

Short course 2: *Public and Private Sector Financing for Climate Change Adaptation*

Get Started



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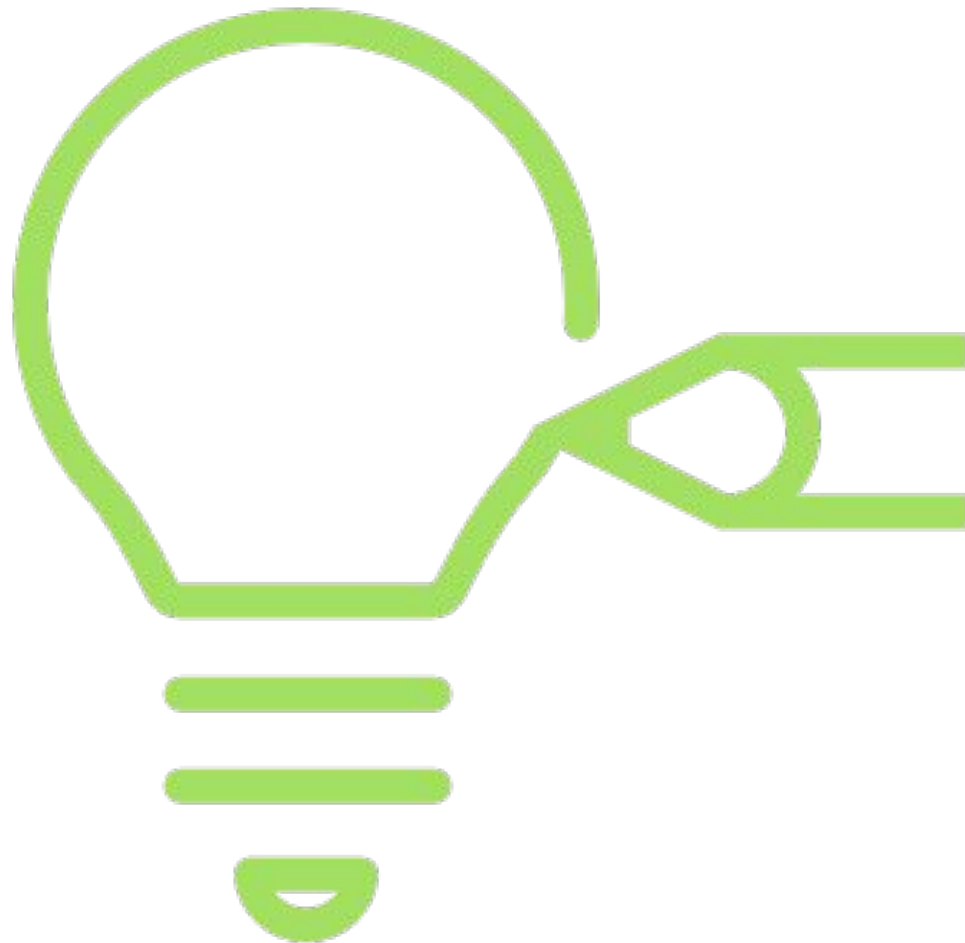
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Why?

- **Growing adaptation needs:** International climate finance is insufficient to meet the growing adaptation needs in LDCs.
- **Competition for funds:** International climate funds are often prioritized for mitigation efforts, over adaptation.
- **Complexity of accessing funds:** LDCs may encounter challenges in accessing international climate finance due to bureaucratic hurdles, lack of expertise and the complexity of the application processes.
- **Uncertainty & unpredictability:** The availability of international climate finance is uncertain and subject to political and economic factors. LDCs require stable, long-term financing to plan and implement effective adaptation measures.
- **Challenges to finance local climate action:** There is growing recognition of the need to localize climate change adaptation and in doing so leverage existing subnational climate finance instruments.

