
Masterclass on Climate Adaptation Finance

Introduction



GLOBAL
CENTER ON
ADAPTATION



BANK OF TANZANIA ACADEMY

A3BEL

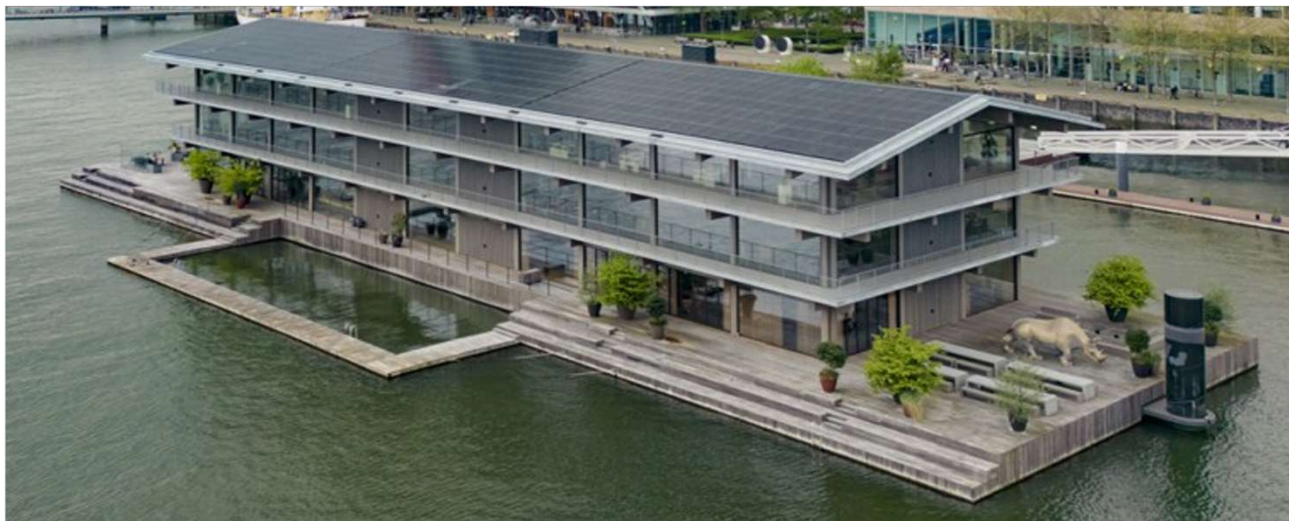


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Global Center on Adaptation



The **Global Center on Adaptation (GCA)** is an international organization that acts as a solutions broker to accelerate global action for climate adaptation solutions, from the international level to the local, in partnership with the public and private sectors, to ensure we learn from each other and work together for a climate-resilient future.



GCA Global office, Rotterdam, the Netherlands

VISION

Adaptation to a changing climate securing progress towards sustainable development, safeguarding people, the planet and our shared prosperity.

MISSION

Accelerate action for climate adaptation, from the global to the local, working with international financial institutions and national partners across financial streams.

GCA Africa Adaptation Acceleration Program (AAP): scaling up **climate adaptation**



Work Stream 1: MDB investment projects

- Mainstreaming adaptation into MDB investment projects
- Project pipeline development



Work Stream 2: IMF Resilience and Sustainability Facility

- Financial system and policy reform



Work Stream 3: Direct access to global climate finance

- (Re)accreditation and proposal preparation (GCF)
- Locally Led Adaptation: 'People's Adaptation Investment Plans'



Work Stream 4: Domestic private sector

- Scaling financial service provider participation in climate adaptation
- YouthAdapt incubation grants for adaptation enterprises

GCA Climate Adaptation Finance Program



Enabling Environment

Supporting Financial System Policy Reform

Policy measures implementation under the IMF's Resilience and Sustainability Facility (RSF)

Supply side

Technical Assistance for African financial institutions

De-risk Adaptation Capital

AFAC- Climate resilient enhancement

Portfolio de-risking & Adaptation Investment Strategy

Green Climate Fund proposal design for Equity

Climate risks and adaptation mainstreaming in Guarantees



Demand side

Build the Adaptation Finance Business Case

Market Analyses of Adaptation Solutions

Pan-Africa YouthADAPT Challenge

Identify & build the investment case for select Adaptation solutions in 4 African markets

Challenge to showcase youth-led MSMEs and innovators in Adaptation across 5 African countries

Advocacy & Capacity Building

Capacity Building on Adaptation Finance

Advocacy for Policy Change & Market Coordination

Handbook and Masterclass for Financial Institutions

Africa Business Adaptation Alliance



The Masterclass on Climate Adaptation Finance



Purpose: Global Center on Adaptation (GCA) and European Bank for Reconstruction and Development (EBRD) in partnership with Frankfurt School of Finance & Management, RebelGroup, and Haskoning develop the Masterclass to engage the private sector in climate adaptation finance, unlocking market growth, protecting portfolios, and creating long-term value through innovative tools. The Masterclass positions adaptation as both a strategic opportunity and a risk management priority.

The Masterclass is built on the **Handbook for Financial Institutions: Climate Adaptation Finance**. The 6-module Handbook equips financial institutions (FIs) with understanding and knowledge of physical climate risks and bankable adaptation investments that build resilience, align with national priorities, and benefit millions of people.

M1: Rationale for Investing in Adaptation

M2: Understanding Climate Change Science: what FIs must know

M3: Fundamental Climate Risk Modeling for FIs

M4: Adaptation Needs, Finance Solutions & Tools

M5: Climate Adaptation Product and Pipeline Development in FIs

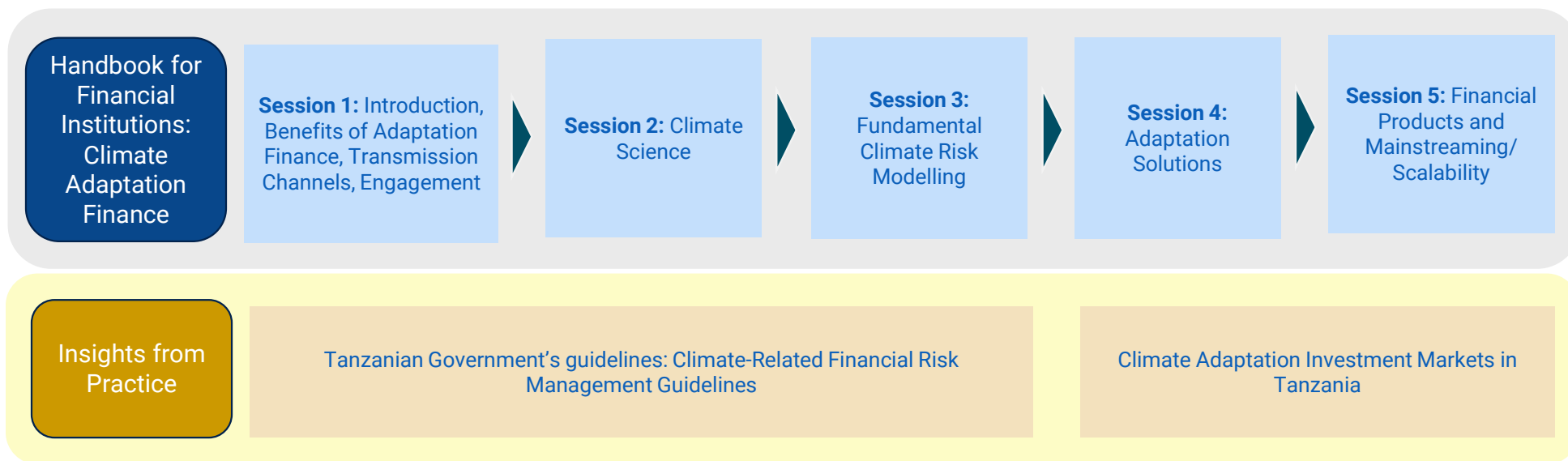
M6: Stakeholder Engagement and Policy Support for Scalable Climate Finance

Structure of the Online Masterclass



This Online Masterclass on Climate Adaptation Finance was developed specifically for financial institutions in Tanzania through a partnership between the Bank of Tanzania (BoT) via the BoT Academy, and the Global Center on Adaptation (GCA). The Masterclass is a part of the BoT Academy's training programs to strengthen the capacity of Tanzania's financial institutions to manage climate risks in line with the BoT's guidelines and to scale climate finance for a more resilient national financial sector.

In addition to five theoretical sessions, the Masterclass is enriched with practical insights drawn from the Government of Tanzania's guidelines and real-life local climate adaptation investment opportunities, enabling participants to translate theory into practice.



Introductions of GCA's partners



Frankfurt School of Finance & Management gGmbH is Germany's leading private business school with Triple Crown Accreditation, offering degree programs, research, executive & professional education, and consulting in sustainable finance worldwide, with campuses in Germany, offices abroad, and partnerships with and projects in over 125 countries.



RebelGroup is a values-driven strategic consultancy and hands-on investor operating at the nexus of public and private sectors, delivering honest, evidence-based advice and carrying projects through implementation and investment to create meaningful societal impact. Rebel specialize in sectors such as renewable energy, social infrastructure, housing, mobility, and healthcare.



Haskoning is an international engineering and project management consultancy with 140 years of experience and more than 6,800 professionals across offices in more than 25 countries worldwide. Haskoning combines engineering, design, consultancy, software, and technology to deliver future-proof solutions across all infrastructure sectors.

Trainer team



Christine Grüning, Ph.D.
Adaptation Finance Expert

15 years of global experience in the adaptation finance, climate finance & policy, environmental economics



Marcel Ham
Climate-Resilient Finance Expert

25 years of global experience in finance, including infrastructure PPPs and adaptation-aligned financing



Danilo Amaral Cançado
Climate Adaptation and Resilience Expert

8 years of experience in climate adaptation and infrastructure projects in Africa, Asia, Latin America and Caribbean. Certified Climate Finance Expert.

Masterclass on Climate Adaptation Finance

Session 1: Introduction, benefits of adaptation finance, transmission channels, engagement



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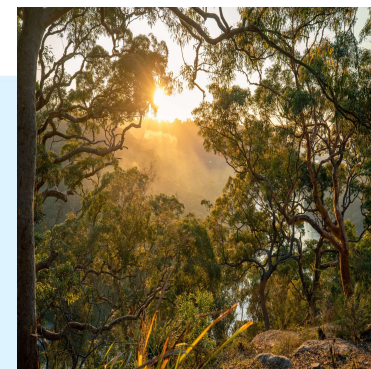
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Context for the Masterclass

Climate change and climate-related risks are no longer distant threats. They are **material, immediate, and profoundly reshaping the landscape** in which financial institutions operate. For financial institutions, particularly those active in climate-vulnerable regions, investing in adaptation is not only a matter of managing risk, but also a strategic imperative for protecting portfolios, capturing new market opportunities, and sustaining long-term value creation in an increasingly volatile world. This session also examines how financial institutions can shape the enabling environment for adaptation finance by engaging with key stakeholders across public, private, and civil society sectors. Participants will explore how collaboration with governments, regulators, and ecosystem actors can reduce investment barriers, align efforts with national climate policies, and support policy and regulatory reform.

