 2024a).

Prioritisation and validation. FirstRand validates its priorities through materiality analysis and client demand mapping. Sectors such as power, real estate, agriculture, and infrastructure have been identified as critical focus areas. Given their exposure to both physical and transition risks, the group classifies exposures on its balance sheet according to climate impact and risk profile, creating a tool to monitor progress toward portfolio alignment. Interim targets and product pipelines, such as green loans, sustainable bonds, and risk-sharing facilities, help to validate strategic priorities in practice (FirstRand, 2024a).

Figure 11: FirstRand's key considerations in materiality determination

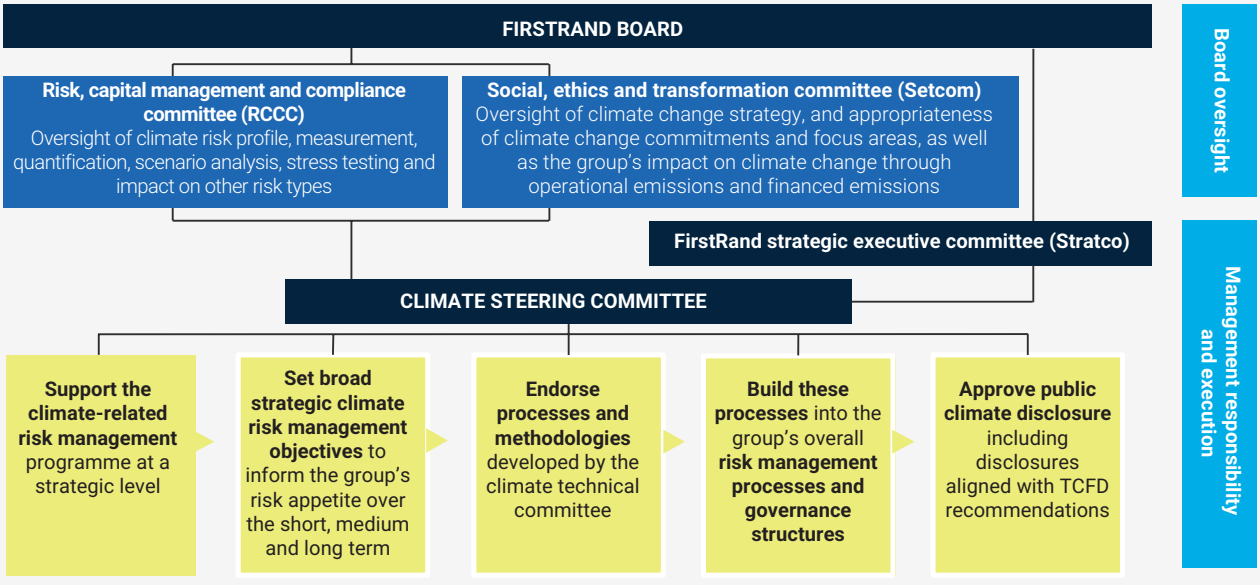


Source: FirstRand (2024a).

Sustainable governance. FirstRand's governance structure embeds climate considerations across decision-making levels. Oversight is provided through board and executive committees, while sustainability units coordinate implementation and reporting. To strengthen accountability, FirstRand invests in staff capacity building, for example:

- Group-wide training: Business and risk professionals were enrolled in climate risk awareness programmes covering the science of climate change, the Paris Agreement, NDCs, risk management and reporting, as well as emerging regulations and green finance taxonomies.
- Specialised training for credit teams: Credit analysts and business units received targeted training on the group's climate risk framework, the process for setting decarbonization targets, and the implementation of the climate balance sheet.

Figure 12: FirstRand's governance



The technical climate committee (TCC) is a specialist subcommittee of the climate steering committee (CSC) that identifies and assesses climate-related risks and opportunities. Specifically, the TCC is responsible for scenario analysis and stress testing and provides input into risk management and governance. There are several working groups within the TCC, including taxonomy, risk analysis, scenario analysis, measurement and disclosure.

Source: FirstRand (2020).

Outlook: FirstRand's climate roadmap shows the progress of the FirstRandclimate change programme FirstRand's climate roadmap shows the progress of FirstRand's climate change programme in four key areas: governance, strategy, risk management, and risk metrics and targets (see **Figure 13**).

Figure 13: FirstRand's climate roadmap for "governance"

- **Completed:** the milestone has been achieved, with ongoing refinement
- **In progress:** work to achieve the milestone has commenced
- **Not yet started:** work to achieve the milestone has not commenced

* Basel Committee on Banking Supervision standard number 239: Principles for effective risk data aggregation and risk reporting.

Source: FirstRand (2024a).

04

Building Institutional and Human Capacity for Climate Adaptation Finance

Scaling climate adaptation finance is not just about capital; it's about people, systems and institutional readiness. For FIs ready to move from ambition to action, building internal capacity is the next critical step. This chapter explores how FIs can strengthen both human and institutional capacity to mainstream and scale climate adaptation finance. It examines training and capacity-building approaches and shows how tools like this Handbook can support meaningful institutional change.

This chapter addresses the following questions:

- **What are the core institutional enablers that shape the capacity of FIs to address climate adaptation?**
- **Why are climate science and adaptation knowledge essential across FI functions, and what core technical and soft skills are required?**
- **How do clear mandates, incentives, and leadership support influence employees' confidence and ability to apply adaptation competencies?**
- **What methods are most effective for assessing institutional and human capacity for climate adaptation, and how can HR interpret and act on the results to design targeted training?**
- **What training modalities and HR enablers support effective and long-term capacity building for climate adaptation?**

Target Group: HR; Corporate Communications and External Affairs Department; Executive Management; Strategy and Sustainability/ESG Departments.

Understanding Institutional and Human Capacity Needs

What are the core institutional enablers that shape the capacity of FIs to address climate adaptation?

While institutional frameworks set the strategic foundation for addressing climate adaptation, it is the human capacity (e.g., the knowledge, skills and motivation of FI employees) through which FIs can effectively operationalise climate adaptation priorities. Three core institutional enablers play a critical role in shaping this capacity: Effective governance, organizational culture, and strong leadership (see **Figure 14**).

Figure 14: Institutional enabler in shaping capacity for climate adaptation

Effective Governance	Organizational Culture	Strong Leadership
• Provides clear mandates and accountability mechanisms that prioritize climate adaptation. • Embeds adaptation into policies and decision-making structures. • Ensures capacity-building is strategically aligned and sustained, rather than ad hoc.	• Fosters staff motivation and cross-functional collaboration. • Integrates climate adaptation into institutional values and daily practices. • Empowers employees to apply their training, contribute to decisions, and address climate risks across departments.	• Secures resources, partnerships, and visibility to champion climate adaptation. • Sets the tone for organizational priorities. • Creates an environment where staff feel supported to engage and innovate in climate finance.

Source: Authors.

