

INPUT INDICATORS

Measure the resources required to deliver

- Existence of a company-wide disclosure policy on climate adaptation
- % of assets covered by disclosed adaptation data
- Membership in recognized reporting frameworks (e.g., TCFD, GRESB, CDP)

LEADING INDICATORS

Looks forward at future outcomes and events

- Frequency of reporting updates (annual, biannual)
- Inclusion of adaptation KPIs and resilience case studies in public reports
- Stakeholder engagement sessions organized around adaptation progress

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Improvement in ESG or GRESB scores related to climate adaptation
- Increase in investor or tenant confidence (measured via survey or retention)
- Reduced exposure to climate-related litigation or compliance risk

KPIs

Showcase Demonstration Projects and Build Toolkits for Replication

Goal: Drive systemic change by scaling resilience pilots into demonstration projects and codifying lessons learned for sector-wide adoption.

Description: Developers should expand successful resilience pilots into **flagship demonstration projects** that illustrate how adaptation can be both profitable and scalable. These projects serve as proof points that influence policy, attract financing, and inspire peers across the sector. Beyond implementation, developers should **codify successful approaches into toolkits or playbooks** that translate project lessons into practical guidance for others. Sharing these toolkits with industry peers, associations, and policymakers accelerates sector-wide learning, reduces uncertainty, and reinforces developers' leadership role as innovation drivers.

- [Sustainable and Affordable Housing](#) (World Green Building Council (WGBC) Report) contains case studies of affordable (including Global South) housing that is sustainable/resilient—developers can draw from these as demonstration projects and source inspiration for toolkits.
- [Can Africa afford green and resilient housing?](#) Edge-cases from across the continent (AUHF paper) Specific to Global South context (Africa), this study provides demonstration-type examples of resilient housing projects and financing models, highly relevant when scaling pilots.

Action 2

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Existence of a documented resilience playbook or case study portfolio shared internally or publicly

LEADING INDICATORS

Looks forward at future outcomes and events

- Number of external presentations, publications, or partnerships to share lessons learned

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Evidence of peer or partner replication of your company's resilience methods

KPIs

Invest in Mixed-Income, Resilient Housing

Goal: Embed adaptation strategies into affordable and rental housing to promote equity, resilience, and inclusive climate action.

Description: Developers should integrate resilience features such as passive cooling, flood-proof design, fire buffers, and water-efficient systems into mixed-income housing projects, ensuring that affordable and rental housing is not left behind in the adaptation transition. This approach addresses equity concerns by protecting vulnerable populations, reduces regulatory and reputational risks, and meets the growing demand from communities, policymakers, and investors for just and inclusive climate action.

Mixed-income, resilient housing also strengthens community resilience by distributing adaptive infrastructure (green roofs, stormwater systems, shared cooling centers) across diverse neighborhoods. By making resilience a core investment priority in affordable housing portfolios, developers contribute to long-term social stability while future-proofing assets in line with both climate and social goals.

- The [Operational Toolkit on the Use of EU Funds for Social and Affordable Housing & Accompanying Services](#) (European Commission) helps developers navigate financing, procurement, partner or government funding “stack”, and also contains case studies. Useful when embedding resilience features into mixed-income projects and aligning with policy and pricing levers.
- [Mixed-Income Housing Development Planning Strategies and Frameworks in the Global South](#) (Onatu et al., 2024) focuses explicitly on mixed-income housing in the Global South; useful for developers investing in inclusive/resilient housing to ensure equity, scale and adaptation features.
- [Improving sustainability of affordable housing using innovative design](#) (Scientific African, 2023) in South Africa deals with how resilient design features (passive cooling, water efficiency) can be integrated into affordable housing in a Global South context.
- [Mixed-Income Housing \(MIH\)](#) : this chapter of Sustainable Cities and Communities lays foundational concepts, typologies and governance issues around mixed-income housing in Global North settings and can inform a developer-toolkit’s governance/supply-side sections.
- [Mixed-Income, Purpose-Built Rental](#) (EY Canada Housing Research) includes policy-lever mapping for mixed-income housing in Canada. Good basis for a developer toolkit section on ‘financial model and resilience premium’ for mixed-income resilient housing.
- [Toolkit for Affordable Housing Policy](#) (European Commission / FUTURIUM) is useful for the policy & project-briefing for governance, procurement frameworks, institutional partnerships, mixed-tenure models. Helps embed resilience by showing how to align with policy and regulation and mixed-income delivery frameworks.