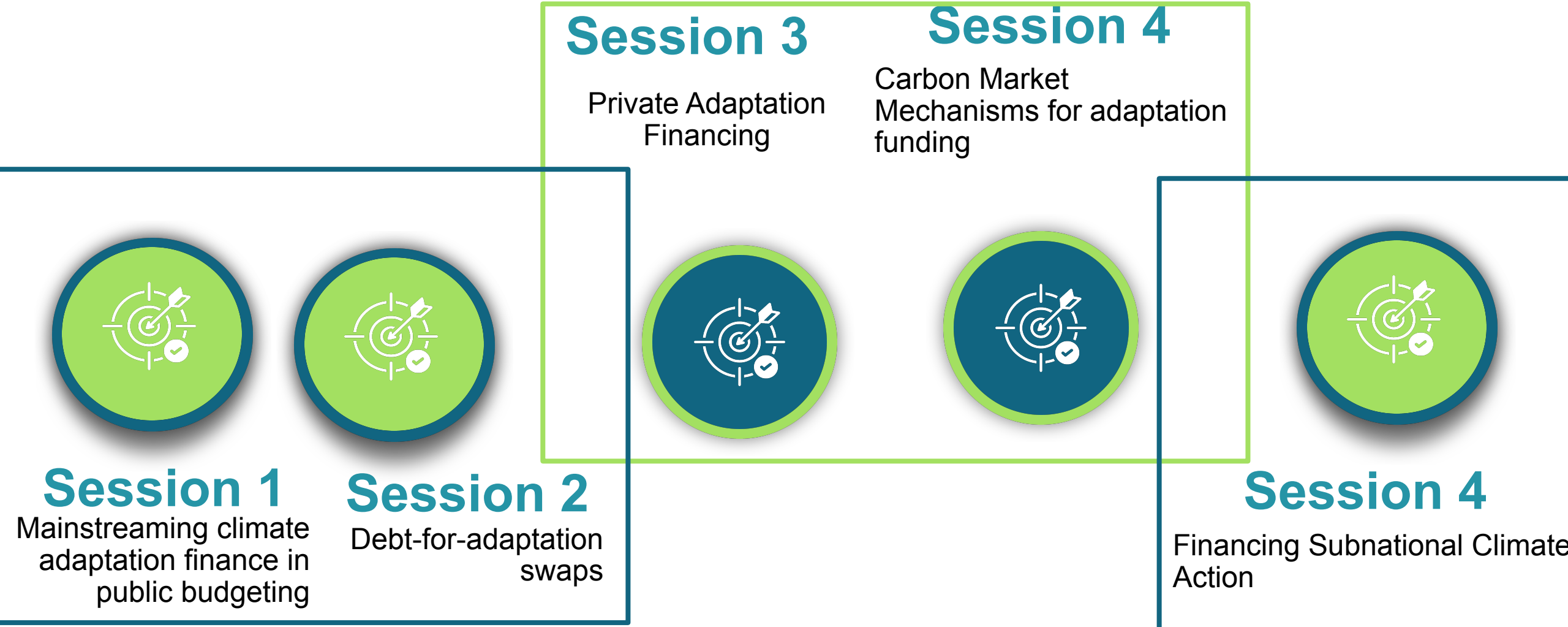


Objective



Introduce participants to innovative/emerging financing mechanisms required to bridge the adaptation financing gap and help LDCs build resilience to climate change at national and subnational levels.

Short Course 2 – Public and Private Sector Financing for Climate Change Adaptation



Session 1: Mainstreaming climate adaptation finance in public budgeting processes





Learning Objective

The learning objective of mainstreaming climate adaptation finance in public budgeting is to equip participants with the knowledge, skills, and strategies necessary to effectively integrate climate adaptation considerations into national and subnational public financial management systems.

Conceptual framework

The budget is an essential public policy tool. Indeed, public budgeting processes refer to the systematic procedures and practices that governments use to plan, allocate, monitor, and control the use of financial resources. These processes are essential for ensuring that public funds are used efficiently, effectively, and in a manner that aligns with policy goals and priorities.

Budgeting is a central component of Public Financial Management (PFM), and effective PFM relies on robust budgeting practices to ensure that public resources are used efficiently, transparently, and in alignment with policy goals.

- ❖ **Public Finances Management (PFM)** refers to the collection, management and expenditure of public finances throughout an economy. The objective of PFM is to improve citizens' lives through better management of public money.
- ❖ **Climate-Sensitive Public Finances Management (CSPFM)** refers to the integration of climate change considerations into the management of public finances. This approach ensures that fiscal policies, budget processes, and financial management practices account for both the risks and opportunities presented by climate change.



The benefits of Climate-Sensitive Public Finances Management

01

Enhanced resilience: Strengthening the ability of public finances to absorb and recover from climate-related shocks

02

Increased efficiency: Ensuring that public funds are used effectively to address climate challenges, reduce waste and maximize impact

03

Better planning: Facilitating long-term planning and investment decisions that account for future climate scenarios.

04

Transparency and accountability: Improving the tracking and reporting of climate-related expenditures, leading to greater accountability and public trust.

Mainstreaming climate adaptation finance into public budgeting

- 1) It involves systematically integrating climate adaptation considerations into the entire public finance management cycle.

- 3) It involves an integration of climate considerations into financial planning, resource allocation, and expenditure management.

- 2) This ensures that government expenditures, investments, and financial policies effectively address the challenges posed by climate change.

- 4) This ensures that resources are allocated effectively to mitigate the impacts of climate change and enhance the resilience of communities and ecosystems.

Entry points for climate adaptation mainstreaming in budgeting processes

Resource
allocation
stage of policy
cycle

- Incorporate adaptation-related priorities in resource allocation procedures
- Reallocating funding to vulnerable and/or priority sectors and regions
- Mainstreaming adaptation through the establishment of a horizontal 'adaptation fund' available to sector departments and agencies
- Adding climate change considerations to the criteria used for screening and selecting projects and investments, including for climate-related DRR

Preparing the
budget circular
stage

- Screening of sector programmes and projects for climate risks and other climate-related considerations
- Costing of adaptation-related policies and measures

Sector
resource
allocation
stage

Adding climate change considerations in screening and selecting projects and specific investments

Allocating budget for climate change responses identified in the context of cross-sectoral plans or claiming resources from a 'horizontal' fund to implement them.