Governance, culture, and leadership combine to determine whether and how staff can develop, apply and sustain the competencies needed to scale adaptation finance. For example, the Commercial Bank of Ceylon (CBC) demonstrates how aligned governance, culture and leadership have enabled the institution to expand its capacity to develop green financial products, strengthen staff capabilities, and contribute to Sri Lanka's national adaptation and sustainable development goals. By embedding climate risk management in policies and governance and reinforcing it through a strong sustainability culture, CBC has enabled institution-wide adoption of climate-conscious practices.

Box 2: Commercial Bank of Ceylon – Governance and culture driving climate adaptation

The CBC is the largest private bank in Sri Lanka and a systemically important FI in the region, with operations in Bangladesh and the Maldives. It offers a wide range of banking services, including retail, SME, and corporate banking, and has a growing international presence. As a leading private commercial bank, CBC recognises its dual responsibility: to strengthen financial stability by managing climate risks, and to support climate resilience through adaptation finance (CBC, 2025a).

Governance, strategy, policy and risk integration: In response to the escalating risks of climate change in Asia, particularly affecting agriculture, water resources and disaster-prone communities, CBC has integrated climate risk and adaptation considerations into its core banking operations.

- Through its Green Financing Strategy, the bank integrates climate change mitigation and adaptation into credit policy, environmental risk assessments, and strategic planning, ensuring that lending decisions consider sectoral vulnerabilities and client resilience.
- CBC conducts systematic climate risk assessments to align financing decisions with long-term sustainability and client resilience goals.
- The bank's Group Environmental and Social Risk Management Policy ensures environmental safeguards are applied consistently across operations (CBC, 2025b).
- Sustainability is organised along a three-pillar structure, focusing its sustainability activities across three overarching themes, anchored in the bank's strategic business alignment, a responsible organizational culture, and its responsibilities beyond its business undertakings.

Culture of enabling climate-conscious practices: CBC fosters an open sustainability culture that supports climate-conscious practices across the institution. Leadership emphasises that: **"Sustainability has always been central to our philosophy and is entwined in our culture and in how we conduct business."** (CBC, 2025c)

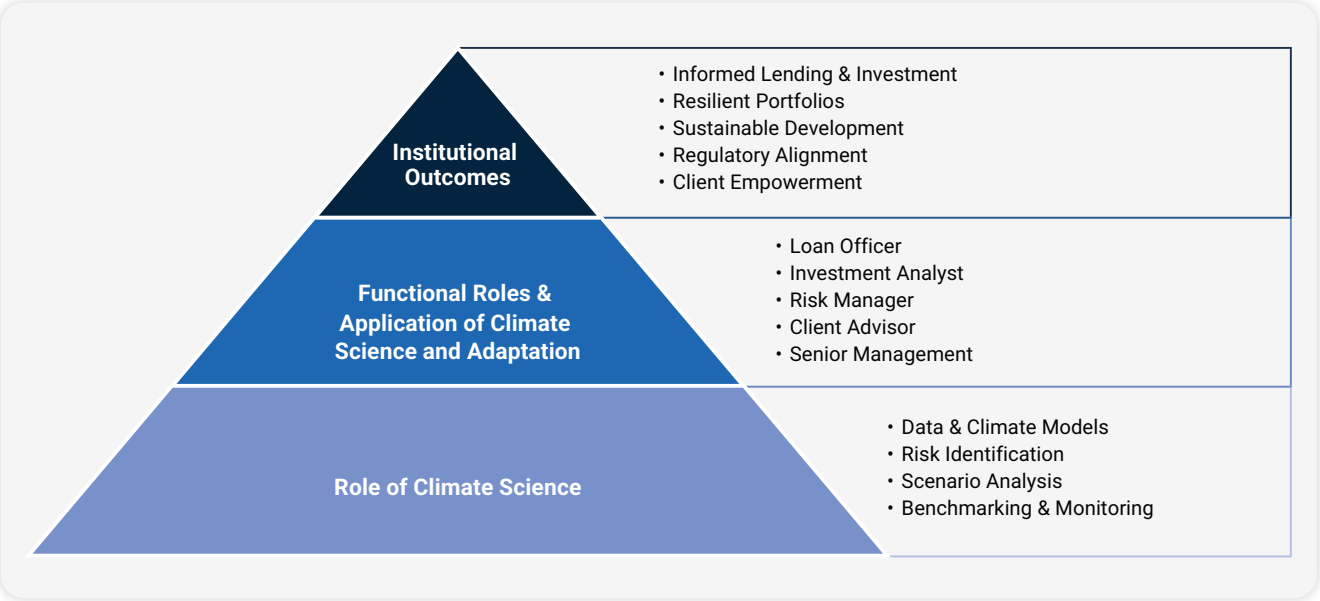
- The bank promotes sustainable growth across all areas, including its operations, stakeholder relationships and the markets it serves.
- CBC continuously integrates sustainability principles into its strategies and daily practices, aiming to reduce risks while creating value for the institution and its clients.

Source: CBC (2025a, 2025b, 2025c).

Why are climate science and adaptation knowledge essential across FI functions, and what core technical and soft skills are required?

Climate science and adaptation knowledge are essential across all functions of FIs because they enable a whole-of-institution responses to climate risks and opportunities. These knowledge areas go beyond technical assessments; they directly inform core business functions, regulatory compliance and client engagement. Across departments such as risk, credit, product development and advisory, climate knowledge empowers employees to understand climate risks and design financial solutions that are resilient and tailored to client needs (see **Figure 15**). For instance, loan officers and credit analysts can integrate climate risk into due diligence, investment analysts can assess long-term viability, client advisors can offer more relevant products, and senior management can align institutional strategy with sustainability goals.

Figure 15: Strategic importance of climate science for financial institutions



Source: Authors.

This cross-functional application strengthens institutional decision-making, ensures regulatory compliance, and supports integrating climate priorities into everyday operations. Climate science and adaptation knowledge thus become a driver of institutional resilience and strategic alignment (see **Figure 16**). Institutional enablers are vital to creating the environment and incentives for staff to develop and use these skills. Without skilled and engaged employees, supported by strong institutional frameworks, even the most ambitious climate adaptation strategies are unlikely to succeed.

Figure 16: Climate science and adaptation knowledge: The backbone of financial institutions' operations and strategy

Source: Authors .

Building human capacity requires equipping staff with core climate knowledge, technical skills for risk assessment and product innovation, and soft skills for collaboration and strategic thinking:

Core climate science knowledge helps employees grasp the nature of climate risks and vulnerabilities.

Technical skills enable them to apply climate risk tools, develop adaptation-focused financial products, and incorporate climate factors into risk management.

Soft skills, such as communication, teamwork and stakeholder engagement, are essential to embed climate adaptation across departments and with external partners.

A competency-based approach ensures training is targeted and relevant to specific roles, enhancing effectiveness. **Table 2** provides some examples.