Learning outcomes Session 1

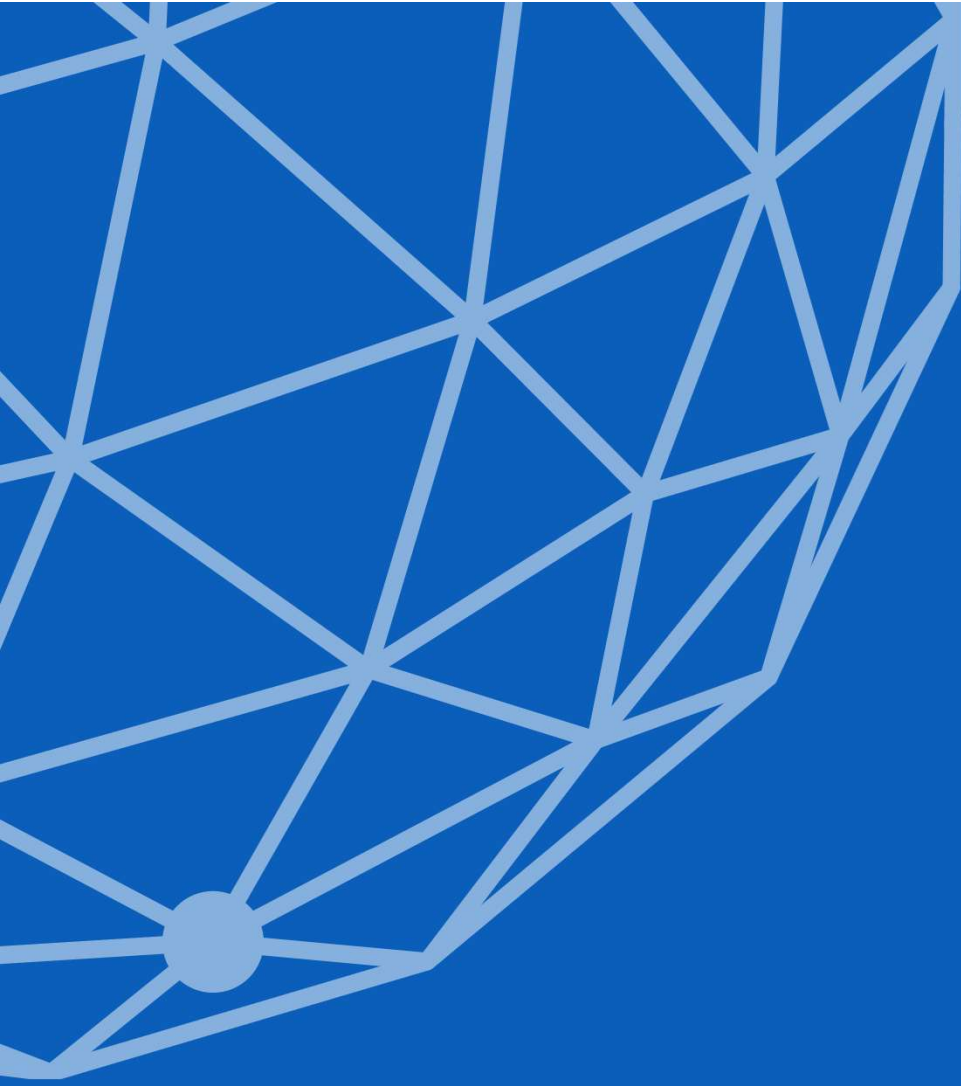
- *Recognize the urgency of climate adaptation, key climate risks, and their material financial impacts for institutions and clients*
- *Differentiate between mitigation and adaptation*
- *Familiarize with key stakeholders involved in climate adaptation finance, including public, private, and civil society actors*
- *Understanding stakeholder mandates, financing roles, and relevance to FIs' adaptation finance efforts*



Module 1 – Investing in
Adaptation



Module 6: Aligning Ambition and
Action – Stakeholder
Engagement and Policy Support
for Scalable Climate Finance



Session 1

Mitigation and adaptation action as a financial imperative

Adaptation as a business opportunity

Exposure of FIs Clients to Climate Risks

Risk transmission channels: from clients to financial risk types

Role of Financial Institutions in shaping the Environments for AF

Engaging with key stakeholder

Climate change impacts in Tanzania



Why action matters – Example of Tanzania



1%

...of GDP per year is the estimated total cost of drought events in Tanzania.

USD 200 M

...in estimated agricultural economic losses from climate change impacts every year.³

27.7%

...of Tanzania's population is already facing at least one climate change-related risk (and this percentage reaches 29.4% in vulnerable groups).

4%

...is the rate by which climate change could slow economic growth in the country by 2050.

11%

...is the projected reduction in livestock productivity by 2050 if Tanzania does not adapt to climate change.

USD 216 M

...is the potential physical damage per year to transport infrastructure assets (roads and bridges) by 2050.

International Monetary Fund. (2024). United Republic of Tanzania. IMF Country Report No. 24/349, Fourth Review. <https://www.imf.org/en/-/media/files/publications/cr/2024/english/1tzaea2024002-print-pdf.pdf>
World Bank Group. (2025). Climate Change Knowledge Portal – Tanzania. <https://climateknowledgeportal.worldbank.org/country/tanzania/natural-disasters-historical>.
World Bank (2024). Country Climate Development Report – Tanzania. . <https://www.worldbank.org/en/country/tanzania/publication/ccdr>
GIZ. (2021). Climate Risk Profile: Tanzania. https://www.adaptationcommunity.net/wp-content/uploads/2021/02/GIZ_Climate-Risk-Profile-Tanzania_EN_final.pdf.
Irish Aid. (2018). Tanzania Country Climate Change Risk Assessment Report. <<https://www.iied.org/sites/default/files/pdfs/2023-11/22086g.pdf>>

Essential and mutually reinforcing strategies to address climate change



Climate change mitigation

A human intervention to reduce emissions (sources) or enhance the sinks of greenhouse gases (GHGs).

Example of a climate change mitigation action:

Generate energy from solar panels instead of from diesel generators.



Climate change adaptation

The process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities.

Example of a climate change adaptation action:

Investment in cold storage facilities to reduce post-harvest losses and protect farmers' income against higher temperatures and supply chain disruptions.



Examples of adaptation investment opportunities



Resilient agriculture: drought-resistant crops, water-efficient irrigation, improved livestock management.



Water security: rainwater harvesting, water reuse and closed-loop water systems.



Infrastructure resilience: climate-proof roads, bridges, housing, and energy systems.



Ecosystem-based adaptation: wetland restoration from saltwater intrusion, coastal protection measures.



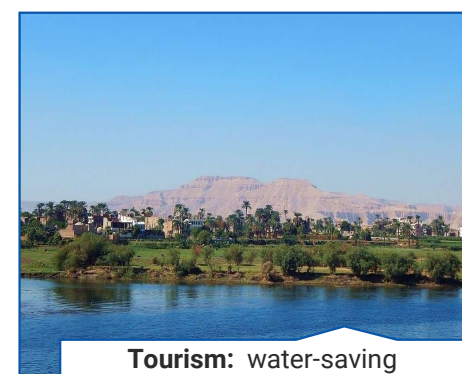
Forestry & Ecosystems: afforestation (sustainable tree growth for manufacturing).



Urban adaptation: green spaces, cooling infrastructure, improved drainage for flood management.



Social safety nets: insurance schemes, financial packages for food commodities, capacity and awareness of communities.



Tourism: water-saving measures in hotels, responsible water use in tourism sector, waste and pollution control.

Quiz Question



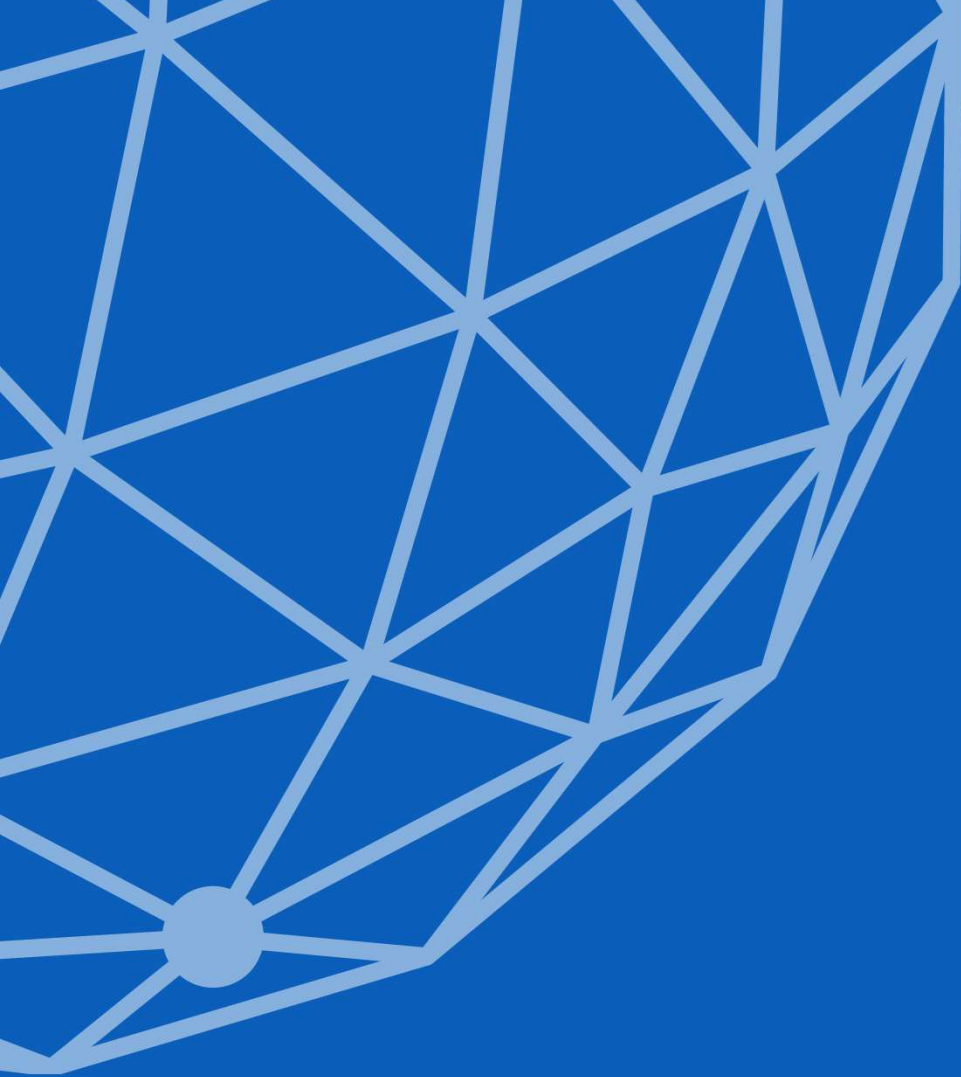
A city is facing hotter summers every year. The local government decides to plant shade trees along streets to cool down sidewalks and public spaces

A) Mitigation (reduces or prevent greenhouse gas emissions).

B) Adaptation (reduces vulnerability or increases resilience to climate Impacts)

C) Neither (not directly related to mitigation or adaptation)

Adaptation is the correct answer. Planting shade trees helps people cope with the existing and increasing heat caused by climate change. The trees cool sidewalks and public spaces, reducing heat stress and making the city more livable, but they do not directly reduce greenhouse gas emissions. This action increases resilience to climate impacts rather than preventing climate change itself.