Tools to mainstreaming climate adaptation and CSPFM in the budgetary process

- **Climate Budget Tagging (CBT)**



- ❖ CBT is a tool for monitoring and tracking climate-related expenditures in the national budget system. It provides comprehensive data on climate-relevant spending, enabling governments to make informed decisions and prioritize climate investments.
- ❖ CBT enables public scrutiny on government and donors' spending on tackling climate change issues, and it strengthens accountability and transparency.
- ❖ Climate change budget tagging is a government-led process of identification, measurement, and monitoring of climate relevant public expenditure.

Evolution of Climate Change Budget Tagging 2011-2021

Country	CPEIR (year)	Tagging Supported by	Fiscal Years Budget Tagging Applied	Application
Nepal	2011	UNDP	2013–present	Budget
Cambodia	2012	UNDP	2013–present	Review
Indonesia	2012	WBG	2014–present	Budget
Philippines	2013	WBG	2015–present	Budget
Ecuador	2017	UNDP	2016–present	Budget
Ghana	2015	UNDP	2016–present	Budget
Moldova	2017	UNDP	Not yet applied	Budget
Colombia	2018	WRI	2017	Review
Ethiopia	2014	WBG	2017	Review
Honduras	2016	UNDP, GEF	2017–present	Budget
Nicaragua	2015		2017–present	Budget
Pakistan	2015 and 2017	UNDP	2017–present	Budget
Kenya	2016	UNDP, UNEP	2017–present	Budget
Bangladesh	2012	UNDP	2018–present	Budget
Ireland			2019–present	Budget
Uganda	2013	WBG	2019–present	Budget
Odisha (India)			2020	Budget
France			2021	Budget
Mexico			2021	Budget

Source: WBG, 2021

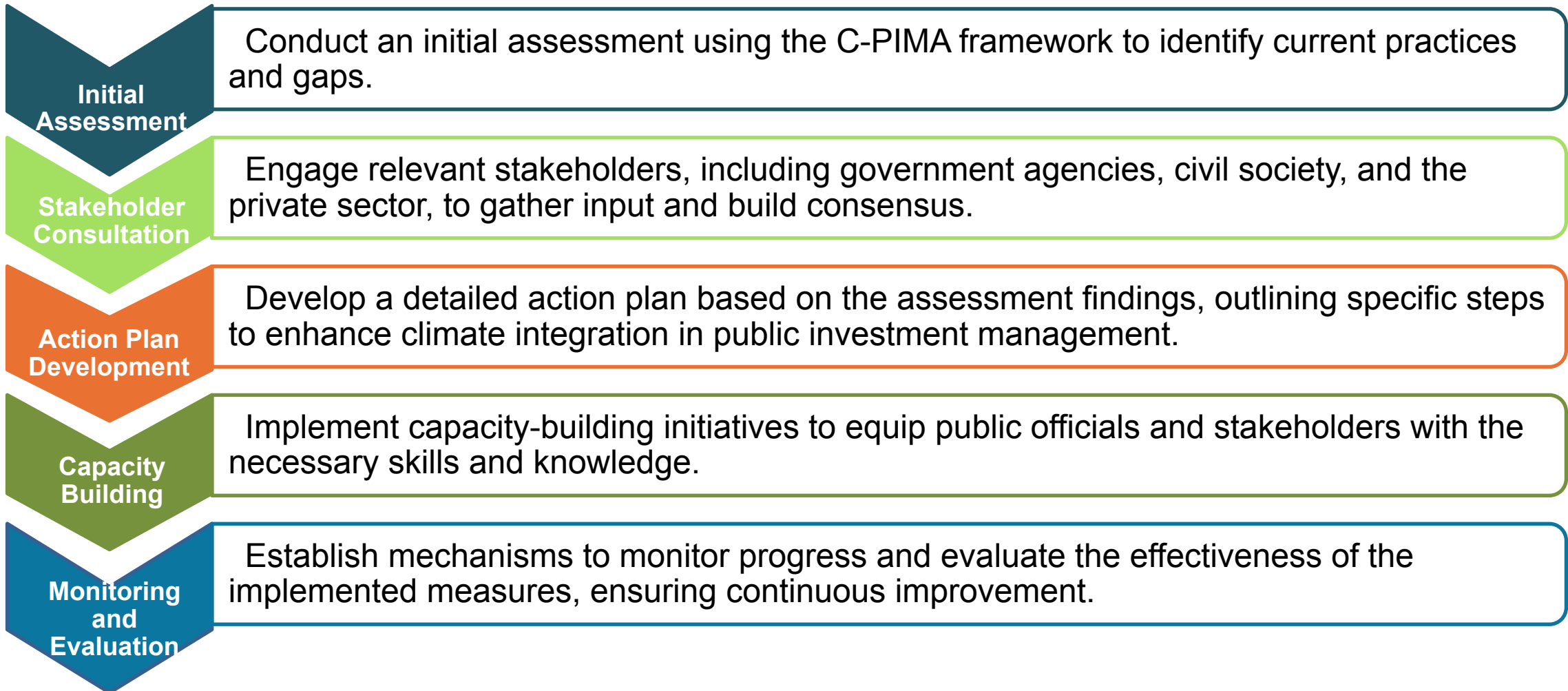
Climate Public Investment Management Assessment (C-PIMA)