Table 2: Examples of core knowledge and technical skills that staff need across functions

Competency Area	Description / Examples	Staff Departments
Core Climate Science Knowledge (Module 2)	Foundational understanding of climate risks and vulnerabilities, including physical climate hazards, exposure patterns and sensitivity of key sectors. This baseline knowledge enables all FI employees to interpret climate-related information, engage effectively with clients, and recognise how climate impacts translate into financial risks and opportunities for adaptation finance.	All FI employees
Technical Skills for Climate Risk Assessment (Module 3)	Ability to use climate risk assessment tools and data sources to evaluate borrower and portfolio exposure to physical climate hazards. Skills include data interpretation, climate scenario analysis, risk identification, benchmarking, and ongoing monitoring. These competencies are essential for integrating physical climate risk into credit appraisal, portfolio management, and regulatory reporting, critical foundations for mainstreaming adaptation finance.	• Risk Management (incl. Credit Risk, Operational Risk, Market Risk) and Compliance Departments • Sustainability/ESG Department • Corporate/Wholesale, SME, & Retail Banking Departments; Credit, Product & Structured Finance Departments • Treasury & ALM Department
Climate Adaptation Product Development Skills (Modules 4 & 5)	Capabilities to design, structure, and implement financial products that support climate adaptation outcomes. Skills include integrating climate-resilience criteria into lending products, structuring adaptation-linked financing solutions, and embedding climate considerations in product features (e.g., eligibility requirements, pricing incentives, performance indicators). These skills enable FIs to mobilise capital toward climate-resilient investments and expand their adaptation finance portfolios.	• Corporate/Wholesale, SME, & Retail Banking Departments; Credit, Product & Structured Finance Departments • Sustainability/ESG Department • Risk Management (incl. Credit Risk, Operational Risk, Market Risk) and Compliance Departments • Treasury & ALM Department

Source: Authors.

How do clear mandates, incentives, and leadership support influence employees' confidence and ability to apply adaptation competencies?

Employees' abilities to apply climate adaptation knowledge in practice depend on their skills and the institutional environment that enables and encourages action. Clear mandates, appropriate incentives and strong leadership are critical enablers that translate training into effective implementation. Without them, even well-trained employees may hesitate to apply their knowledge due to uncertainty, lack of authority, or misaligned priorities (see **Table 3**).

Table 3: Examples of core knowledge, technical skills, and soft skills that staff need across functions

Institutional Enabler	Impact on Employees' Confidence and Ability to Apply Knowledge
Clear Mandates	• Provide direction and legitimacy for climate-related actions. • Embed climate adaptation into institutional policies and role expectations. • Increase employee confidence to prioritise adaptation in daily work.
Incentives	• Reinforce motivation through recognition, performance metrics, or career progression. • Signal organizational commitment to climate adaptation. • Encourage consistent and proactive application of knowledge.
Leadership Support	• Creates an environment of trust and accountability. • Secures resources and fosters cross-functional collaboration. • Empowers staff to take initiative, innovate, and act with confidence.

Source: Authors.

Effective Capacity-Building Approaches and Programme Design

What methods are most effective for assessing institutional and human capacity for climate adaptation, and how can HR interpret and act on the results to design targeted training?

An effective capacity assessment begins with a structured approach that combines multiple methods to address both institutional systems and individual competencies. These methods help identify current capacities and align needs with institutional goals:

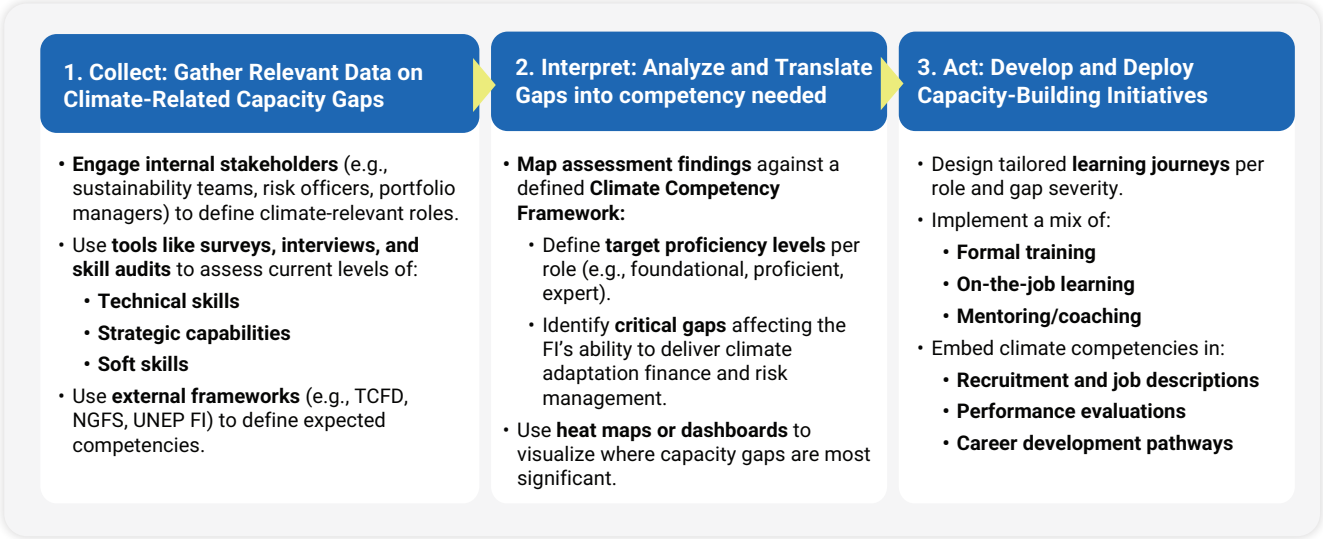
- Surveys generate quantitative insights into staff knowledge, confidence and engagement levels related to climate adaptation. They are especially useful for identifying patterns across departments or job roles.
- Capacity audits assess formal systems and structures (e.g., governance, policies, staffing and budgets) to pinpoint institutional strengths, gaps and alignment with strategic climate goals.

Box 3: Guiding questions for preparation and assessment

- What specific knowledge and skills are needed across staff levels to effectively integrate climate adaptation into day-to-day operations and decision-making?
- How does the institution's strategic direction align with national climate priorities, and how can capacity-building efforts reinforce this alignment?
- What existing capacity gaps or learning needs exist across functions, and how can these be identified through tools such as skills assessments or staff surveys?

To design effective training and development programmes that build climate adaptation capacity, HR must follow a structured process: collect relevant data, interpret it meaningfully, and act strategically (see **Figure 17**). This ensures that learning interventions are aligned with institutional needs and embedded in talent systems.