INPUT INDICATORS

Measure the resources required to deliver

- % of portfolio or pipeline projects dedicated to mixed-income or affordable developments integrating resilience

LEADING INDICATORS

Looks forward at future outcomes and events

- Share of resilient housing projects benefiting from blended finance or public-private funding

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Reduction in displacement or vulnerability among tenant populations in completed projects

Action 3

Resources

KPIs

FINANCIAL & INSURANCE INSTITUTIONS & DEVELOPMENT BANKS

Who is this
pathway for?

This pathway is designed for public and private financial institutions, commercial and development banks, multilateral lenders, insurers, and reinsurers involved in financing, underwriting, and supporting the buildings and construction sector. It targets professionals working in sustainable finance, risk management, product innovation,

and policy alignment. The pathway provides a structured approach to integrating climate risk and adaptation into lending criteria, investment decisions, and insurance products, ensuring long-term resilience and market stability.

<p>Climate change represents a systemic financial risk. Floods, wildfires, heatwaves, and storms cause mounting asset losses, threaten collateral values, and disrupt business continuity, leading to cascading impacts on lending and insurance portfolios. For insurers and reinsurers, the increasing frequency and intensity of</p>	<p>climate hazards destabilize models built on historical data, making risk pricing unreliable and driving up claims. For financial institutions, property devaluation and stranded assets threaten balance sheets and investor confidence. Adaptation in the building sector therefore becomes a matter of financial stability, not only</p>	<p>environmental stewardship. Resilient buildings lower exposure to loss, protect returns, and maintain insurability. Financial and insurance institutions have the leverage to shift markets by aligning investment flows, insurance products, and credit conditions with resilience goals.</p>	<p>By embedding adaptation into project screening, disclosure, and pricing, they can de-risk portfolios, foster innovation, and mobilize capital for climate-ready development, supporting both national commitments and global frameworks like the Chailot Declaration and the Paris Agreement.</p>
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Align capital flows to make resilience a driver of value, not just compliance.

<p>Today, adaptation is often treated as a disclosure item, not a performance driver. In the short term, institutions must build internal</p>	<p>climate-risk expertise and adopt adaptation screening tools. Medium term, they should embed resilience into financing, insurance,</p>	<p>and taxonomy frameworks. Long term, they must steer capital systematically toward adaptive assets, making</p>	<p>resilience a prerequisite for value creation and a safeguard of financial stability.</p>
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FINANCIAL & INSURANCE INSTITUTIONS & DEVELOPMENT BANKS

Short-Term Actions

Actions	Resources & case studies	KPIs
Finance Early Warning Systems	WHO Framework for addressing the interconnectedness of early warning to action and finance to strengthen multiscale institutional responses to climate shocks and disasters	Number of early warning or climate information systems financed, supported, or insured
Establish Specific Financing and Insurance Schemes	Building Financial Instruments for Climate Adaptation (CPI)	Total value of capital deployed through resilience-oriented instruments
Build Capacity to Assess Adaptation and Resilience in Portfolios	Practical Guidance on Implementing Adaptation and Resilience for Banks (UNEP FI)	% of financed or insured projects screened for physical climate risks

Medium-Term Actions

Actions	Resources & case studies	KPIs
Align All Financing with Climate Mitigation and Adaptation Goals	Guide for Adaptation and Resilience Finance (UNDRR)	% of new loans or investments passing adaptation and mitigation screening
Integrate Risk Assessment and Hazard Exposure Analysis in Insurance Underwriting	Implementation of Climate-related Adaptation Measures in Non-Life Underwriting (EIOPA)	% of clients benefiting from reduced premiums or interest rates after implementing adaptation actions
Design Inclusive Financing and Risk-Sharing Mechanisms to Scale Climate Resilience	Mobilising Adaptation Finance to Build Resilience (Climate Financial Risk Forum)	Volume of blended finance operations for resilient infrastructure and retrofits

Long-Term Actions

Actions	Resources & case studies	KPIs
Adopt Shadow Pricing for Climate Risk	Pricing of Climate Risks in Financial Markets (BIS)	% of investment or lending decisions applying shadow climate risk pricing
Develop Taxonomies for Green and Resilient Investments	Sustainability Risk Tool Dashboard (UNEP FI)	% of new financing tagged or classified under taxonomy categories
Create a Centralized Climate Data and Risk Assessment Platform	Project Viridis (BIS)	Number of internal teams or external partners using the data platform for risk assessment

Short-term actions

Finance Early Warning Systems

Goal: Support the development and maintenance of early warning systems for climate hazards.