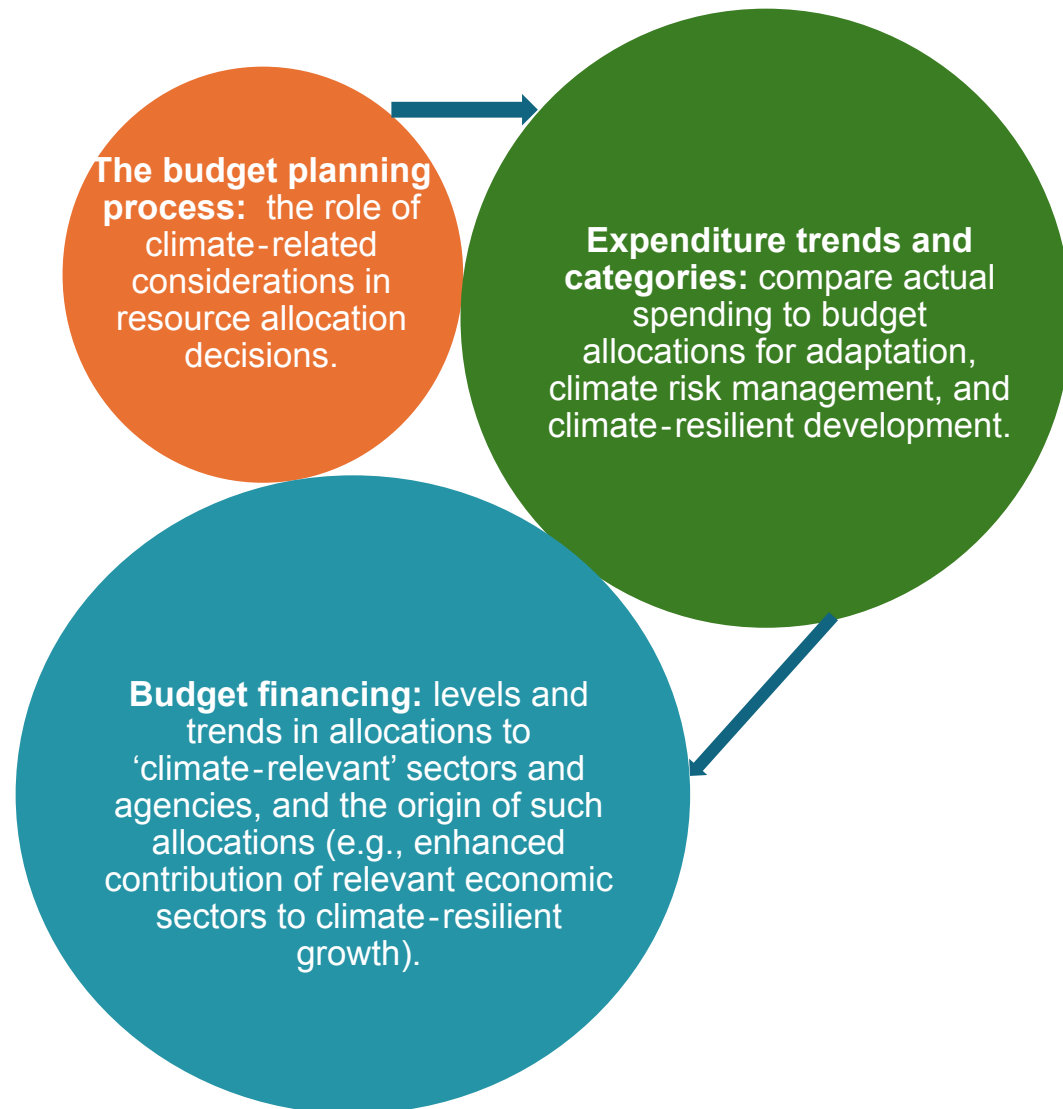
Source: IMF, 2022

- ❖ The Climate Public Investment Management Assessment (C-PIMA) tool is designed to help countries evaluate and enhance their capacity to integrate climate resilience and adaptation considerations into public investment management.
- ❖ This tool, developed by the International Monetary Fund (IMF) and other partners, provides a systematic framework to assess how well climate risks and opportunities are being incorporated into the planning, allocation, and execution of public investments.

C-PIMA Implementation steps



Public Environmental Expenditure Reviews (PEER)



- ❖ The PEER tool can be used for mainstreaming climate adaptation in the budgetary process through analyzing how budget resources are planned and spent across competing claims and priorities.
- ❖ PEER provides a comprehensive review of government expenditures related to environmental and climate issues, and in doing so identifies gaps, inefficiencies, and areas for improvement.
- ❖ The instrument provides valuable insights for policymakers to make informed decisions and prioritize investments that support climate adaptation.