Figure 17: Designing targeted climate science and adaptation knowledge

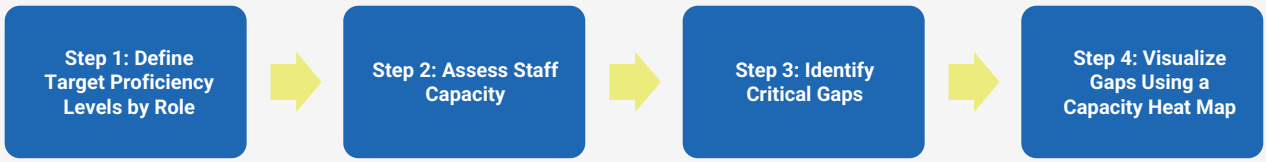


Source: Authors.

To strategically strengthen institutional and human capacity for climate adaptation, an FI can conduct a capacity assessment with three objectives to identify critical skills gaps across departments and prioritise training (see **Box 4**).

Box 4: Example of capacity mapping and assessment framework

The following steps outline how capacity assessment findings can be mapped using a Climate Competency Framework:



Step 1 – Define Target Proficiency Levels by Role: The Climate Competency Framework outlines key knowledge and skill areas necessary for scaling climate adaptation finance.

Competency Area	Risk Team	Credit Officers	Product Development	Senior Management
Climate Science Fundamentals	Proficient	Foundational	Foundational	Foundational
Climate Risk Assessment	Expert	Proficient	Foundational	Proficient
Adaptation Finance Instruments & Mechanisms	Proficient	Foundational	Proficient	Proficient
Regulatory & Policy Awareness	Proficient	Proficient	Proficient	Expert
Soft skills (e.g., collaboration, systems thinking, communication)	Foundational	Proficient	Expert	Proficient

For each role, target proficiency levels were defined using three tiers:

Level		Description
Unaware	0	No familiarity with the concept or its relevance
Foundational	1	Basic awareness and understanding; limited application
Proficient	2	Applies skills regularly and effectively in context
Expert	3	Leads, mentors or others who innovate in this area

Step 2 – Assess Staff Capacity: The FI evaluates the current knowledge, skills, and behaviours of its staff in relation to the competencies outlined in the Climate Competency Framework. The goal is to establish a clear baseline and identify gaps between existing capabilities and the levels required to support climate adaptation finance. This assessment can draw on a combination of methods, including self-assessments, manager evaluations, HR system reviews, staff surveys, interviews, and, where appropriate, technical diagnostics. Each competency area is assessed using a standardised scale (e.g., Unaware, Foundational, Proficient, Expert), allowing for consistent comparisons across roles and departments.

Step 3 – Identify Critical Gaps: The institution identifies where significant mismatches exist between what is needed and the actual skills or knowledge levels across the organization. A *critical gap* is typically defined as a difference of two or more levels between the current and required proficiency. These gaps are considered urgent because they directly impact the institution's ability to deliver on its climate adaptation finance goals. For example, suppose the Risk Team needs to be at an Expert (Level 3) in *Climate Risk Assessment* but currently assesses itself as only Foundational (Level 1). In that case, this is a critical two-level gap, which puts the institution at risk of mispricing climate-related exposures.

Step 4 – Visualise Gaps Using a Capacity Heat Map: The heat map below illustrates the summary of proficiency gaps across the functions of a fictitious example. This format helps HR and leadership quickly identify areas requiring urgent intervention.

Competency Area	Risk Team	Credit Officers	Product Development	Senior Management
Climate Science Fundamentals	Moderate Gap (1)	Moderate Gap (1)	Critical Gap (2)	Moderate Gap (1)
Climate Risk Assessment	Critical Gap (2)	Moderate Gap (1)	Moderate Gap (1)	On Target
Adaptation Finance Instruments	Moderate Gap (1)	Critical Gap (2)	Moderate Gap (1)	On Target
Policy & Regulatory Knowledge	On Target	Moderate Gap (1)	On Target	On Target
Stakeholder engagement	Near Target	On Target	On Target	On Target

Legend:

On Target | Near Target | Moderate Gap (1 level) | Critical Gap (2+ levels)

What training modalities and HR enablers support effective and long-term capacity building for climate adaptation?

Building climate adaptation competencies requires combined training modalities that support awareness, skill development and on-the-job application. These approaches are most effective when integrated into a broader institutional effort to embed adaptation into organizational values and practices (see **Table 4**).

Table 4: Different options to enhance the employee's ability to address climate adaptation

Training Area & Objective	Key Modalities/ Measures	Advantages & Challenges (+ / –)
Awareness *Build a general understanding of climate change and adaptation*	• Awareness campaigns (emails, posters, videos) • Info sessions and guest speaker events	+ Reaches a broad audience and establishes a shared understanding of climate and adaptation concepts + Creates a common institutional language for climate adaptation, risk and opportunity discussions + Helps staff recognise why adaptation is relevant to the FI's mandate + Low-cost and scalable – Does not address how climate impacts translate into financial decisions – Limited ability to connect high-level concepts to sector- or product-specific adaptation needs
Formal Training *Provide structured learning to develop adaptation-related skills and knowledge*	• Workshops and webinars • E-learning modules • Scenario-based learning • Educational games • Certification courses	+ Builds role-specific skills for integrating adaptation into credit, risk and product processes + Ensures consistency in understanding adaptation frameworks, scenarios and methodologies + Provides recognised competencies for client engagement on resilience + Can be standardised and scaled + Offers certification or formal recognition – Requires updates as adaptation solutions, regulatory expectations and tools evolve – May not fully reflect local climate impacts without contextualisation – Resource- and coordination-intensive

Training Area & Objective	Key Modalities/ Measures	Advantages & Challenges (+ / –)
On-the-Job Capacity Building *Integrate knowledge into everyday work and decision-making*	• Mentorship/coaching programmes • Cross-functional project teams- Secondments to sustainability teams- adaptation pilots • Knowledge-sharing platforms	+ Enables direct application of adaptation concepts in lending, risk assessment and product innovation + Facilitates cross-department collaboration essential for mainstreaming adaptation + Builds practical experience and internal champions for adaptation finance – Effectiveness depends on the availability of adaptation-relevant projects or transactions – Requires internal or external adaptation expertise to guide applied learning – Exposure may vary if only some teams engage in adaptation-related work – Resource- and coordination-intensive

Source: Authors.

Box 5: BNP Paribas and CaixaBank sustainability training programmes

BNP Paribas "We Engage" internal training

BNP Paribas has implemented a comprehensive internal training programme titled "We Engage", aiming to enhance employees' understanding of sustainable finance and related social and environmental challenges. This initiative provides all employees worldwide with access to six digital modules, each comprising a video presentation followed by a brief quiz. The modules are designed to:

- Educate employees on current social and environmental issues using key data points.
- Highlight sustainable financing solutions developed by BNP Paribas in collaboration with partners and clients.
- Showcase real-life examples of employees actively contributing to sustainability efforts, thereby fostering a culture of engagement and responsibility.

Source: BNP Paribas (2025).