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How FIs Can Engage



Financing others' climate adaptation efforts, e.g. finance clients' adaptation investments or government-led adaptation efforts



Internal climate adaptation measures e.g. retrofit branches and strengthen business continuity systems



Catalyzing systemic change e.g. by promoting climate adaptation across the financial ecosystem and supporting global climate goals



Internal enabling activities e.g. enabling activities, like integrating climate risk into lending and adopting disclosure standards should be implemented in line with BoT's **Guidelines on Climate-Related Financial Risks Management and Disclosures (2025)** and the **Guidelines on Reporting of Sustainability-Related Risks and Opportunities for Banks and Financial Institutions (2025)**.

Why Finance Climate Adaptation? The benefits

Wider benefits of investing in adaptation for Commercial Financial Institutions



Risk Mitigation

Protects portfolios by reducing defaults, asset losses, and climate-related disruptions

Builds Resilience & Position as a leader

Enhances long-term stability and establishes leadership in sustainable finance by driving investment in adaptation

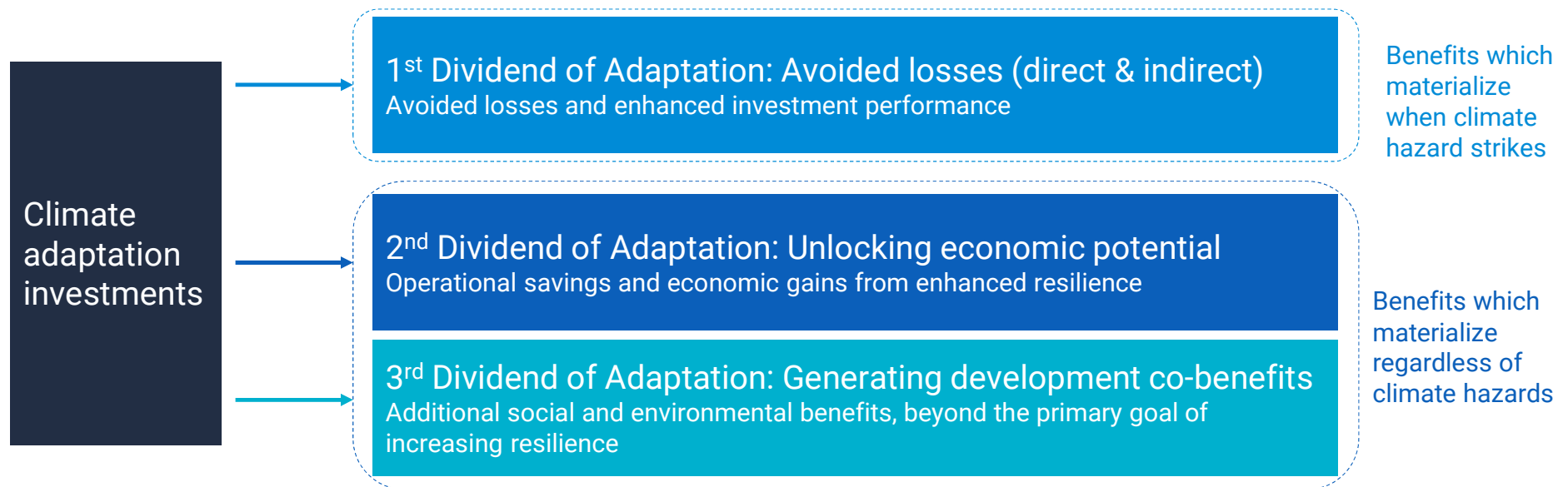
Generates Returns/reduces costs

Creates profitable products while optimizing operational efficiency

Unlocks Capital

Expands funding opportunities and access to climate-aligned finance

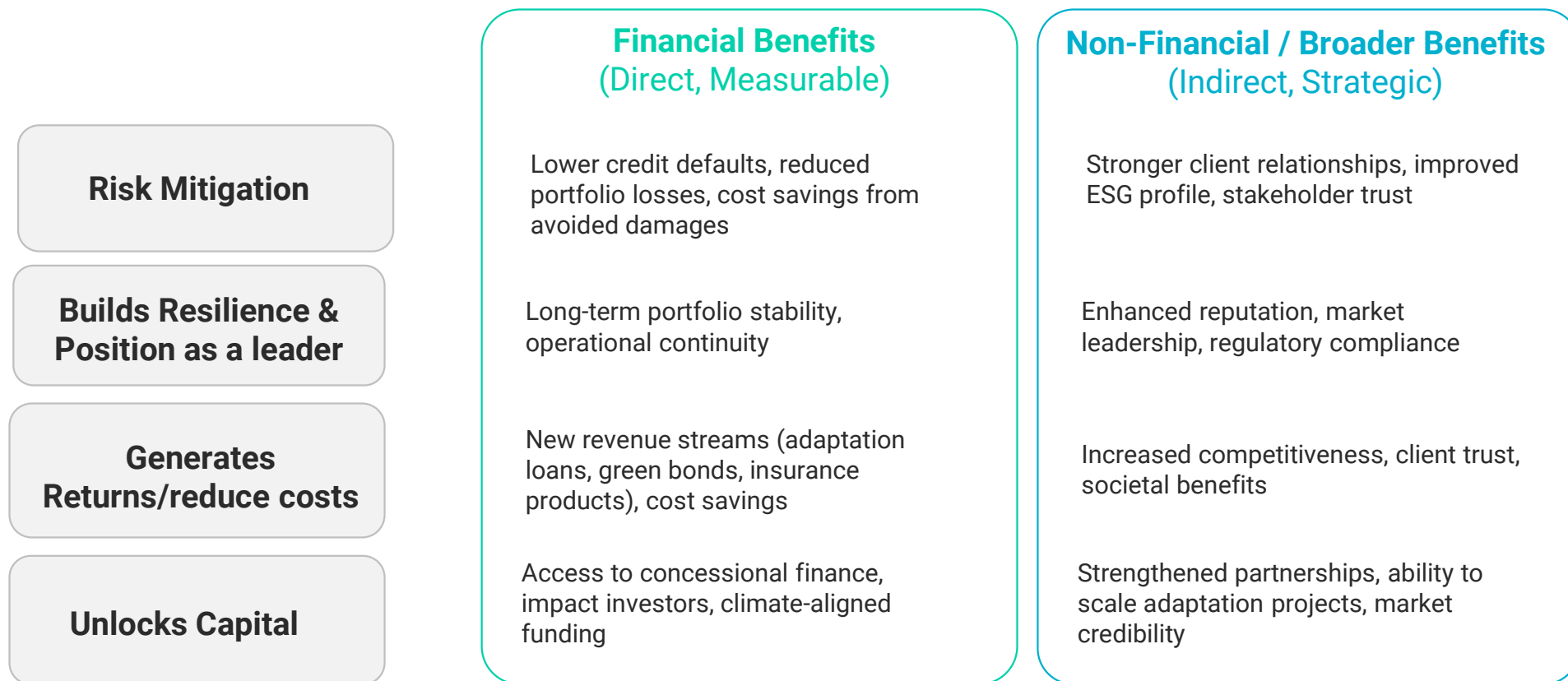
The Triple Dividend



Why finance climate adaptation? The benefits



Financial and non-financial benefits of investing in adaptation for Commercial Financial Institutions



Quiz Question

What is meant by the "triple dividend" of investing in climate adaptation?

A) Increased profits, reduced taxes, and faster project delivery.

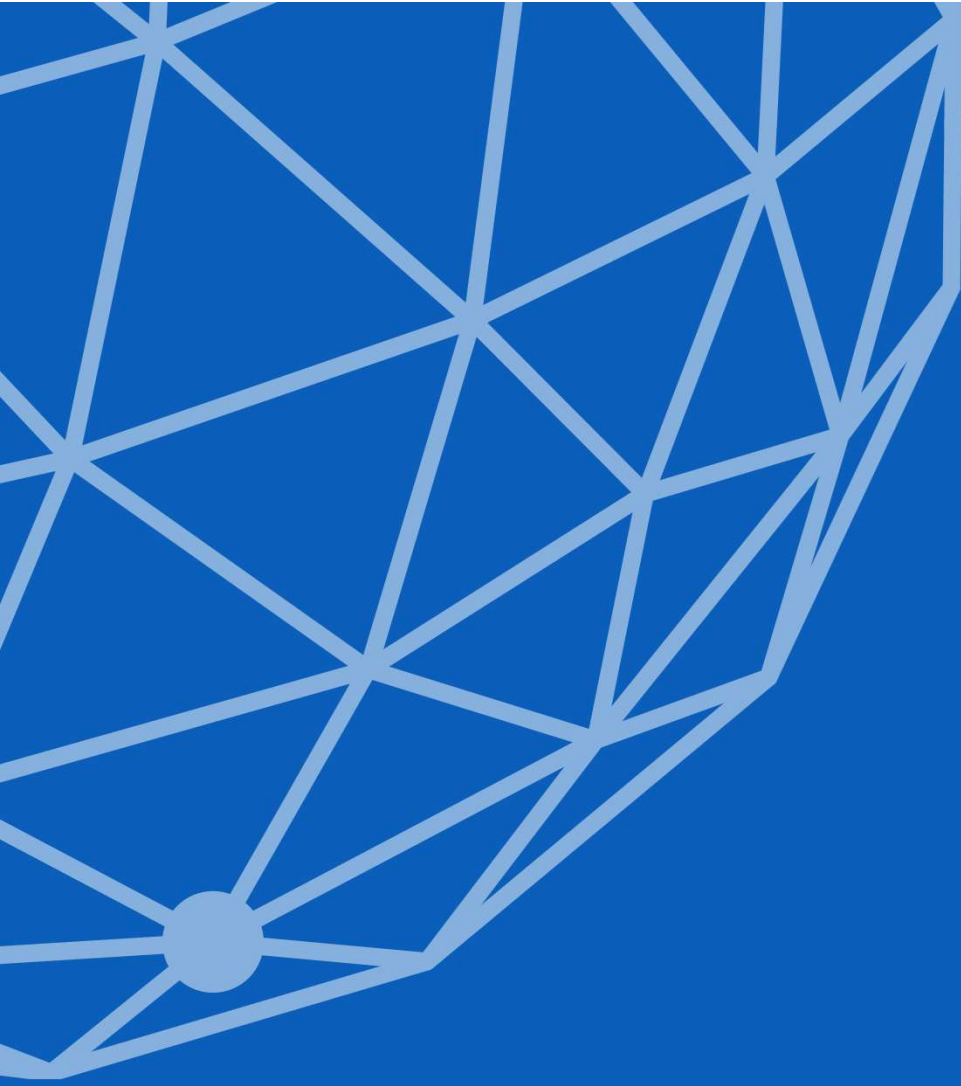
B) Higher interest rates, improved branding, and reduced insurance premiums.

C) Avoided losses, operational savings, and environmental and social co-benefits.

D) Short-term gains, reduced reporting requirements, and simplified compliance.

The triple dividend refers to three key benefits of adaptation investments:

1. Avoided losses from climate-related disruptions,
2. Operational and economic gains from resilient infrastructure, and
3. Environmental and social co-benefits that enhance long-term value.