Description: Financial institutions and insurers should create dedicated funding mechanisms such as grants, blended finance, or risk-pooling instruments to deploy and sustain early warning systems. By partnering with governments and technology experts, these systems can be scaled effectively, enabling timely responses to extreme weather events. Reliable early warnings improve community preparedness, reduce losses, and foster a proactive culture of risk management across the sector.

- This WHO [Framework for addressing the interconnectedness of early warning to action and finance to strengthen multiscale institutional responses to climate shocks and disasters](#) provides a conceptual framework linking EWS to finance and action. Helps insurers/DFIs understand how to structure funding mechanisms tied to EWS outcomes.
- [The Road to Banking Resiliency and Adaptation: Early Warning Systems and Scenarios Analysis](#) (Moody's): Focuses on the role of banks in resilience and early warning; relevant for insurers and lenders looking to support EWS through financing and risk-pooling instruments.

INPUT INDICATORS

Measure the resources required to deliver

- Budget share or total funding committed to early warning and risk monitoring systems

LEADING INDICATORS

Looks forward at future outcomes and events

- Number of early warning or climate information systems financed, supported, or insured

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Reduction in insured or financed losses in areas covered by early warning systems

Action 1

Resources

KPIs

Establish Specific Financing and Insurance Schemes

Goal: Create dedicated financial products and insurance options that incentivize resilient construction and renovations, especially for vulnerable communities and high-risk projects.

Description: Financial institutions, insurers, and development banks should take the first step toward mainstreaming adaptation finance by designing specific schemes that directly reward resilience. These may include resilience bonds that channel capital into adaptation projects, grants or low-interest loans for retrofitting vulnerable buildings, or subsidized insurance products for developments that integrate climate-adaptive features. Thus, financial actors reduce risks for investors and developers, encourage experimentation with resilient materials and designs, and begin shifting market expectations. Governments and regulators can support by offering guarantees or co-financing, while developers and project owners must actively integrate resilience to qualify.

Action 1

- This [Essential Guide to Climate Finance](#) by the Climate Finance Resource Center can serve as a basis to apprehend new financing models.
- [Guide for Adaptation and Resilience Finance](#): United Nations Office for Disaster Risk Reduction (UNDRR) lays out what constitutes adaptation/resilience finance, lists 100+ investable activities, and helps financial institutions design lending/insurance products targeted at adaptation.
- [Building Financial Instruments for Climate Adaptation](#) (CPI) offers key lessons on structuring adaptation-focused instruments (bonds, blended finance) and shows how to create viable schemes that incentivise resilient construction and renovation.
- [Case study](#) by Banque de France of French insurers facing climate change risk and where they stand in implementing new resilience requirements.
- OECD's [Enhancing the insurance sector's contribution to climate adaptation](#) examines the contribution of the insurance sector to climate adaptation and explores new approaches.
- This [Insurance for Climate Adaptation](#) report by the Global Commission on Adaptation makes recommendations to maximize the benefits of insurance for climate adaptation.
- [The adaptation of real estate: what roles can the financial sector play?](#) by the Institute for Climate Economics (I4CE) explores how financial institutions such as banks, insurers, and asset managers can accelerate the adaptation of real estate to climate risks
- The European Central Bank and EIOPA introduced a [two-pillar mechanism](#) aimed at reducing the financial impact of climate-related disasters. The proposal outlines an EU-level reinsurance scheme to cover private losses and a reconstruction fund dedicated to public infrastructure recovery. Both mechanisms are designed to operate under preventive conditions, reinforcing the importance of proactive adaptation and risk reduction measures across Member States.

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Number of new financial or insurance products designed to support adaptation (e.g., resilience bonds, parametric insurance, retrofit loans)
- Existence of frameworks or pilot programs for community-level financing (e.g., cooperative insurance, risk pools)

LEADING INDICATORS

Looks forward at future outcomes and events

- Total value of capital deployed through resilience-oriented instruments
- Number of local partnerships (municipalities, CSOs, SMEs) with active financial or insurance products in place

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Increase in the number of beneficiaries or assets protected by adaptation-related financial products
- Documented improvement in post-event recovery speed or coverage for vulnerable groups

KPIs

Build Capacity to Assess Adaptation and Resilience in Portfolios

Goal: Integrate adaptation considerations into day-to-day financial operations.