CaixaBank Sustainability Training Plan

CaixaBank has expanded its Sustainability Training Plan to encompass its entire workforce in 2023, aiming to enhance employees' understanding of climate-related risks and the bank's role in the economy's decarbonization. Key components of the Training Plan include:

- Comprehensive Staff Training: All employees receive mandatory training focusing on climate change risks, the importance of decarbonization, and the integration of sustainability into daily activities.
- Advanced Training for Specific Departments: In 2023, 1,850 employees from Business Banking and Corporate and Institutional Banking participated in in-depth training through the UPF Barcelona School of Management. This programme covers topics such as sustainability concepts, regulatory frameworks, impact measurement, and future environmental trends.
- Certification for Branch Managers: A total of 3,711 branch managers were trained and certified in sustainable investment, emphasising socially responsible investment, impact investment, and ESG product marketing.
- Ongoing Specialised Training: CaixaBank continues to offer specialised training sessions based on team-specific needs and provides various courses through its online platform, Virtaula, covering topics like agencies and ratings.

Source: CaixaBank (2023).

Effective capacity-building programmes must be designed with a clear understanding of institutional priorities, staff needs, and long-term learning goals. **Box 6** illustrates some guiding questions, while **Table 5** outlines capacity-building measures tailored to different FI staff roles. These measures can be structured modularly, starting with general awareness training for all staff and supplemented by targeted training or on-the-job capacity building specifically for each role.

Box 6: Guiding questions for the training design and delivery of the intervention

- Which training modalities (e.g., formal training, mentorship, or on-the-job learning) are most appropriate and effective for different staff groups?
- How intensive or time-bound should training be, and how can it be delivered without disrupting core operations?
- How will progress be monitored, and how can institutional learning be embedded to support long-term impact and continuous improvement?

Table 5: Key capacity-building measures for different financial institutions' staff roles

Staff Role	Awareness	Training	On-the-Job Capacity Building	Institutional Capacity Building
All Staff	General awareness of climate change and institutional goals	Basic training on the institution's climate/ adaptation finance strategy, climate change hazards and impacts	Continuous learning through internal platforms, mentorship, and cross-team collaboration	Promote a climate-informed culture and incentivise knowledge-sharing
Loan Officers	Understand climate risks and adaptation relevance for borrowers	Learn to assess adaptation needs and screen climate risks in loan applications	Apply climate risk assessments in credit processes	Integrate adaptation into lending guidelines and product design
Client Advisors	Awareness of climate impacts on client sectors	Train in advising clients on adaptation finance opportunities	Use tools to guide clients toward resilient investments	Support the development of climate-informed advisory frameworks
Risk Managers	Understand systemic climate risks and potential financial implications	Learn climate risk modelling and scenario analysis techniques	Integrate climate risks into credit and portfolio risk assessments	Develop internal climate risk-management protocols and reporting systems
Senior Management	Awareness of adaptation's strategic importance	Training in integrating climate risk into institutional strategy and decision-making	Champion adaptation integration in institutional planning	Allocate resources and mandate for adaptation mainstreaming

Source: Authors.

To enable long-term impact in building institutional capacity for climate adaptation finance, HR must act as a strategic enabler, embedding climate competencies into systems, shaping a culture of engagement, and facilitating cross-departmental alignment. This requires structural integration and continuous staff motivation and institutional coherence. HR faces key challenges in building engagement for climate adaptation, including low employee awareness, resistance to change, competing business priorities, and siloed implementation of climate initiatives. These factors limit staff motivation and institutional integration, requiring targeted HR strategies to foster relevance, collaboration and sustained commitment. Despite these challenges, HR is uniquely positioned to drive sustained capacity through systemic integration to respond and leverage opportunities (see **Table 6**).

Table 6: How Human Resources can respond and leverage opportunities

HR Challenge	HR Opportunity	HR Enabler	Targeted HR Action	+ / – (Impact Consideration)
Low employee awareness of climate risks and responsibilities	Build climate literacy through HR-managed learning systems	Competency-Based Learning Pathways	Integrate climate basics and role-relevant modules into onboarding, learning portals, and Learning Management System-based assessments.	+ Scalable for all roles – Risk of generic content without role alignment
Lack of motivation or engagement with climate topics	Strengthen staff buy-in through value-based HR initiatives	Culture & Engagement Programmes	Run staff campaigns via internal comms; embed climate goals into HR recognition tools like awards or peer-nomination systems.	+ Boosts relevance and morale – Requires storytelling and internal comms support
Competing priorities weaken training uptake	Reinforce climate importance via HR-led performance frameworks	Incentive Alignment	Embed climate KPIs in annual performance cycles, goal-setting templates, and promotion criteria.	+ Aligns behaviour with incentives – Needs leadership backing and systems updates
Departmental silos slow capacity transfer	Use HR's central role to connect functions via shared development pathways	Cross-Functional Collaboration	Convene joint upskilling sessions, rotation programmes, or project secondments across climate-relevant teams.	+ Encourages peer learning and alignment – Requires scheduling coordination and workload balance
Limited visibility of HR's impact on adaptation goals	Use HR's existing data tools to report progress and inform decisions	Monitoring, evaluation, and learning	Include climate training metrics in HR information system dashboards, and track climate-related outcomes in exit interviews, promotions, and performance logs.	+ Supports learning and strategy – Needs investment in measurement design

Source: Authors.

05 Additional Resources

Further sources on the financial impact of climate change

Data

- Mainstreaming Climate in Financial Institutions Initiative (UNFCCC) offers a curated resource centre, case studies, and peer learning tools for FIs applying the Principles for Mainstreaming Climate Action. Supports both policy-level alignment and practical implementation steps: A community of financial institutions | Mainstreaming Climate in Financial Institutions
- IPCC interactive map showcases the effects of climate change under different scenarios: IPCC WGI Interactive Atlas
- The World Bank's Climate Change Knowledge portal provides global data on historical and future climate vulnerabilities and impacts. The tool provides information about global, regional, and country-related data on climate change and development: Home | Climate Change Knowledge Portal
- The IMF's Climate Change Indicators Dashboard is a database of mitigation and adaptation indicators: Climate Change Indicators Dashboard

Publicly available tools and training

Course Name	Provider	Target Audience	Key Topics	Certification	Link
Green Finance Academy	The European Bank for Reconstruction and Development (EBRD)	FIs	Green Finance Series – covering the foundations of green finance, climate mitigation, climate adaptation and nature. Climate Risk Series covering corporate climate governance practices.	Certificate upon completion	EBRD Green Finance Academy
Climate Finance Learning	African Development Bank (AfDB)	FIs, policymakers	Climate finance landscape, climate adaptation projects, accessing funding (e.g., Green Climate Fund [GCF], Adaptation Fund), designing proposals	Certificate upon completion	AfDB Climate Finance e-Learning
Introduction to Climate Finance	GCF	Financial professionals, FIs and government officials	Climate finance mechanisms, accessing funds for adaptation, and designing climate resilience projects	Certificate upon completion	iLearn | Green Climate Fund
Climate Smart Finance	International Finance Corporation (IFC)	FIs, investors, banks	Structuring climate-smart financial products, adaptation finance deals, and private finance for climate resilience	Certificate upon completion	IFC Climate Smart Finance
Climate Change Adaptation and Finance	UNFCCC	FIs, policymakers	Adaptation strategies, financing climate adaptation projects, adaptation funds access, and climate-resilient investments	Certificate upon completion	UNFCCC e-Learning
Building Resilience through Green Finance	African Capacity Building Foundation (ACBF)	FIs, development practitioners	Green finance tools, financing adaptation projects, resilience building through sustainable financial products	Certificate upon completion	ACBF e-Learning
Adaptation Finance and Development Projects	Adaptation Fund	FIs, project developers	Accessing adaptation funds, designing climate-resilient projects, and financing strategies for developing countries	Certificate upon completion	Adaptation Fund e-Learning

06

Glossary

Unless otherwise specified, all the definitions are drawn from the IPCC (2023) Glossary.