Session 1

Mitigation and adaptation action as a financial imperative

Adaptation as a business opportunity

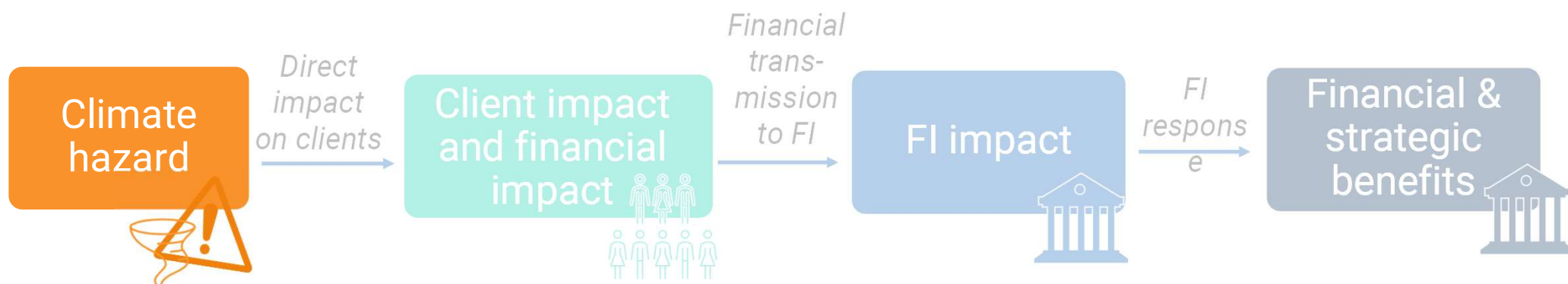
Exposure of FIs Clients to Climate Risks

Risk transmission channels: from clients to financial risk types

Role of Financial Institutions in shaping the Environments for AF

Engaging with key stakeholder

How are climate impacts on the clients transmitted to FIs?



Types of Climate-related Risk

Physical risk

Risks from physical damages to infrastructure, losses, and supply-chain disruptions due to climate-related events or changes.

Examples:

- **Acute:** Increased severity of extreme weather events such as cyclones, droughts, heatwaves and floods
- **Chronic:** Changes in precipitation patterns and extreme variability in weather patterns

Transition risk

Risks to policies, legal frameworks, technologies, and market changes in addressing climate change

Examples:

- Changing customer behaviour
- Increased cost of raw materials
- Increased pricing of GHG emissions
- Enhanced emissions-reporting obligations
- Substitution of existing products and services with lower emissions options

Acute and Chronic Climate Hazards

Acute climate hazards

“shocks”

→ sudden, destructive, episodic

- **Floods** (flash floods, riverine, coastal)
- **Tropical cyclones, hurricanes, typhoons** (including storm surge & extreme winds)
- **Heatwaves** (short, extreme periods of high temperature)
- **Cold waves & extreme winter storms**
- **Droughts** (seasonal/short-term water shortages)
- **Wildfires**
- **Landslides & avalanches** (often triggered by heavy precipitation)
- **Hailstorms & lightning**
- **Extreme precipitation events** (intense rainfall or snowfall)

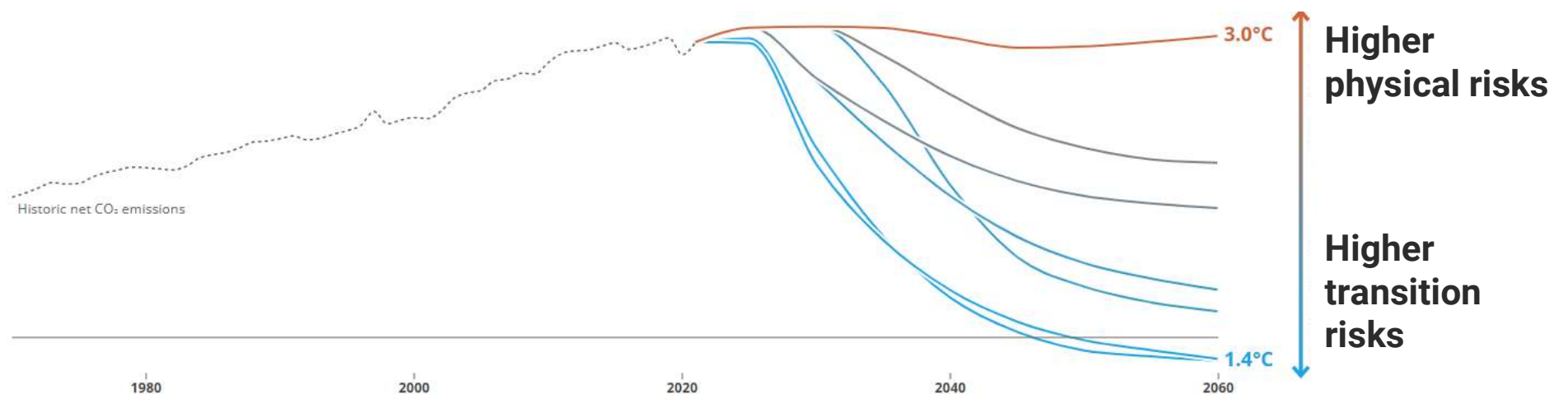
Chronic climate hazards

“stresses”

→ gradual, cumulative, often less visible but deeply disruptive.

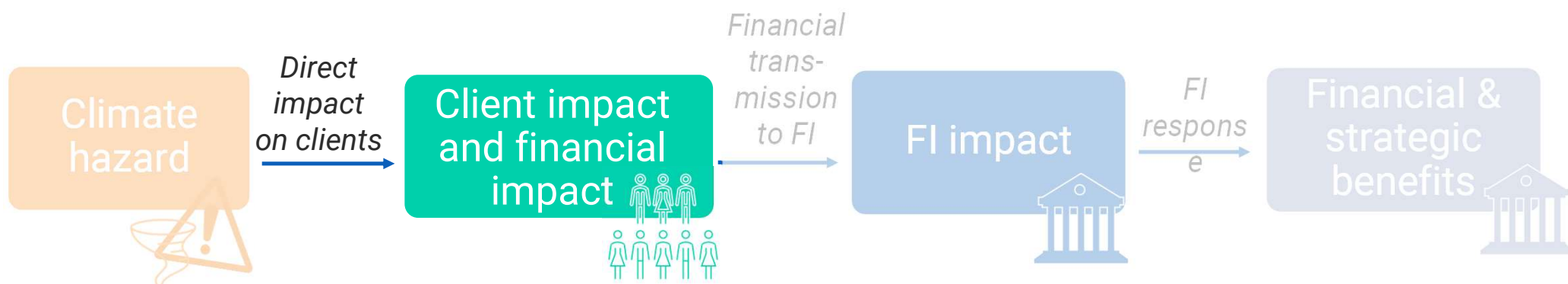
- **Rising average global temperatures** (hotter baseline)
- **Sea level rise** (coastal inundation, saltwater intrusion)
- **Ocean warming & acidification** (coral bleaching, fisheries decline)
- **Glacier & snowpack melt** (loss of water sources, glacial lake outburst risk)
- **Changing rainfall patterns** (erratic precipitation, shifting monsoons)
- **Prolonged droughts / desertification** (multi-year water scarcity, land degradation)
- **Soil degradation & salinization** (reduced fertility, land loss)
- **Ecosystem shifts & biodiversity loss** (species migration/extinction, habitat loss)
- **Increased chronic health risks** (malnutrition, expanded range of vector-borne diseases)
- **Permafrost thaw** (methane release, infrastructure destabilization)

Linking Temperature Rise to Physical and Transition Risks for Financial Institutions



Source: <https://www.ngfs.net/ngfs-scenarios-portal/explore>

How are climate impacts on the clients transmitted to FIs?



How does climate change impact FIs?

Climate Hazard



Direct Exposure (FI client)

Impact on clients assets, operations, infrastructure



Indirect Exposure (FI client)

Arises from supplier, buyers, market



Examples:

- **Households:** property damage, rising living costs, and loss of income from floods, droughts, or heatwaves.
- **Businesses & SMEs:** production losses, higher input costs, supply chain disruptions, or physical damage to facilities.
- **Agricultural clients:** yield declines, water scarcity, and soil salinization affecting repayment capacity.

Example:

- Supply chain disruptions and higher prices for materials, water, and energy.
- Reduced market demand as consumers and investors shift toward low-carbon products.
- Policy and regulatory changes (e.g., carbon pricing, emissions standards) increasing compliance costs.
- Financing and insurance constraints as lenders and insurers price in climate risk or restrict coverage.

Examples for climate-related risk for clients

Client impact and financial impact	Physical Risk (climate hazard impacts)	Transition Risk (low-carbon shift impacts)
Direct Exposure	• Smallholder farmers' crops fail due to drought, salination or destroyed house due to flooding • Coastal MSMEs damaged by flooding	• Manufacturing clients face increased carbon pricing • Energy companies affected by fossil fuel phase-out policies
Indirect Exposure	• Households lose income due to reduced agricultural yields • Transport disruptions impact suppliers	• Supply chain disruptions increase costs for client businesses • Clients face new regulations increasing compliance costs

- Prominence of each risk varies based on factors such as **sector** and **client type**.

Financial impact on clients

Impact on clients

Physical climate risks, both acute (extreme events) and chronic (long-term stressors), can undermine clients' income, assets, and solvency.

Acute Risks (short-term shocks)

- **Loss of income:** Crop failures, soil erosion, damage to property, or business interruptions (e.g. heat-related productivity losses) reduce earnings for individuals, farmers, and businesses.
- **Increased expenses:** Repairing damaged assets, adapting to rising cooling or irrigation needs (e.g. heat stress, water stress), or relocating from high-risk areas adds unforeseen costs.
- **Asset devaluation:** Properties or land in high-risk areas (e.g., flood zones, wildfire areas, rising sea level) may lose value, affecting collateral.
- **Operational disruption:** Manufacturing plants may face production delays or equipment damage, heat stress for employees, increasing operational costs and reducing output.
- **Business interruption in real estate:** Commercial buildings may be damaged or temporarily unusable, need of insulation or AC, causing rental income loss, additional or increased repair costs.



Financial Impact on clients:

- Revenues & Expenditures: Declining sales or rising costs squeeze margins.
- Income & Cash Flow: Reduced cash inflows delay loan payments or investments.
- Balance Sheet: Asset write-downs and lower valuations weaken net worth.
- Assets & Liabilities: Damaged or devalued assets increase leverage pressure.
- Capital & Financing: Creditworthiness declines; borrowing costs rise.

- Climate hazards directly and indirectly disrupt clients' operations and assets.
- Disruptions translate into financial strain affecting clients' solvency and investment capacity.

Quiz Question



A coastal manufacturing company faces increasing insurance costs and repeated damage to port facilities due to gradual ocean changes. At the same time, it must invest in new equipment because of stricter emissions-reporting requirements. Which option best identifies the types of climate-related risks involved?

A) Chronic physical risk and transition risk.

B) Acute physical risk and transition risk

C) Transition risk and market risk (non-climate)

D) Acute physical risk and chronic physical risk

The **gradual ocean changes** causing repeated damage to port facilities reflect a **chronic physical risk** (e.g., sea level rise and ocean warming). The need to invest in new equipment due to **stricter emissions-reporting requirements** represents a **transition risk**, arising from policy and regulatory changes related to addressing climate change.

Quiz Question

A mid-sized agribusiness operates in a region experiencing more frequent heatwaves and prolonged droughts. Over several years, the firm reports declining crop yields, rising irrigation and cooling costs, falling land values used as loan collateral, and increasing difficulty refinancing debt. Which sequence best describes how physical climate risks translate into financial stress for this client?