Description: Banks, insurers, and development finance institutions should train staff, update tools, and create internal standards for evaluating adaptation measures. This includes the ability to assess resilience investments, track adaptation outcomes, and disclose climate risks.

- [Practical Guidance on Implementing Adaptation and Resilience for Banks](#) (UNEP FI, 2025): a specific roadmap for banks regarding strategy, assessment and action around adaptation/resilience including staff training, updating internal tools and governance.
- [Integrating adaptation and resilience into transition plans](#) (Network for Greening the Financial System, NGFS) highlights how financial institutions can embed adaptation into their transition planning, assess counterparties' resilience, and align portfolios accordingly.
- [Strengthening Financial Systems for Climate Adaptation](#) (CGAP). Although with strong global-south focus (incl. low-income & vulnerable segments), this is valuable for insurers and DFIs who aim to build capacity and upgrade systems for portfolio screening, vulnerability assessment and inclusive risk finance.

Action 3

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Adoption of mandatory adaptation risk screening procedures in investment policies

LEADING INDICATORS

Looks forward at future outcomes and events

- % of financed or insured projects screened for physical climate risks

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Reduction in portfolio exposure to high climate-risk assets

KPIs

Medium-term actions

Align All Financing with Climate Mitigation and Adaptation Goals

Goal: Ensure that all investment and lending decisions support both climate change mitigation and adaptation goals by gradually reducing or stopping financial support for projects in high-risk areas or that do not prioritize resilience measures.

Description: Develop criteria to assess projects based on their alignment with climate goals, particularly in areas prone to flooding, fires, or extreme weather. Institutions must conduct climate screening of all projects for their mitigation and adaptation alignment (Paris Agreement compliant). This includes reducing financing for non-adapted or high-risk projects, particularly in hazard-prone zones (e.g. floodplains, wildfire regions) and prioritizing funding for projects that incorporate adaptive, low-carbon, and sustainable practices. This action creates a clear market signal, shifts capital flows, and de-risks the sector over time.

- [Guide for Adaptation and Resilience Finance](#) (UNDRR, 2024) provides a clear framework of what qualifies as adaptation/resilience finance, a list of 100 investable activities, and screening criteria. Useful for banks and DFIs designing lending portfolios aligned with mitigation and adaptation.
- The Network for Greening the Financial System (NGFS) [Adaptation Task Force](#) provides regulatory & supervisory insight on how adaptation finance should be integrated in financial systems, enabling institutions to align financing with adaptation/mitigation goals and regulatory expectations.

Action 1

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Existence of a formal climate alignment policy (Paris Agreement, Net-Zero, or Adaptation Roadmap)
- % of portfolio screened for physical climate risk and resilience
- % of staff trained on climate risk assessment and adaptation finance

LEADING INDICATORS

Looks forward at future outcomes and events

- % of new loans or investments passing adaptation and mitigation screening
- % of project rejections or reclassifications due to high climate exposure
- Number of financed projects with climate adaptation components (e.g., resilient infrastructure, floodproof assets)

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- % of total assets aligned with climate mitigation and adaptation targets
- Reduction in portfolio exposure to physical climate risks (e.g., floodplains, wildfire zones)
- Improvement in credit ratings or insurance premiums for adapted assets
- Share of financing directed to certified climate-resilient or sustainable projects

KPIs

Integrate Risk Assessment and Hazard Exposure Analysis in Insurance Underwriting

Goal: Adjust insurance premiums and coverage on detailed assessments of climate risks and resilience measures implemented in properties and projects and reward proactive risk-reduction efforts.

Description: Mandate comprehensive risk assessments for properties seeking insurance, assessing exposure to relevant hazards and adaptation measures in place. Premiums should reflect the level of risk reduction and resilience investments made by property owners, with higher premiums for high-risk properties lacking adaptation features. This approach integrates risk transfer and incentive mechanisms. Ultimately, insurers may withdraw coverage of institutional clients where risks are too high and unmanaged.