Adaptation: 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.

Climate change: A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use.

Note that the United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'. The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes.

Exposure: 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.

Greenhouse gases (GHGs): Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapour (H2O), carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4) and ozone (O3) are the primary GHGs in the Earth's atmosphere. Human-made GHGs include sulphur hexafluoride (SF6), hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs) and perfluorocarbons (PFCs); several of these are also O3-depleting (and are regulated under the Montreal Protocol).

Gross domestic product (GDP): The sum of gross value added, at purchasers' prices, by all resident and non-resident producers in the economy, plus any taxes and minus any subsidies not included in the value of the products in a country or a geographic region for a given period, normally one year. GDP is calculated without deducting for depreciation of fabricated assets or depletion and degradation of natural resources.

Hazard: 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.

Impacts: The consequences of realised risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather/climate events), exposure, and vulnerability. Impacts generally refer to effects on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Impacts may be referred to as consequences or outcomes, and can be adverse or beneficial.

Mitigation (of climate change): A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

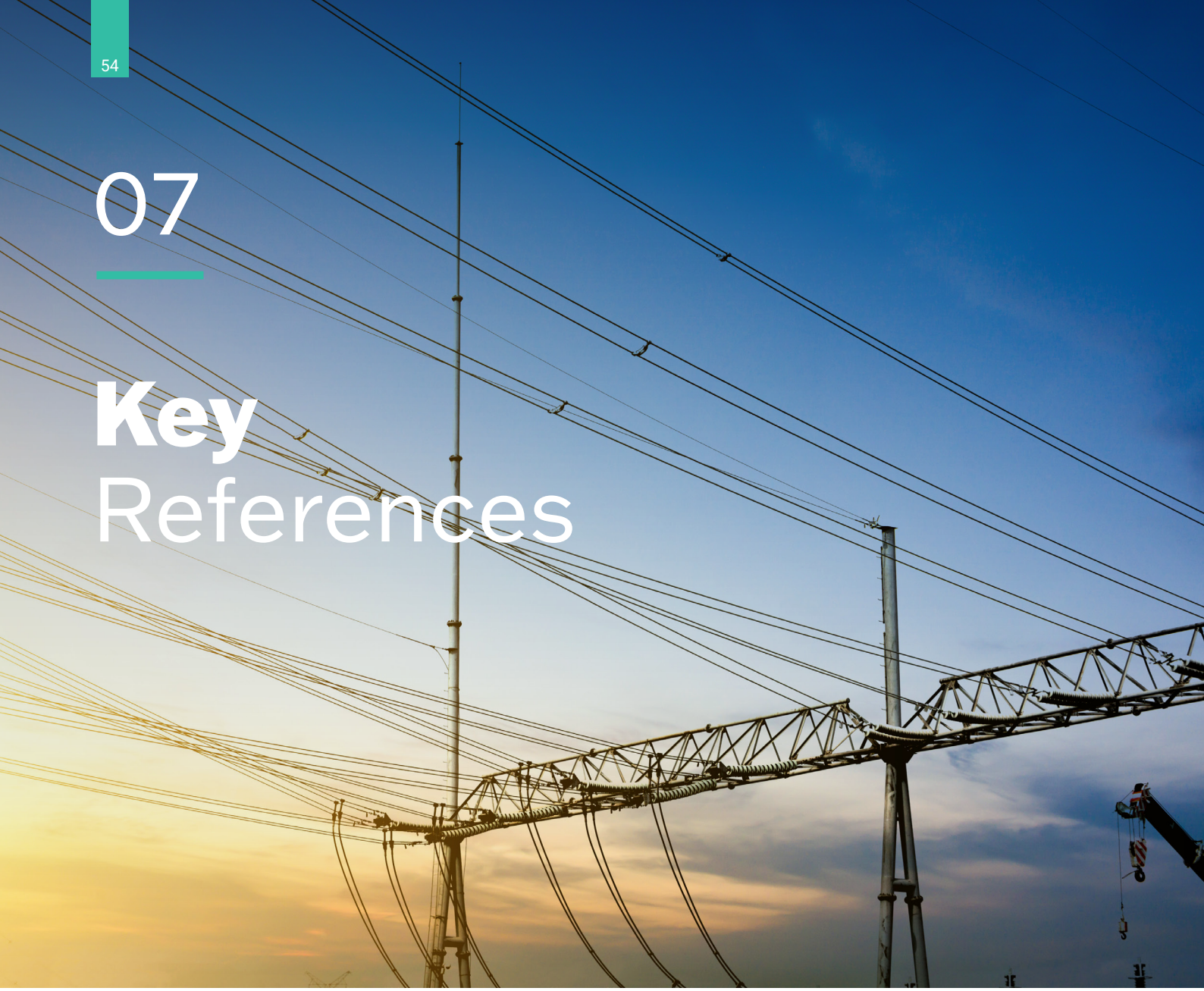
Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Organizations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes impacting organizations' premises, operations, supply chain, transport needs, and employee safety (TCFD, 2017).

Resilience: 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.

Transition risks are related to extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements for accelerating the transition towards a lower-carbon economy. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations (TCFD, 2017).

Triple Dividend is an approach that considers avoided losses (first dividend), induced economic or development benefits (second dividend), and additional social and environmental benefits (third dividend) of adaptation actions (WRI, 2022).

Vulnerability: 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.



07

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08

Practice Questions

The following set of 15 single-response, multiple-choice questions is designed to test understanding of key concepts covered in **Module 1: Investing in Adaptation**. The questions are intentionally challenging and go beyond simple recall, requiring application, analysis, and comparison of concepts. The questions cover the following chapters of Module 1:

- **Chapter 1: The Case for Adaptation: Why Action Matters**
- **Chapter 2: Benefits of Investing in Climate Adaptation**
- **Chapter 3: Building Blocks for Mainstreaming Climate Adaptation Finance in Financial Institutions**
- **Chapter 4: Building Institutional and Human Capacity for Climate Adaptation Finance**

Each question has **four answer options**, with only **one correct solution,** followed by an explanation clarifying the reasoning and key learning points.