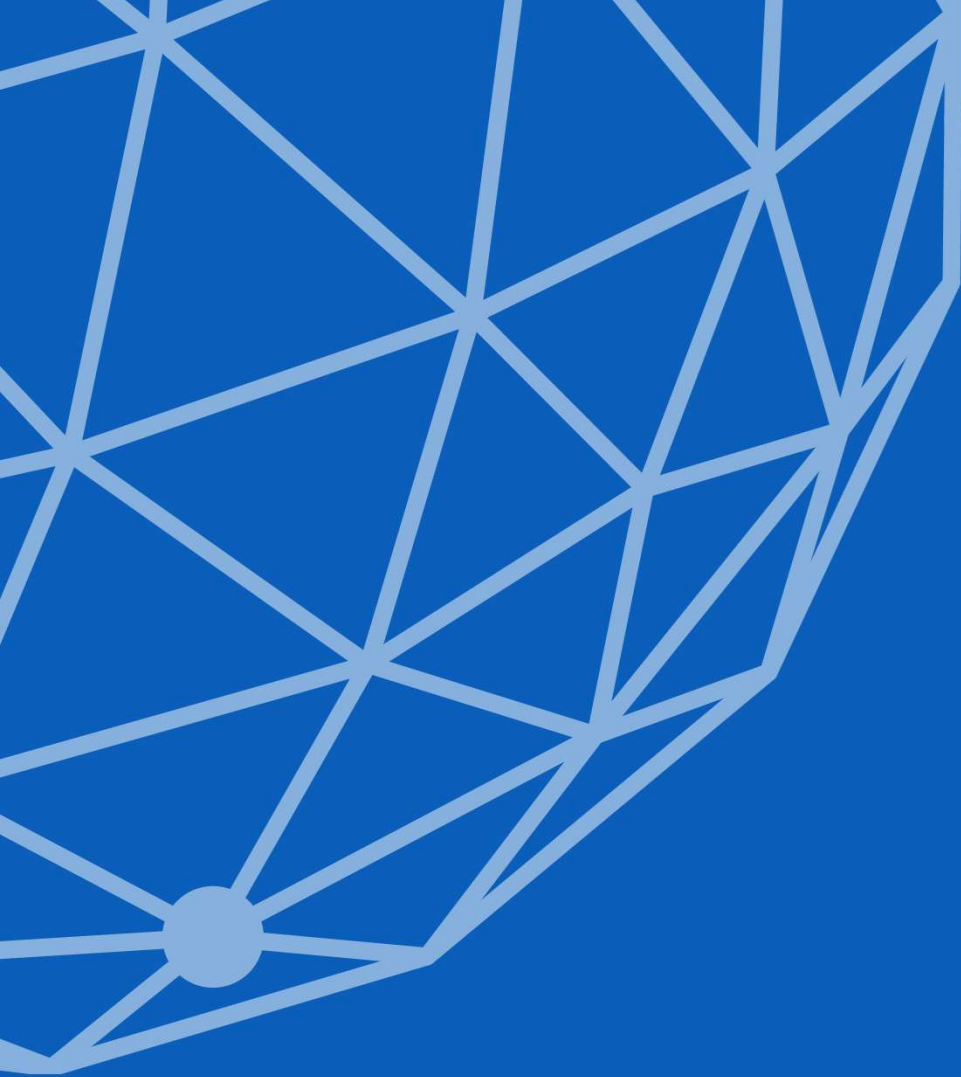
A) Acute physical risks → short-term revenue volatility → temporary liquidity stress only.

B) Transition risks → regulatory compliance costs → lower profitability → asset write-ups

C) Market risks → declining demand → reduced revenues → lower emissions exposure

D) Chronic physical risks → operational disruption → higher expenses → asset devaluation → reduced creditworthiness

Prolonged heatwaves and droughts represent chronic physical climate risks. These risks disrupt operations (lower yields), increase expenditures (irrigation and cooling), and lead to asset devaluation (falling land values). Together, these effects weaken the balance sheet and reduce creditworthiness, increasing borrowing costs and refinancing challenges—exactly reflecting the financial impact pathways outlined in the slide.



Session 1

Climate action as a financial imperative

Adaptation as a business opportunity

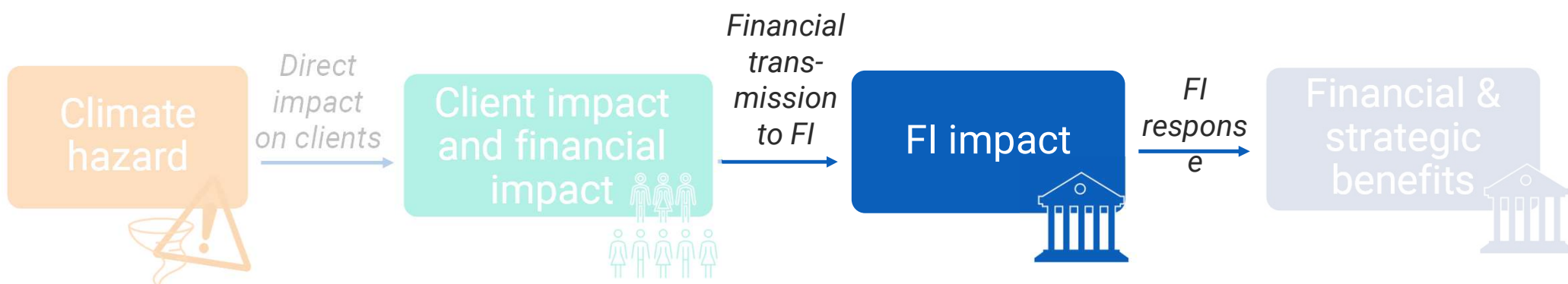
Exposure of FIs Clients to Climate Risks

Risk transmission channels: from clients to financial risk types

Role of Financial Institutions in shaping the Environments for AF

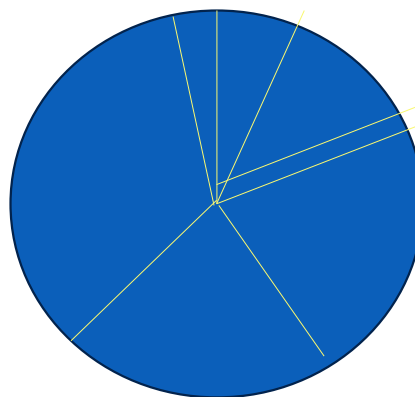
Engaging with key stakeholder

How are climate impacts on the clients transmitted to FIs?



Understanding **client-level and sector vulnerabilities** is essential

FI impact



Credit risk

Operational risk

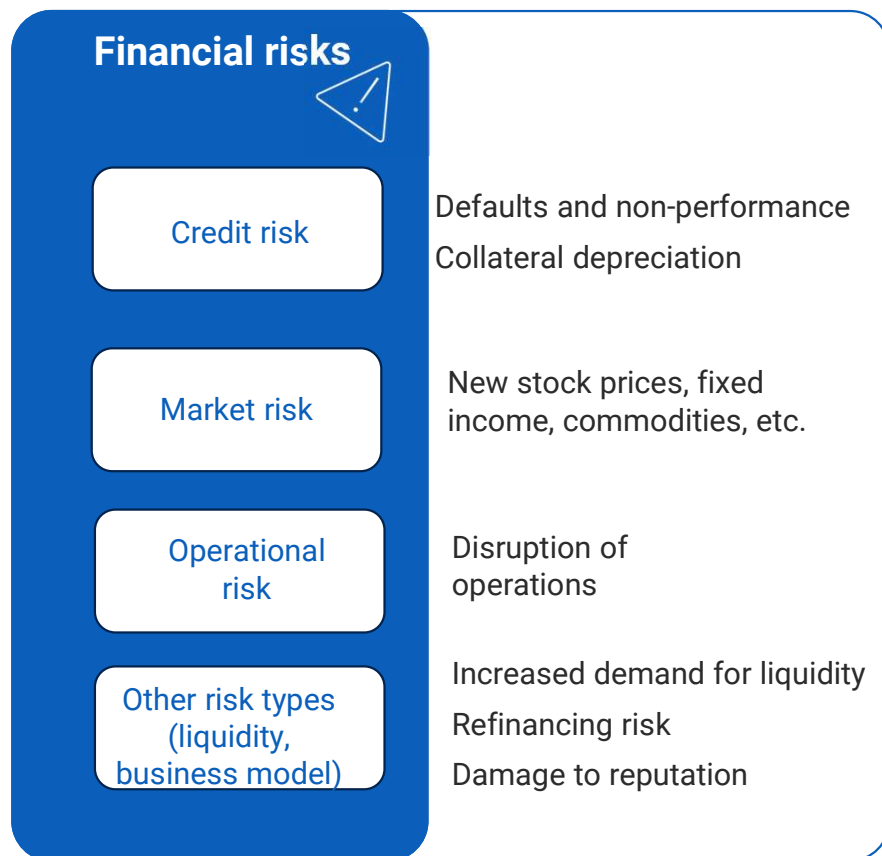
Market risk

Other risk types
(liquidity,
business model)

Which are the key climate-related risk of your FI?

FI impact 	Physical Risk (climate hazard impacts)	Transition Risk (low-carbon shift impacts)
Direct Exposure	• Flood damage to FI branch offices (reduced asset value) or data centres (increases operational costs) • Operational disruptions from power outages	• Costs to comply with Central Bank's climate disclosure regulations • Investments needed to green FI's fleet or buildings
Indirect Exposure	• Loan defaults rise due to clients affected by drought or floods • Decline in collateral values in high-risk areas	• Credit risk from clients in fossil fuel sectors losing value • Increased risk from clients facing stricter environmental regulations

Climate risk drivers affecting financial risk categories



What are examples for physical risks affecting the financial risks?

Increasing the flood risk to the mortgage portfolio incomes or defaults

Severe weather events lead to re-pricing of sovereign debt (e.g., higher borrowing costs, "Reduced debt market access, and deteriorating fiscal positions)

Disruption of FI's operations due to physical damage to its property, branches, telecommunication, and data centers as a result of extreme weather events

Increasing compliance, liability, and reputational risks due to their investments and lending activities in carbon-intensive sectors.

Examples: Transmission of the impacts to FI

Financial risks



Credit risk

Market risk

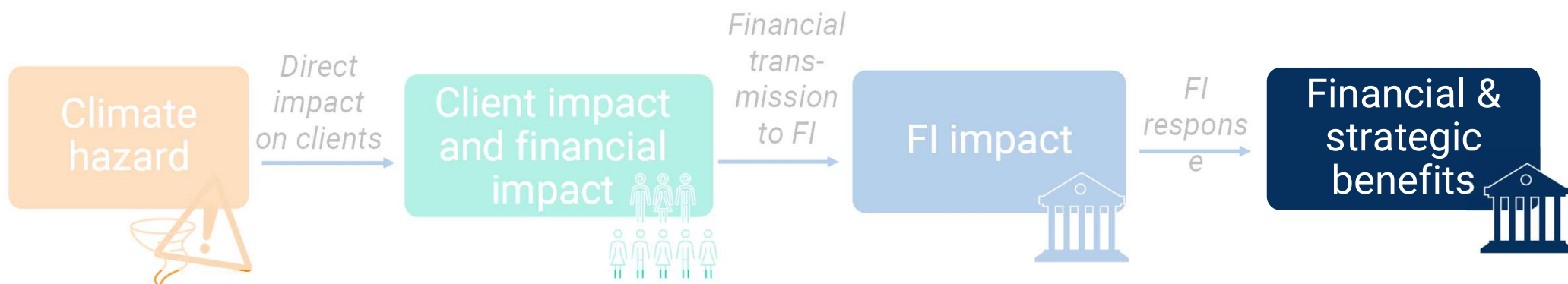
Operational
risk

Other risk types
(liquidity,
business model)

Examples of FI responses:

- **Assess and monitor risks:** Identify which clients, sectors, or assets are most exposed to climate hazards.
- **Adapt products and services:** Offer climate-resilient loans, insurance, or technical support to help clients reduce vulnerability.
- **Incorporate climate considerations into lending and investment decisions:** Prioritize resilient and low-carbon projects.
- **Engage clients proactively:** Provide guidance on risk management, adaptation measures, and mitigation strategies.
- **Invest in internal resilience:** Protect operations, infrastructure, and data systems from climate-related disruptions.