Making Systems and Institutions Climate Finance Ready

Financial Planning

Assess needs and priorities, and identify barriers to investment
Identify policy mix and sources of financing

Accessing Finance

Multiple access channels
Blend and combine finance
Formulate project, programme, sector-wide approaches to access finance

Delivering Finance

Implement and execute project, programme,
Ensure effective procurement processes
Build local supply of expertise and skills
Coordinate implementation

Monitor, Report & Verify (MRV)

Monitor, report, and verify flows of results and funding
Performance-based payments and incentives

Challenges to mainstreaming climate adaptation in budgeting processes

Data and Capacity

Lack of reliable climate data and insufficient capacity within public financial management institutions to integrate climate considerations.

Political Will

Securing commitment from political leaders and stakeholders to prioritize and invest in CSPFM.

Coordination

Ensuring coordination between various government departments and agencies involved in climate action and financial management.

Cases studies

	Context	Implementation	Outcomes
Ethiopia	As a drought-prone country, Ethiopia has implemented CBT to manage its climate adaptation and mitigation efforts.	<ul style="list-style-type: none"> The Climate Resilient Green Economy (CRGE) strategy integrates CBT. Strong government commitment with dedicated budget lines for climate actions. Collaboration between various ministries for comprehensive budget tagging. 	<ul style="list-style-type: none"> Effective channeling of funds towards drought resilience and mitigation projects. Better integration of climate considerations into national development plans. Increased ability to attract international climate finance.
Uganda	Uganda's diverse ecosystems are under threat from climate change, prompting the need for effective financial tracking.	<ul style="list-style-type: none"> Pilot projects for CBT began in 2015 with support from the Climate Change. Department Training for budget officers and sectoral ministries. Inclusion of CBT in the national budgeting software. 	<ul style="list-style-type: none"> More precise allocation of resources to vulnerable areas. Increased involvement of stakeholders in the budget planning process. Comprehensive reporting on climate finance flows.
Bangladesh	Bangladesh faces significant risks from rising sea levels and extreme weather events. CBT is a key tool for managing climate finance effectively.	<ul style="list-style-type: none"> Since 2014, the Ministry of Finance has incorporated CBT into its budgeting process. Detailed tagging across key sectors such as agriculture, water resources, and disaster management. Assistance from international agencies such as UNDP for capacity building. 	<ul style="list-style-type: none"> Better alignment of financial resources with national climate strategies. Improved mechanisms for tracking climate-related expenditure. Acknowledgment from the international community for innovative climate finance management.
Nepal	Nepal, highly vulnerable to climate change due to its geography, has integrated CBT into its budgetary process to ensure efficient use of resources.	<ul style="list-style-type: none"> The Government of Nepal adopted the Climate Change Financing Framework (CCFF) in 2012. Climate-related expenditures are tagged across different sectors, enabling the tracking of climate finance. Extensive training for government officials on CBT processes. 	<ul style="list-style-type: none"> Enhanced prioritization of climate-related projects. Greater accountability and transparency in climate financing. Informed policy-making through detailed expenditure reports.
Cambodia	Cambodia is highly vulnerable to climate impacts, particularly flooding and changes in precipitation patterns. CBT helps in tracking and utilizing climate funds effectively.	<ul style="list-style-type: none"> The Ministry of Economy and Finance adopted CBT as part of the national budget. Extensive training for government staff on the principles and practices of CBT. Collaboration with international donors for technical and financial support. 	<ul style="list-style-type: none"> Improved efficiency in the use of climate funds. Enhanced capacity of government officials in climate finance management. Strengthened partnerships with international climate finance mechanisms.