1 Which of the following best explains why climate change poses systemic risks to financial institutions (FIs) at both macro and micro levels?

A. Climate change primarily affects agricultural yields, which are not relevant to most financial portfolios.

B. Climate change impacts are limited to environmental concerns and do not affect financial systems.

C. Climate change leads to extreme weather events that damage infrastructure, reduce borrower repayment capacity, and devalue assets, thereby threatening institutional resilience and financial stability.

D. Climate change only affects insurance companies and has minimal impact on banks and lenders.

2 Why is immediate action on climate adaptation and resilience critical for FIs, especially in vulnerable regions?

A. Because delaying action increases the cost and complexity of adaptation, while inaction leads to rising economic losses, reduced creditworthiness, and social instability.

B. Because climate adaptation only benefits large multinational banks.

C. Because climate adaptation is a regulatory requirement in all countries.

D. Because climate risks are expected to stabilise within the next decade.

3 Which of the following best describes the difference between climate mitigation and climate adaptation in the context of FIs?

A. Mitigation focuses on managing physical risks, while adaptation addresses transition risks.

B. Adaptation is only relevant for insurance companies, while mitigation applies to banks and lenders.

C. Mitigation involves reducing greenhouse gas emissions to limit future climate change, while adaptation involves adjusting systems to cope with current or expected climate impacts.

D. Both mitigation and adaptation are optional strategies that do not affect financial portfolios.

4 Which of the following investment projects would most likely generate both climate adaptation benefits and mitigation benefits?

A. Financing fossil fuel infrastructure in low-income regions.

B. Investing in urban green spaces to reduce heat-island effects, improve stormwater management and sequester carbon.

C. Providing loans for diesel-powered irrigation systems in drought-prone areas.

D. Supporting high-emission manufacturing sectors with traditional credit lines.

5 Why is it essential for FIs to assess climate vulnerability in their operating contexts?

A. To make informed investment decisions and support long-term resilience.

B. To comply with international climate treaties and regulations.

C. To increase short-term profits in climate-sensitive sectors.

D. To avoid lending to clients in urban areas with vulnerable infrastructure.

6 Which of the following best explains why climate adaptation matters for FIs?

A. Adaptation is primarily a regulatory requirement with limited financial relevance.

B. Adaptation is mainly useful to reduce physical climate risks and does not increase resilience.

C. Adaptation is mainly useful for large corporations in developed countries.

D. Adaptation offers economic, financial and non-financial benefits that enhance resilience and investment performance.

7 Which of the following best captures the strategic importance of climate adaptation finance for FIs?

A. It positions FIs to mitigate climate-related risks, unlock new capital sources, and lead in sustainable finance through innovative, resilience-focused financial products.

B. It only enables FIs to meet minimum climate disclosure requirements and avoid regulatory penalties, without strategic or financial benefits.

C. It enables FIs to reduce operational costs by divesting from climate-sensitive sectors.

D. It ensures that FIs can shift their portfolios entirely to public sector investments with guaranteed returns.

8 A commercial bank operating in a climate-vulnerable region is seeking to align its operations with climate adaptation goals. The leadership team is considering adopting a ToC approach to mainstream adaptation across the institution. Based on the ToC for adaptation, which of the following strategies would most effectively support this transformation?

A. Establishing a separate sustainability unit to manage climate issues in isolation, without integrating adaptation into core governance, risk or lending functions.

B. Integrating climate adaptation considerations into core business functions such as governance, risk assessment, lending decisions, and portfolio management to drive systemic change and resilience.

C. Focusing exclusively on green bond issuance to fund adaptation projects, without altering internal decision-making processes or client engagement strategies.

D. Prioritising short-term financial returns by avoiding investments in climate-sensitive sectors, regardless of long-term adaptation potential.

9 A mid-sized FI operating in a climate-sensitive region is aiming to scale its climate adaptation finance beyond pilot projects. Based on best practices for mainstreaming adaptation, which of the following multi-step approaches would most effectively support this transformation?

A. Focus on short-term lending to climate-resilient sectors and outsource climate risk assessments to external consultants.

B. Conduct a one-time climate risk workshop for senior leadership and continue with existing credit evaluation procedures.

C. Systematically assess internal policies and portfolios for climate relevance, build staff capacity through training and data access, and embed climate adaptation into financial products, credit decisions and stakeholder partnerships.

D. Prioritise investments in high-return sectors while deferring adaptation integration until regulatory mandates are enforced.

10 An FI is developing a roadmap to mainstream climate adaptation across its operations. According to best practices, which of the following approaches best reflects the use of the six interconnected building blocks required for successful integration?

A. Focus on external stakeholder engagement and product innovation, while postponing internal governance and capacity building until adaptation finance becomes more profitable.

B. Implement isolated climate risk assessments in select portfolios and rely on external consultants for product design and regulatory compliance.

C. Prioritise short-term lending to climate-resilient sectors and limit adaptation efforts to regulatory reporting requirements.

D. Adopt a comprehensive strategy that integrates climate-aligned governance, builds internal capacity, applies climate-risk science and management tools, designs adaptation-linked products, strengthens internal processes, and engages external stakeholders.

11 An FI is developing its first climate adaptation strategy. To ensure the strategy is aligned with its core mission and governance, which of the following actions would best support the creation of a sustainable vision for climate adaptation?

A. Establish a dedicated adaptation financing initiative managed separately from existing governance and business planning processes to build early momentum.

B. Focus exclusively on mitigation finance, such as energy efficiency loans, and defer adaptation planning until national regulations mandate it.

C. Build the adaptation strategy around the institution's current client base and portfolio composition, embed climate goals into governance and internal policies, and engage stakeholders in a consultative process to shape a long-term vision.

D. Set ambitious adaptation targets without assessing operational capacity or engaging internal teams and clients.

12 An FI is struggling to scale its climate adaptation finance despite having a formal strategy in place. Which combination of institutional enablers is most likely missing or underdeveloped, based on best practices for operationalising climate adaptation?

A. Advanced digital tools and ad hoc external partnerships, without corresponding changes in internal governance or decision-making processes.

B. Access to concessional finance and a large client base in climate-sensitive sectors.

C. A standalone sustainability unit and outsourced climate risk assessments.

D. Effective governance, a supportive organizational culture, and strong leadership.

13 An FI is aiming to strengthen its climate adaptation strategy by embedding climate science and adaptation knowledge across departments. Which of the following approaches would most effectively support a whole-of-institution response to climate risks and opportunities?

A. Provide climate science training to loan officers, credit analysts, investment teams, and client advisors, enabling them to integrate climate risks into due diligence, product design, and strategic planning.

B. Assign climate-risk responsibilities solely to the sustainability team and limit training to technical staff.

C. Focus on regulatory compliance by preparing climate disclosures without engaging operational teams in climate risk understanding.