How are climate impacts on the clients transmitted to FIs?



Examples:

- Reduces credit and operational risks.
- Protects asset quality and revenue streams.
- Strengthens reputation and aligns with regulatory expectations.
- Contributes to long-term sustainable growth by supporting resilient clients and a low-carbon economy.

More on adaptation solutions & investment strategies in Session 4 & 5

Benefits of Adaptation Finance - effect on client creditworthiness



Limited or delayed adaptation by the client

- **Creditworthiness pressure:** Higher likelihood of income loss or asset damage.
- **Rising default risk:** Greater exposure to default, which raises their risk profile and weakens financial standing
- **Asset vulnerability:** Properties or land in risk-prone areas may gradually lose value, affecting collateral quality.
- **Constrained access to finance:** Financial institutions may perceive these clients as higher-risk, leading to:
 - Tighter lending conditions (higher interest rates, shorter tenures)
 - Reduced appetite for long-term or unsecured lending
 - Missed access to transition or green finance opportunities



Effective or Proactive Adaptation by Clients

- **Stronger credit profile:** Lower risk of disruption supports more predictable income or operations.
- **Improved financial resilience:** More stable cash flows enhance repayment capacity and reduce default probability.
- **Asset protection: climate-resilient investments** (e.g., irrigation, shading, cooling) help preserve asset value and collateral quality.
- **Better Access to Finance:** Seen as lower-risk borrowers by financial institutions:
 - More likely to qualify for green finance products or concessional terms.
 - Potential to attract climate-linked investment or public support schemes

What are the distinct features of climate-related risk drivers for FIIs?

Far-reaching impact

Interactions and interdependencies between climate risk factors (Session 2)

Potential to generate cascading risk, amplifying their impact across the economies and financial system

Uncertainty

Probability and severity of the climate risk factors vary according to geography, due to factors such as location, topography, proximity to the sea, or population distribution.

Long-lasting and Irreversible Impact

Challenge in quantifying the financial impact of permanent financial losses due to asset devaluation and stranded assets

Combination of short, medium and long term measures

Impact may appear outside the current business planning or financing horizon (tragedy of the horizon)

Quiz Question

Physical climate risks affect financial institutions primarily through transition-related channels, such as regulatory changes and carbon pricing, rather than through direct impacts on credit, operational, or liquidity risks.

A) True

B) False

Physical climate risks act directly by damaging assets, disrupting operations, and reducing borrowers' ability to repay loans. These effects increase defaults, weaken collateral values, disrupt business continuity, and raise liquidity pressures, without relying on policy or regulatory changes.

Quiz Question

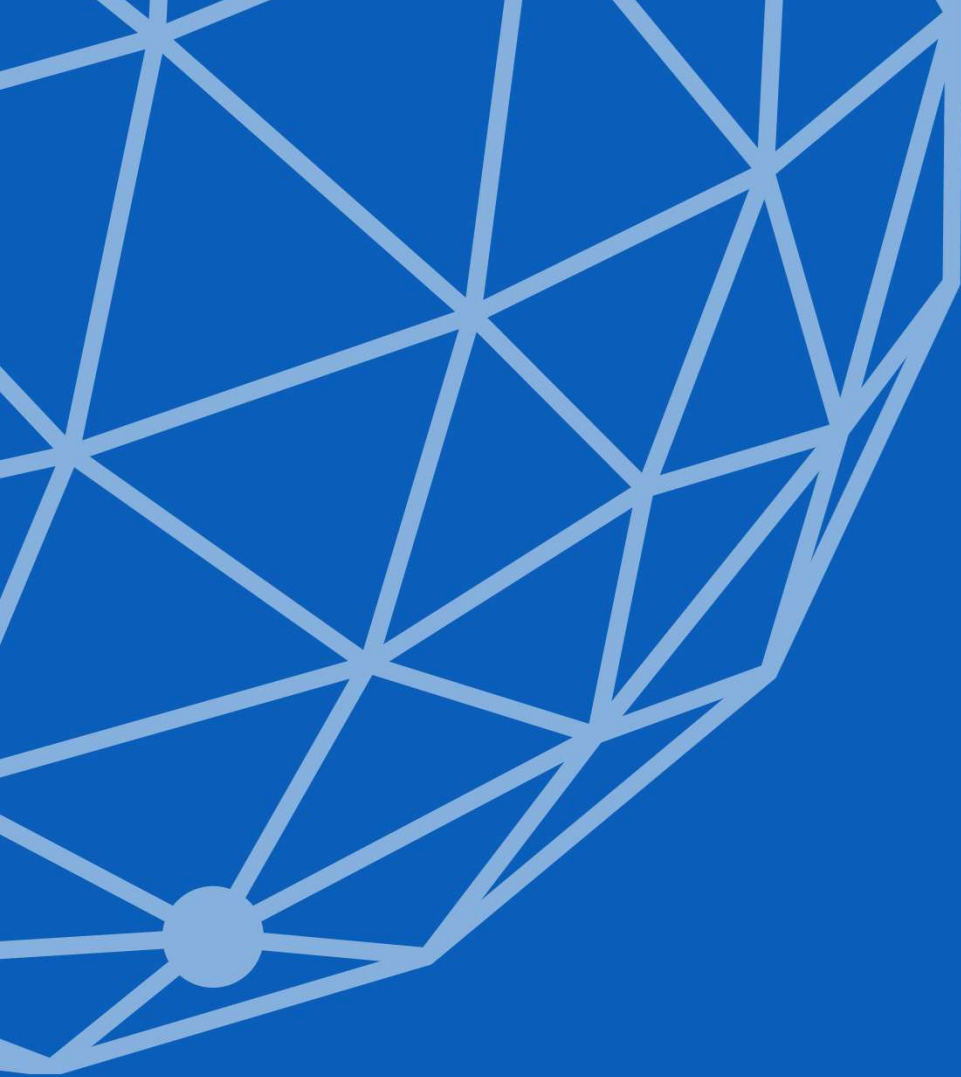


Clients that implement effective or proactive adaptation measures are more likely to experience stronger credit profiles, improved financial resilience, and better access to finance compared to clients that delay adaptation.

A) True

B) False

Proactive adaptation helps clients reduce climate-related disruptions, maintain more stable cash flows, and protect the value of their assets. This lowers the risk of default and makes clients more attractive to lenders, which strengthens creditworthiness and improves access to finance.



Session 1

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Engaging with key stakeholder

Enabling environment for mainstreaming climate adaptation finance

An enabling environment for financial institutions (FIs) is the set of institutional, policy, regulatory, and market conditions that support integrating climate adaptation into core operations.

How does an enabling environment reduce investment barriers?

**Policy & Regulatory
Risk**

Information Gaps

**Capacity
Constraints**



- Clear, stable, and supportive adaptation policies and targets (e.g., multi-year targets) and regulations provide confidence and predictability

Example: BoT's Guidelines on Climate-Related Financial Risks Management and Disclosures (2025) and Guidelines on Reporting of Sustainability-Related Risks and Opportunities for Banks and Financial Institutions (2025).

- Investment-grade climate data, modelling, analytics, and knowledge-sharing platforms reduce uncertainty.

- Capacity-building initiatives, technical assistance, and advisory support improve bankability

How does an enabling environment reduce investment barriers?

High Transaction Costs



- Project aggregation mechanisms and standardized tools streamline processes and lower costs.

Lack of Pipeline



- TA programs and support in project design, aggregation, and development improve investment readiness

Perceived Low Returns



- Blended finance instruments (e.g., guarantees, concessional capital) improve risk-return profiles..

Legal and Institutional Weaknesses



- Strengthening governance, legal frameworks, and land tenure systems creates a secure investment climate.

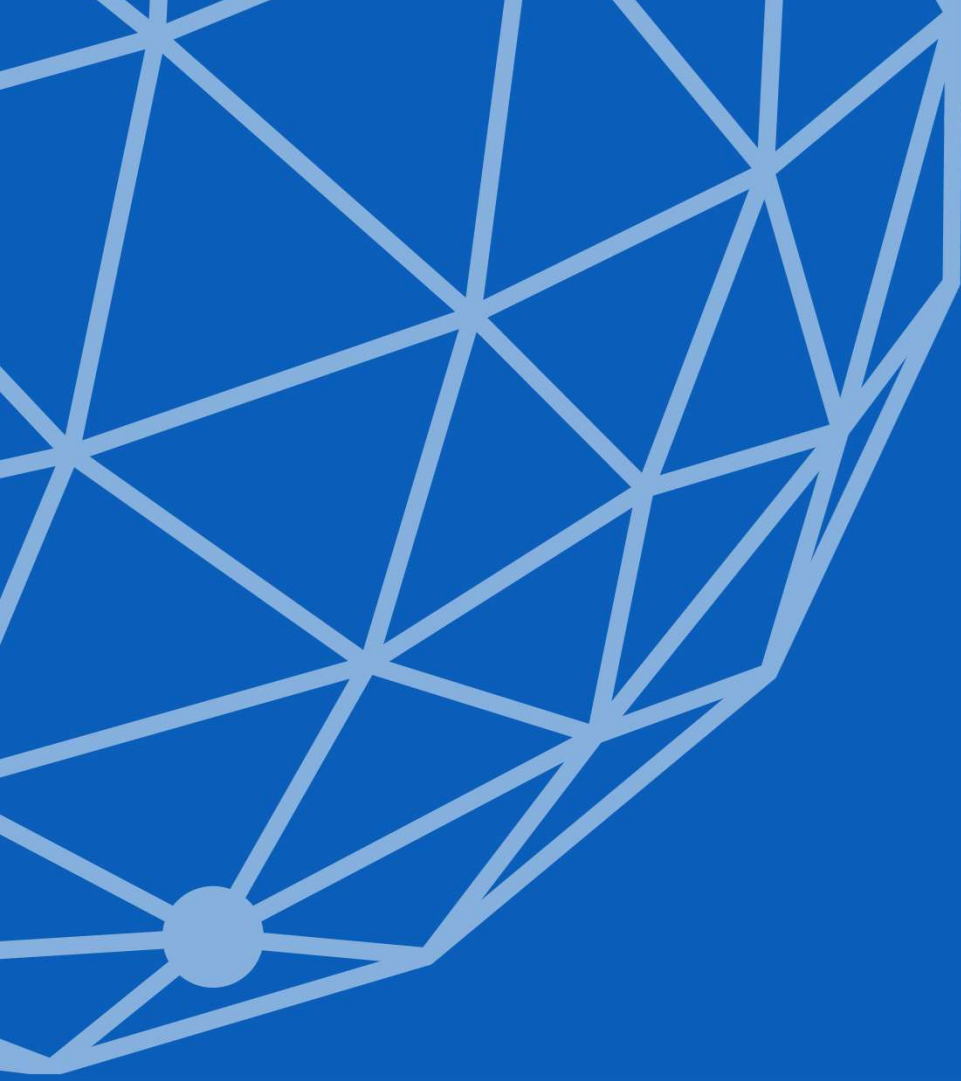
Quiz Question

An enabling environment for adaptation investment mainly reduces barriers by increasing project-level returns, while policy stability, data availability, and capacity-building play only a secondary role.