- [Assessing Climate Risk for the Insurance Industry](#) (UNFCCC, 2018): While older, it gives core methodologies for hazard exposure and risk assessment for insurers (both in Global North & South). Useful baseline when designing underwriting criteria.
- [Impact Underwriting – Implementation of Climate-related Adaptation Measures in Non-Life Underwriting](#) (European Insurance and Occupational Pensions Authority (EIOPA), 2023): Focuses on how insurers can embed adaptation measures into underwriting (e.g., flood-resistant walls, premium discounts), adjust premiums based on hazard exposure & resilience investment

INPUT INDICATORS

Measure the resources required to deliver

- Integration of risk-based incentives into insurance pricing or lending conditions

LEADING INDICATORS

Looks forward at future outcomes and events

- % of clients benefiting from reduced premiums or interest rates after implementing adaptation actions

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Reduction in cumulative insured losses or loan defaults related to climate events

Design Inclusive Financing and Risk-Sharing Mechanisms to Scale Climate Resilience

Goal: Mobilize capital for climate adaptation through financial tools and partnerships that make resilience investments accessible, affordable, and context-appropriate while equitably distributing risk and responsibility.

Description: Create adaptation-focused financing mechanisms and locally tailored risk-sharing models. This involves working in close partnership with governments, municipalities, and civil society to design context-specific financial products such as low-interest loans, tax credits, co-insurance pools, and public-private co-financing schemes, that lower barriers to investment in resilient infrastructure and retrofits. These solutions must reflect regional risk profiles, socio-economic realities, and institutional capacities, and should be developed in tandem with the operationalization of policy reforms. By structuring financing that acknowledges unequal capacities to act (particularly in underserved or high-risk areas) these mechanisms ensure that the costs and responsibilities of adaptation are equitably shared.

- [Guide for Adaptation and Resilience Finance](#) (UNDRR, 2024) includes enabling mechanisms and criteria for instruments like adaptation loans, blended finance, guarantees.
- [Mobilising Adaptation Finance to Build Resilience](#) (Climate Financial Risk Forum, 2024) is designed by industry players (banks, insurers, development banks) to structure adaptation-finance instruments, focusing on scaling. Helpful when creating partnerships/ government risk-sharing models.
- [Climate adaptation finance: The challenge for investors and banks](#) (World Economic Forum, 2024) focuses on barriers and opportunities for adaptation finance, including global-south contexts (underserved markets, high risk zones). Useful when designing inclusive financing and risk-sharing mechanisms.

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Number of partnerships or co-financing arrangements with public bodies for climate resilience

LEADING INDICATORS

Looks forward at future outcomes and events

- Volume of blended finance operations for resilient infrastructure and retrofits

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Increase in total private sector leverage ratio for adaptation finance

KPIs

Long-term actions

Adopt Shadow Pricing for Climate Risk

Goal: Incorporate the hidden costs of climate risk into financial decision-making.

Description: Financial institutions should integrate shadow pricing into ROI models by factoring in potential damage costs, insurance losses, and asset depreciation linked to climate hazards. By assigning an internal value to these risks, investors and lenders encourage the selection of more resilient projects and disincentivize investments in vulnerable locations. Over time, this practice helps align capital flows with long-term adaptation needs and reduces systemic exposure to climate-related losses.

Action 1

- [The Shadow Price of Carbon in Economic Analysis](#) (World Bank, 2024). While focussed on carbon, this guidance helps institutions internalize externalities (i.e., the hidden costs of climate risk) into investment appraisals. It gives a template for shadow pricing of risk.
- [Pricing of Climate Risks in Financial Markets: A Summary of the Literature](#) (Bank for International Settlements (BIS) Papers No. 130, 2021) provides evidence that many assets are under-priced for climate risk; useful background when building internal shadow-pricing models.
- [Climate risk mispricing: Why better assessments matter in financing for development](#) (CIDOB Policy Brief, 2025). Focuses explicitly on development finance institutions and the need to integrate climate risk in emerging markets
- [Scenario-analysis example](#) by Bank of England covering asset-level climate risk via scenario modelling.

Resources

INPUT INDICATORS

Measure the resources required to deliver

- Existence of internal guidance or model for pricing climate-related losses in investment evaluations

LEADING INDICATORS

Looks forward at future outcomes and events

- % of investment or lending decisions applying shadow carbon and climate risk pricing

LAGGING INDICATORS

Looks back at whether the intended result was achieved

- Improved resilience-adjusted ROI across portfolio

KPIs