Session 2: Various debt-for-climate swap schemes

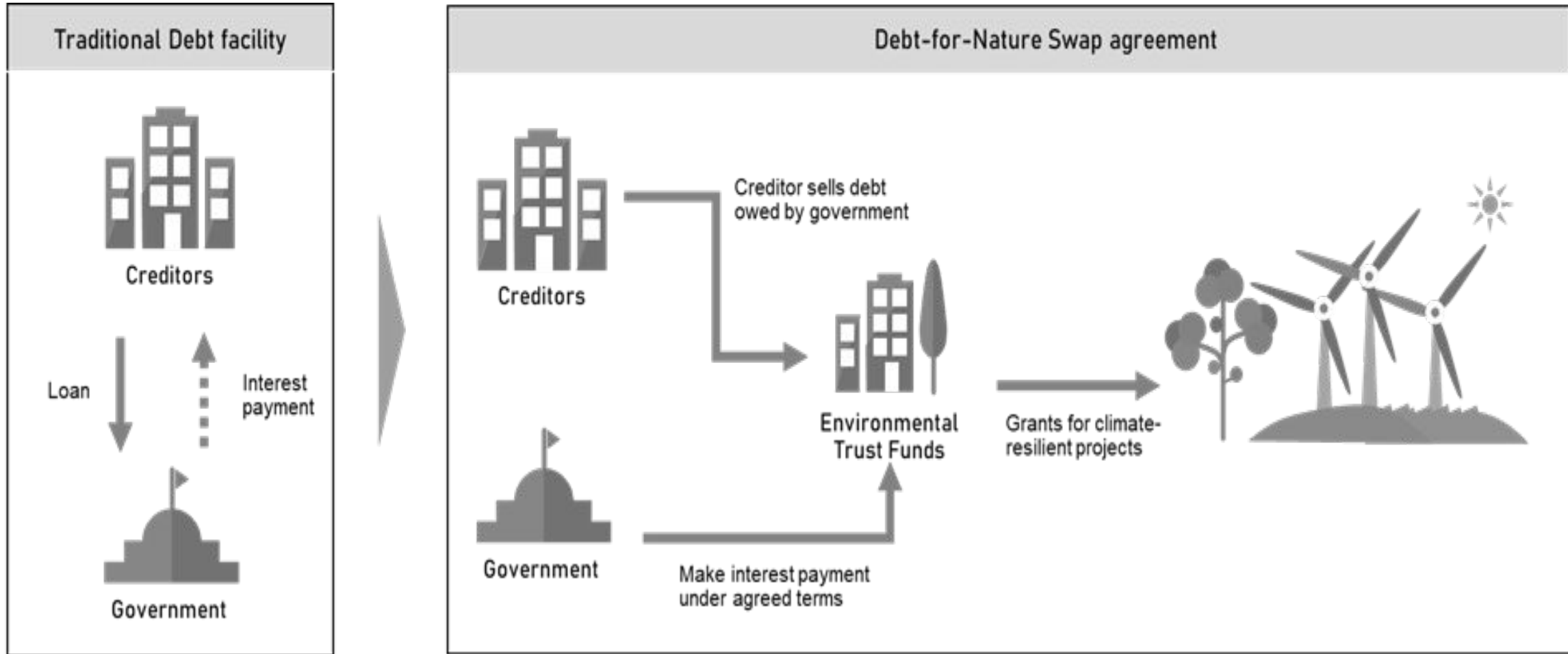


Learning Objective

The learning objective of this session on debt-for-climate swaps schemes aims to equip participants with the knowledge and skills necessary to understand, design, negotiate, implement, and monitor debt-for-adaptation swap agreements effectively.