A) True

B) False

An enabling environment lowers investment barriers primarily by reducing risk and uncertainty, improving information quality, strengthening institutional capacity, and lowering transaction costs. These factors make projects more predictable, bankable, and investable, often before returns are increased through financial instruments.



Session 1

Climate action as a financial imperative

Adaptation as a business opportunity

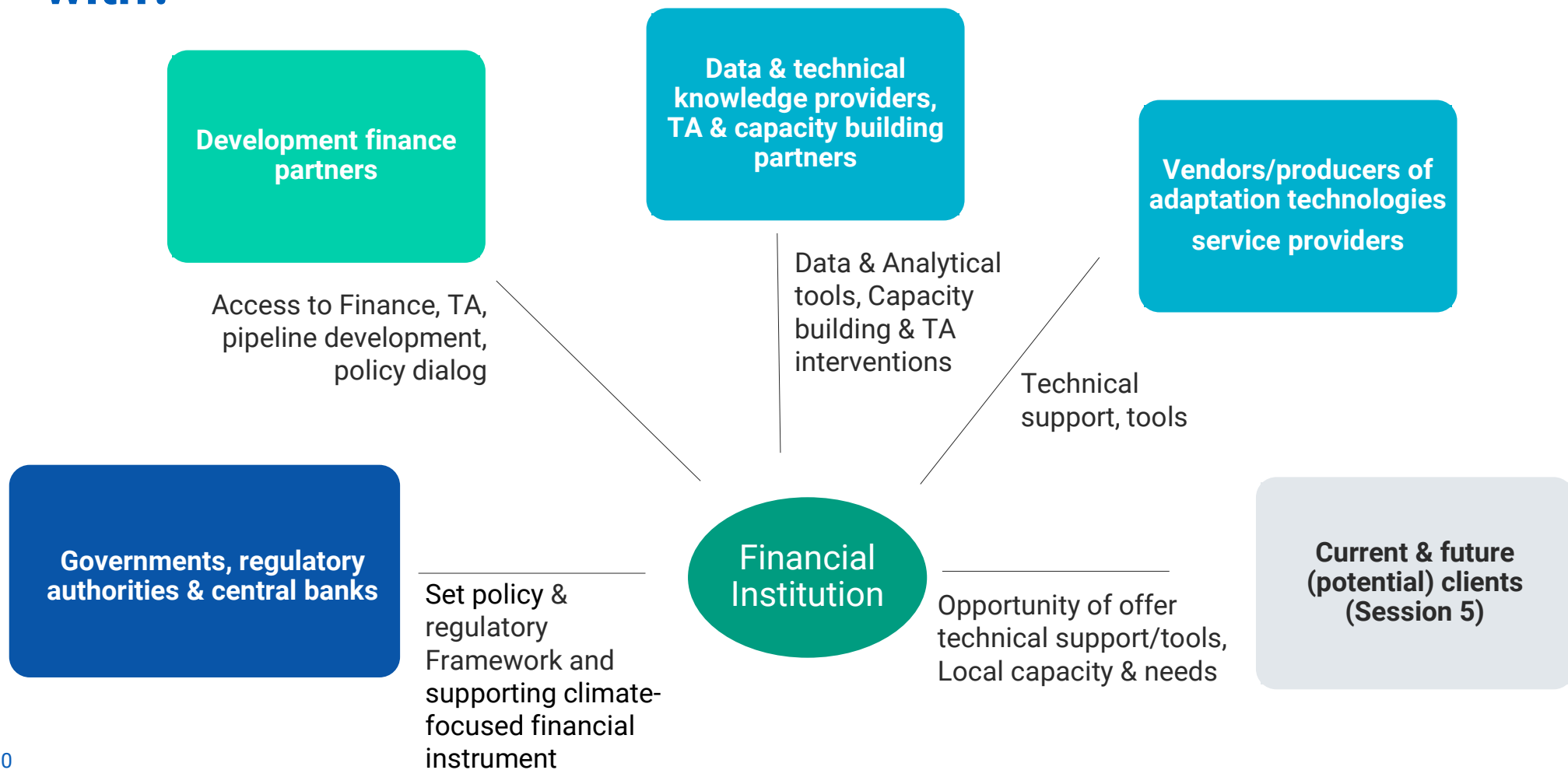
Exposure of FIs Clients to Climate Risks

Risk transmission channels: from clients to financial risk types

Role of Financial Institutions in shaping the Environments for AF

Engaging with key stakeholders

Who are the key stakeholders FIs should engage with?



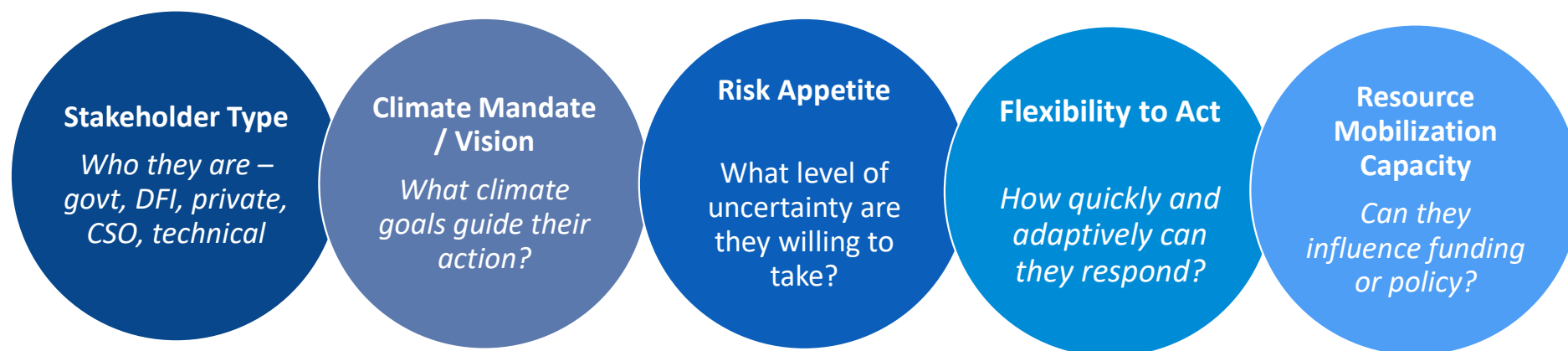
Understanding the stakeholder

”

Why is it important to understand stakeholder types, mandates, and financing capacity for effective adaptation finance engagement?



Understanding stakeholder types, mandates, and financing capacity for effective adaptation finance engagement



Governments, Regulators & ecosystem partners

Governments

National level - Central Government Agencies

- Shape national climate finance priorities

Example:
Vice President's Office
(VPO), Ministry of
Finance and Planning
(MoFP)



Sectoral Ministries

- Translate national goals into sectoral adaptation strategies

Example:
Ministry of Natural
Resources
and Tourism (MNRT),
Ministry of Water and
Irrigation (MoWI),



Local Governments

- Facilitate access to adaptation finance by identifying local priorities and supporting communities to access funds.
- Enable implementation by coordinating investments, channeling funds, and ensuring transparency and accountability.

Central bank & Regulator

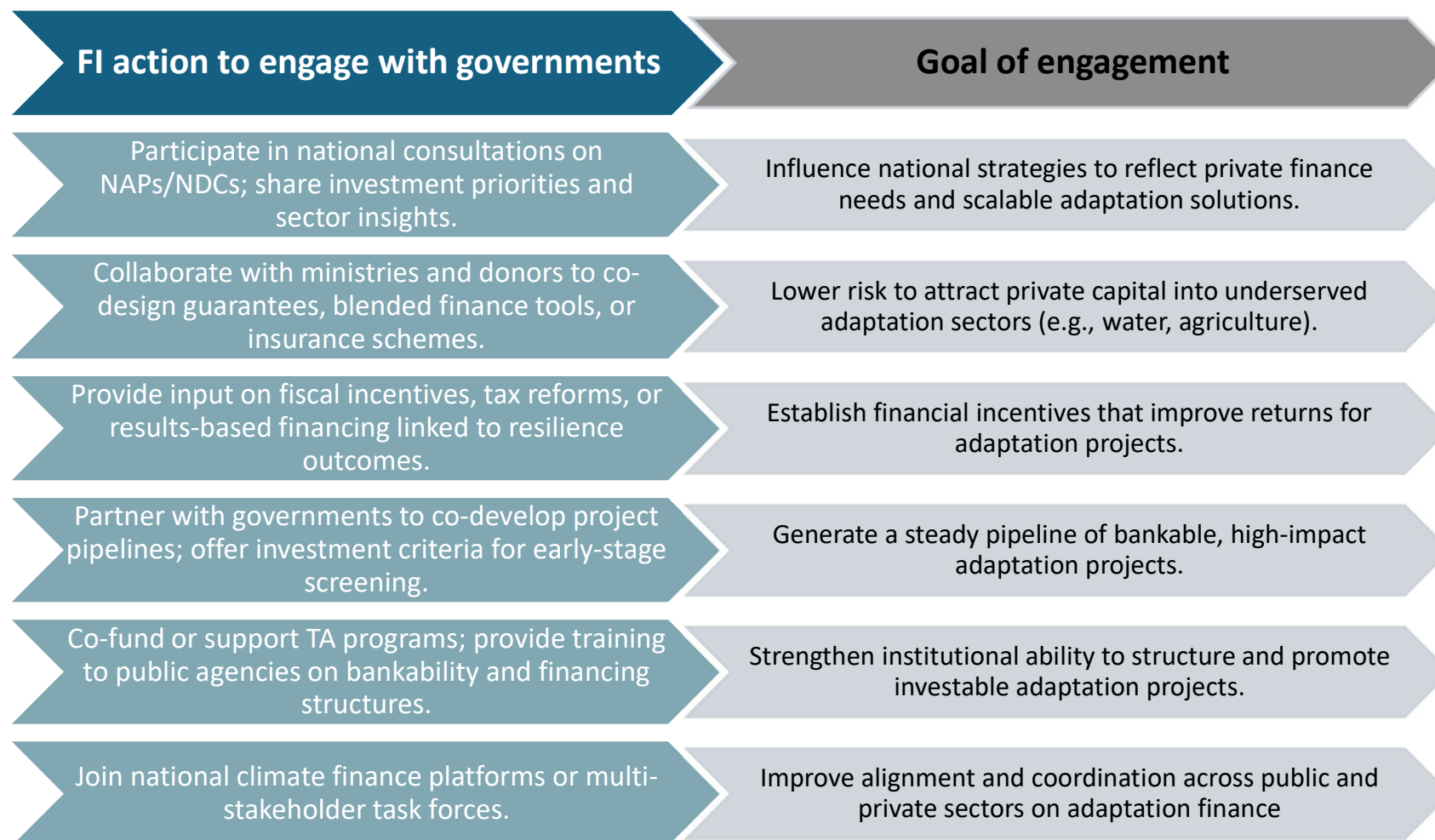


- Create an enabling environment by integrating climate risk into financial regulation and supervision.
- Promote green finance through incentives, guidelines, and climate-aligned lending frameworks.