D. Outsource climate risk assessments to external consultants and maintain existing internal decision-making processes.

14 An FI is preparing to assess its readiness to scale climate adaptation finance. Which of the following approaches best reflects a comprehensive method for evaluating both institutional systems and human capacity?

A. Conduct a one-time workshop on climate adaptation for senior management and assume staff will cascade the knowledge informally.

B. Use surveys to measure staff knowledge and engagement, and perform capacity audits to evaluate governance, policies, staffing and budget alignment with climate goals.

C. Place primary emphasis on feedback from external stakeholders and partners to identify perceived capacity gaps, with limited internal diagnostic analysis.

D. Rely on past performance in mitigation finance as a proxy for adaptation readiness.

15 Which of the following best describes the role of HR in enabling long-term institutional capacity for climate adaptation finance?

A. HR supports climate adaptation by updating job descriptions and performance criteria, while broader strategic alignment is addressed elsewhere in the institution.

B. HR acts as a strategic enabler by embedding climate competencies into systems, fostering a culture of engagement, and aligning cross-departmental efforts despite challenges like low awareness and resistance to change.

C. HR should focus solely on recruiting climate experts and leave integration to operational departments.

D. HR should implement climate adaptation strategies independently, without involving leadership or governance structures.

09

Question Solutions

1

Correct: C

Explanation: Climate change leads to extreme weather events such as floods, storms, and wildfires, which can damage infrastructure and disrupt economic activity. These disruptions reduce the ability of borrowers to repay loans and can significantly devalue assets held by FIs. As a result, banks, insurers and other financial entities face increased credit risk, market volatility and operational challenges. These interconnected effects threaten both the resilience of individual institutions and the stability of the broader financial system.

2

Correct: A

Explanation: Delaying action on climate adaptation and resilience increases both the cost and complexity of future interventions. In vulnerable regions, the impacts of climate change, such as rising sea levels, extreme weather and resource scarcity, can quickly escalate into economic losses, reduced creditworthiness of borrowers and broader social instability. FIs operating in these areas face heightened exposure to credit and operational risks, making early and proactive adaptation essential to safeguard financial stability and long-term viability.

3

Correct: C

Explanation: Mitigation refers to efforts aimed at reducing greenhouse gas emissions to limit future climate change, while adaptation involves adjusting financial systems and strategies to cope with the current or anticipated impacts of climate change. FIs engage in both to manage long-term risks and ensure resilience in the face of evolving environmental challenges.

4

Correct: B

Explanation: Investing in urban green spaces provides both adaptation and mitigation benefits by lowering urban temperatures through shade and evapotranspiration, improving stormwater management to reduce flood risks and sequestering carbon to reduce greenhouse gas emissions. These combined effects help address current climate challenges while contributing to long-term environmental sustainability.

5

Correct: A

Explanation: Assessing climate vulnerability allows FIs to make informed investment decisions and build long-term resilience. Understanding how climate risks affect their operating environments helps them manage exposure, allocate resources effectively, and support clients in adapting to changing conditions. This proactive approach strengthens financial stability and reduces the likelihood of future losses.

6

Correct: D

Explanation: Climate adaptation provides a range of benefits that go beyond avoiding losses from physical climate risks. It enhances economic and financial resilience by helping institutions prepare for and respond to climate impacts, while also improving investment performance through better risk management. In addition, adaptation supports broader non-financial outcomes such as social stability and environmental sustainability, making it a critical strategy for long-term success.

7

Correct: A

Explanation: Climate adaptation finance enables FIs to manage climate-related risks while unlocking new sources of capital and driving innovation in sustainable finance. It supports the creation of resilience-focused financial products that protect against climate impacts and open strategic growth opportunities. This positions institutions as leaders in building climate-resilient economies.

8

Correct: B

Explanation: Integrating climate adaptation into core business functions, such as governance, risk assessment, lending decisions, and portfolio management, supports a systemic shift toward resilience. This approach aligns with the ToC by embedding adaptation into the institution's strategic and operational processes, enabling long-term transformation rather than treating climate risks as isolated issues.

9

Correct: C

Explanation: To effectively scale climate adaptation finance, an FI should begin by assessing its internal policies and portfolios for climate relevance. Building staff capacity through training and improving access to climate data ensures that teams are equipped to understand and manage climate risks. Embedding adaptation into financial products, credit decisions, and partnerships with stakeholders enables a comprehensive and sustained approach, moving beyond pilot projects toward institution-wide transformation.

10

Correct: D

Explanation: A comprehensive strategy that incorporates the six interconnected building blocks, namely, climate-aligned governance, internal capacity building, application of climate risk science and tools, adaptation-linked product design, strengthened internal processes, and improved stakeholder engagement, ensures that climate adaptation is fully integrated across the institution. This approach supports long-term resilience, aligns operations with climate goals, and enables FIs to respond effectively to evolving climate risks.

11

Correct: C

Explanation: To create a sustainable climate adaptation strategy, an FI should align the strategy with its core mission and governance. This involves building the approach around its existing client base and portfolio, embedding climate goals into internal policies and decision-making structures, and engaging stakeholders through a consultative process. Such integration ensures that adaptation is not treated as a separate initiative but becomes part of the institution's long-term vision and operational framework.

12

Correct: D

Explanation: If an FI is struggling to scale its climate adaptation finance despite having a formal strategy, it is likely missing key institutional enablers such as effective governance, a supportive organizational culture, and strong leadership. These elements are essential for translating strategy into action, fostering internal commitment, and ensuring that climate adaptation is embedded across operations and decision-making processes. Without them, even well-designed strategies may fail to gain traction or deliver meaningful impact.

13

Correct: A

Explanation: Providing climate science training to loan officers, credit analysts, investment teams and client advisors equips key staff across departments to understand and integrate climate risks into due diligence, product design and strategic planning. This approach supports a whole-of-institution response by embedding climate adaptation knowledge throughout the organization, enabling more informed decisions and fostering resilience across all business functions.

14

Correct: B

Explanation: Using surveys to measure staff knowledge and engagement, along with capacity audits to evaluate governance, policies, staffing and budget alignment with climate goals, provides a comprehensive method for assessing readiness. This approach captures both institutional systems and human capacity, ensuring that the FI can effectively scale its climate adaptation finance in a structured and informed way.

15

Correct: B

Explanation: HR plays a strategic role in enabling long-term institutional capacity for climate adaptation finance by embedding climate-related competencies into HR systems, fostering a culture of engagement, and aligning efforts across departments. Despite challenges such as low awareness or resistance to change, HR helps drive internal transformation by supporting training, recruitment and performance management practices that reflect climate adaptation goals.

GLOBAL
CENTER ON
ADAPTATION

Global Center on Adaptation
Antoine Platekade 1006
3072 ME Rotterdam
The Netherlands
+31 88 088 6800

www.gca.org