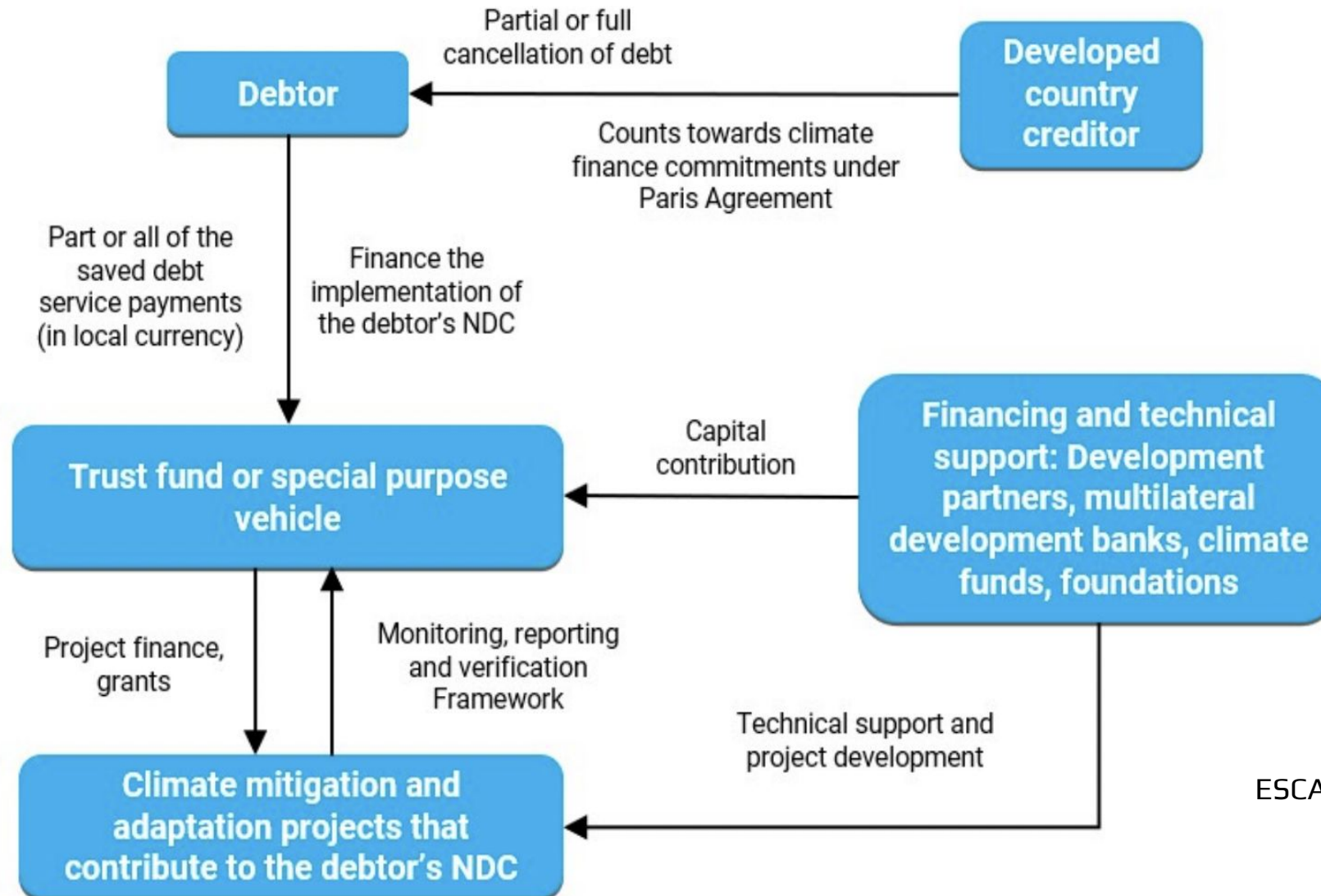


Traditional Debt Facility vs Debt-For-Nature agreement



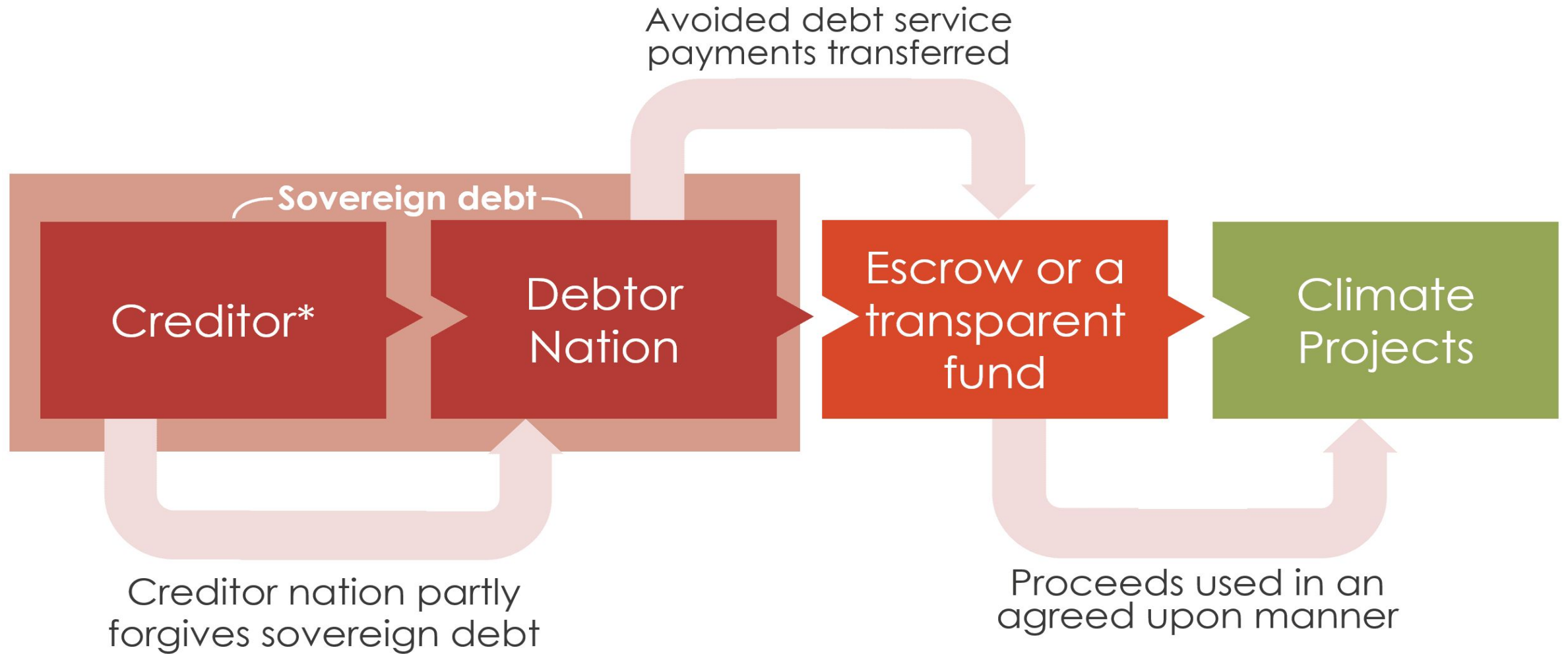
An of illustration of Debt-for-Nature Swap, based on IIGF Green BRI Center 2021

DFC swaps and the Paris Agreement



ESCAP, 2021

Debt-For-Climate (DFC): How it works?



Debt-For-Climate (DFC) process

Debt-For-Adaptation (DFA) outcomes



Cases studies



Seychelles (2018)

Seychelles is the first country to undertake a debt-for-nature swap to encourage marine conservation. The deal enabled Seychelles to swap USD 21.6 million in debt in exchange for the creation of two major marine reserves, helping the country achieve its goal of 30% marine protection. This is an example of a debt-for-nature swap where debt was sold at a discounted rate, and different organizations chipped into fund conservation and climate adaptation projects. The Nature Conservancy's low-interest loan of USD 15.2 million mobilized USD 5 million in grants from philanthropic foundations to buy the outstanding debt on behalf of Seychelles. The estimated savings for Seychelles were about USD 2 million per annum due to reduced debt service charges.