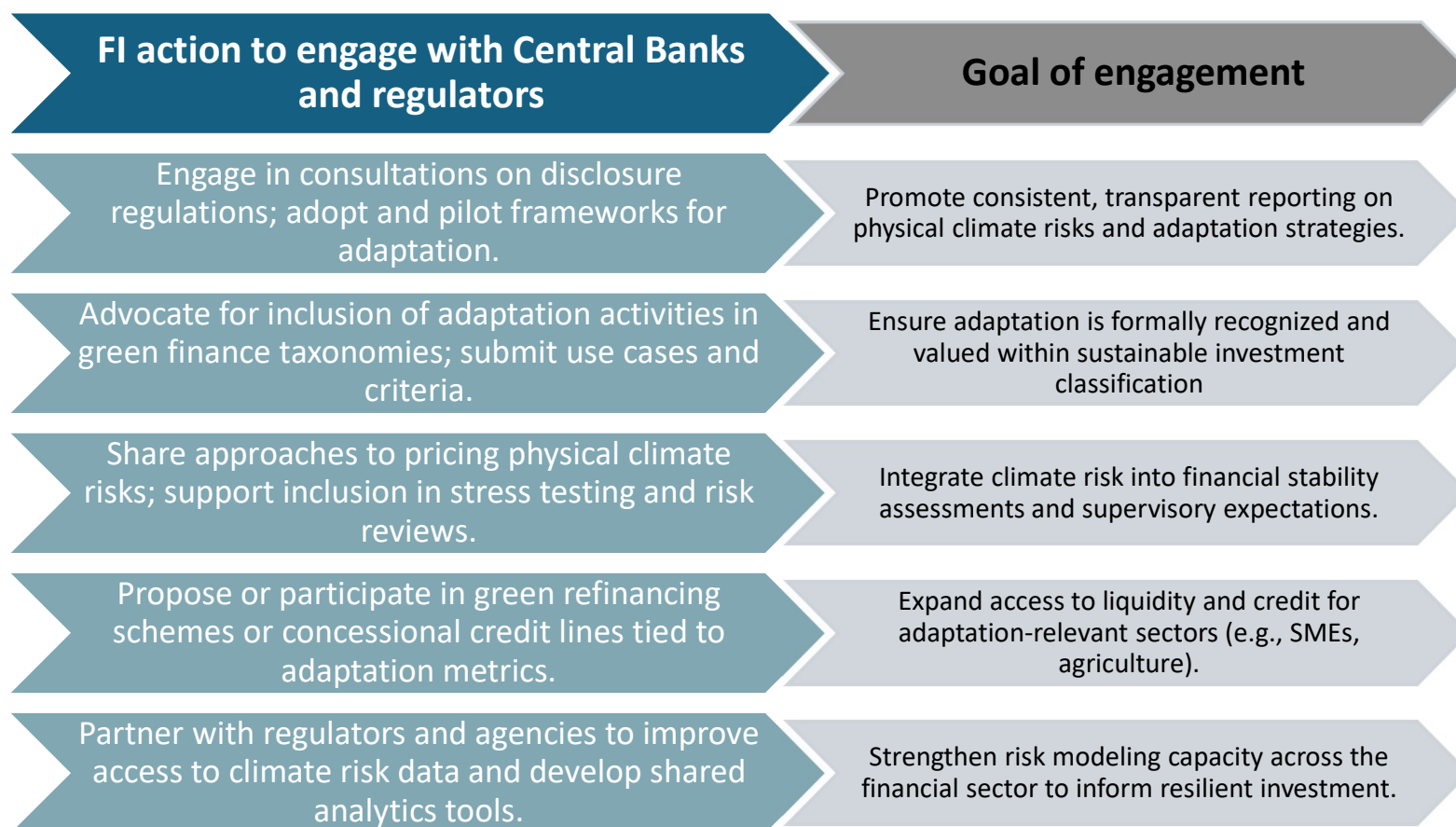


National Designated Authorities (NDAs) e.g.
Vice President's Office for the GCF

Engagement with governments



Engagement with Central banks & regulators



Potential roles of International Development Partners



Mobilizing (Large-Scale) Resources

Example: CRDB Bank Plc received USD 100 million funding from Green Climate Fund (GCF) for the Tanzania Agriculture Technology Adaptation Programme to improve access to affordable climate adaptation technologies in the agriculture sector.

Reducing Investment Risk

Example: In Egypt, EBRD provided a guarantee for QNB Egypt to unlock €70 million of SME lending and will roll out climate-risk assessment tools to support climate resilience.

Technical Assistance & Capacity Building

Example: Under the Africa Adaptation Acceleration Program (AAP), the Global Center on Adaptation (GCA), in collaboration with the African Development Bank (AfDB), supports the Tanzania Agricultural Development Bank (TADB) to enhance the bank's capacity by providing training and expertise on climate-resilient agricultural practices.

Facilitating Knowledge & Technology Transfer

Example: Green Climate Fund (GCF) regional efforts in MENA: "GCF strengthens climate action collaboration in the MENA region" covering water security, food systems, early warning systems, and training on climate-risk evaluation.

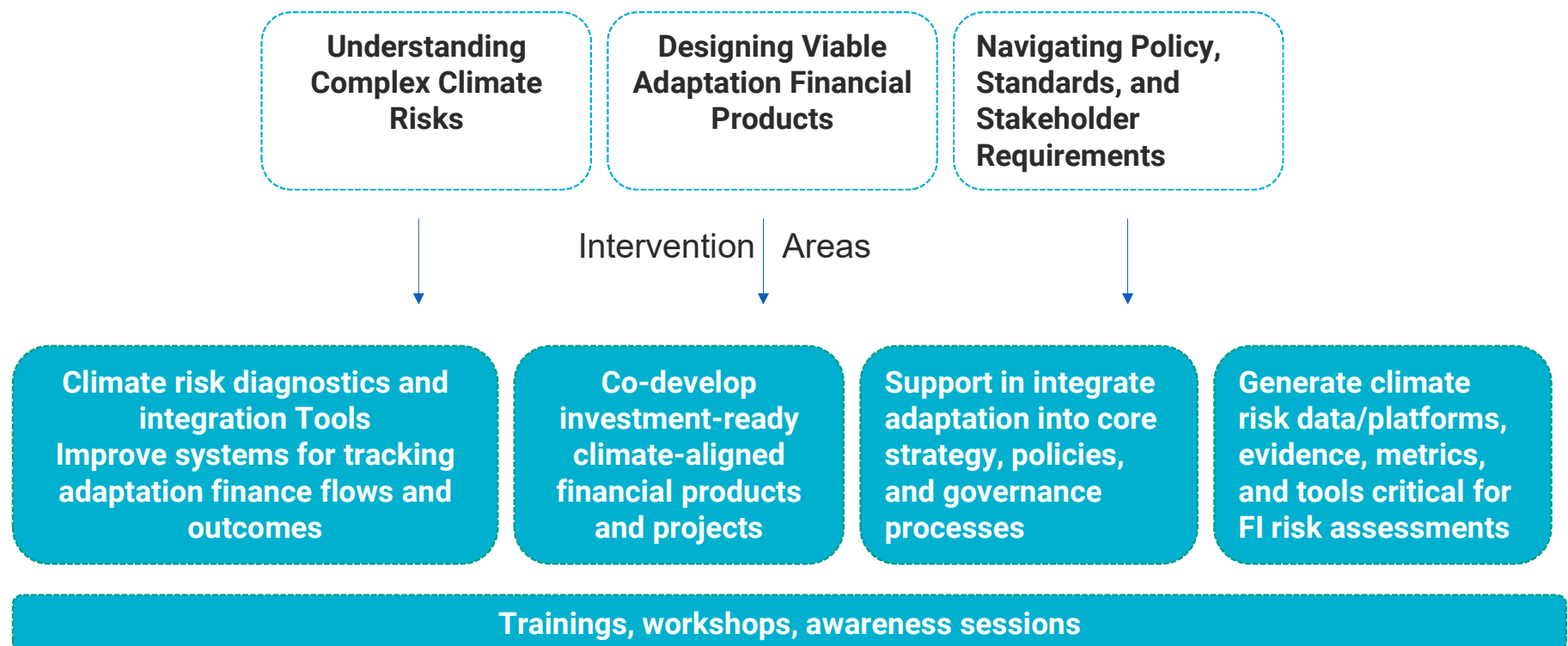
Leveraging Co-Financing

Example: The World Bank/IFC MENA Climate Roadmap (2021–2025) commits US \$10 billion in climate-smart investments and aims to mobilise an additional US \$2 billion in private-sector finance across the region.

Source: <https://www.ebrd.com/home/work-with-us/projects/psd/54662.html>; https://north-africa-middle-east-gulf.ec.europa.eu/news/ebrd-guarantee-qnb-egypt-unlock-eu70-million-small-firms-egypt-2024-11-08_en; <https://idrc-crdi.ca/en/what-we-do/projects-we-support/project/mena-hub-action-research-climate-change-and-health> ; <https://www.greenclimate.fund/news/gcf-strengthens-climate-action-collaboration-mena-region>, <https://www.worldbank.org/en/region/mena/publication/middle-east-north-africa-climate-roadmap>

Importance of technical assistance and capacity building for FIs

Capacity building, technical assistance and research can support...



Building Partnerships to Enhance Institutional Effectiveness

Collaborate Strategically

- Partner with governments, donors, and DFIs to design blended finance and risk-sharing mechanisms.

Leverage Technical Expertise

- Work with NGOs, research bodies, and TA providers to strengthen project appraisal and adaptation metrics.

Engage Private Sector & Fintechs

- Develop innovative financing channels and digital tools to reach underserved clients.

Foster Knowledge Exchange

- Join climate finance networks and multi-stakeholder platforms to share lessons and align standards.

Invest in Capacity: Co-develop training programs to build internal skills on climate risk assessment and adaptation lending.

Quiz Question

A financial institution wants to scale lending for climate adaptation in agriculture but faces weak project pipelines, inconsistent climate risk data, and limited regulatory recognition of adaptation activities. Which combination of actions would most directly address all three constraints?

A) Expand concessional credit lines, tighten internal risk limits, and rely on historical loss data

B) Prioritize transition finance products, reduce exposure to SMEs, and wait for market-led standardization

C) Increase interest rates on adaptation loans, focus on large corporates, and outsource climate analytics

D) Engage regulators on adaptation taxonomies, partner with data and technical providers, and support capacity-building for project development

This combination simultaneously addresses regulatory recognition (through engagement with regulators), information gaps (via data and technical partners), and pipeline constraints (through capacity-building and project development support). Together, these actions strengthen the enabling environment needed to scale adaptation finance.

Recap

1

Adaptation addresses physical risks already unfolding.

2

Financial institutions drive resilience by managing capital.

3

Adaptation drives opportunities and safeguards both **FIs** and **clients**

4

Client losses from climate hazards can **transmit to FIs** and FIs have several **tools and strategies to respond** effectively.

5

Understand stakeholder mandates, roles, and capacities to target engagement effectively.

6

Tailor engagement strategies to the purpose, timing, and strengths of each stakeholder.



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