Belize (2021)

A debt-for-nature swap involving the government of Belize, The Nature Conservancy (TNC), the U.S. Development Finance Corporation, commercial creditors, and other partners took place in 2021. A TNC subsidiary lent funds to Belize to buy back a sovereign bond with a face value of USD 533 million (about 30% of Belize's GDP) at a discounted rate of 55 cents per U.S. dollar. This was financed by issuing USD 364 million in blue bonds. The U.S. Development Finance Corporation provided political risk insurance to lower the credit risk and the cost of the blue bond. This allowed the loan to have a low interest rate, a 10-year grace period during which no principal is paid, and a long maturity of 19 years.

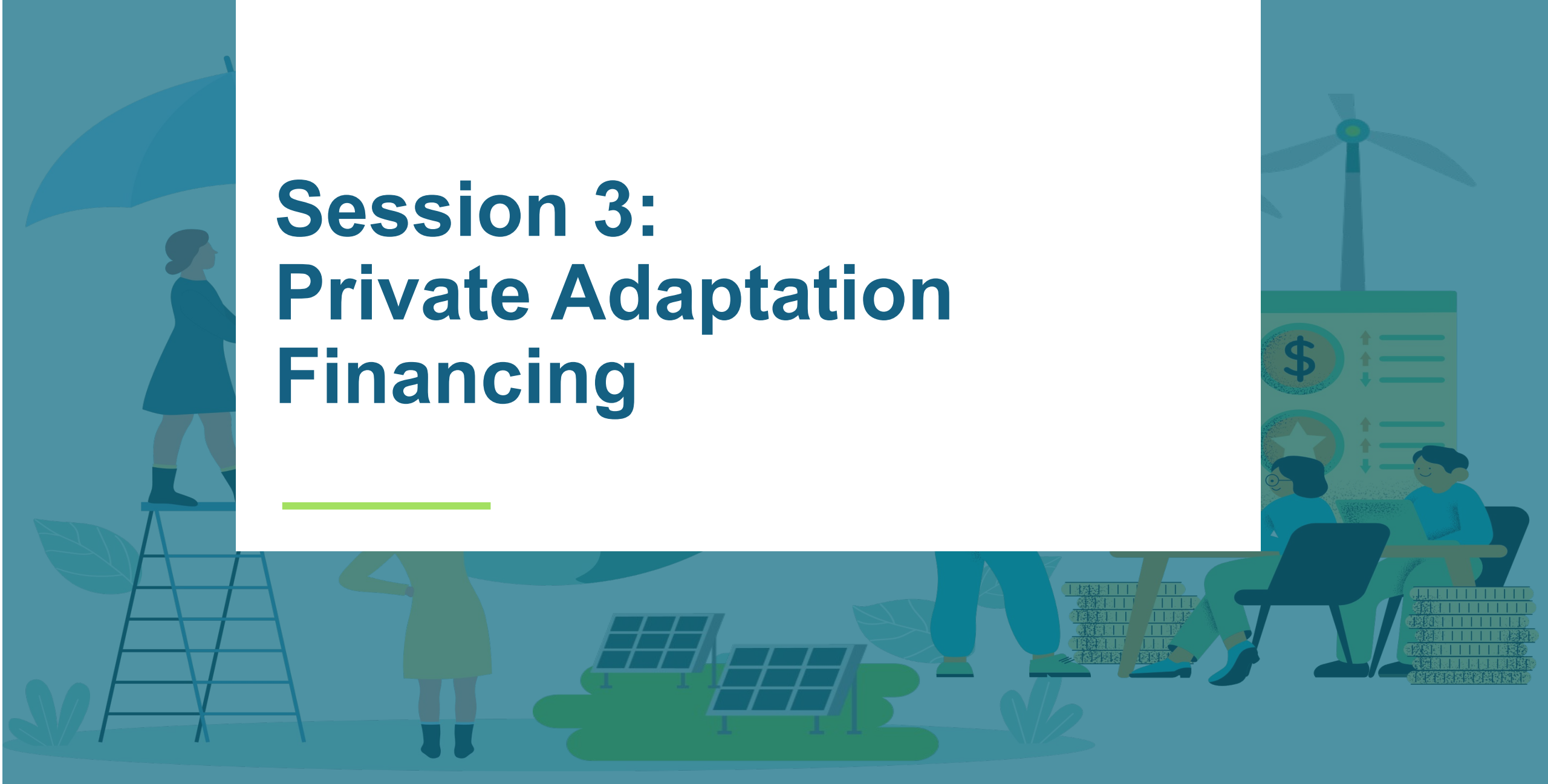
Challenges to DFC swaps

Managing these debts while also investing in adaptation projects can be a significant challenge.

Ensuring that the necessary legal structures are in place can be challenging and time-consuming.

Ensuring transparency and avoiding corruption in project selection and implementation is crucial.

Session 3: Private Adaptation Financing



Learning Objective

The learning objective of Private Adaptation Financing is to equip participants with the knowledge and skills necessary to effectively mobilize and manage private sector financing for climate adaptation projects. It presents the rationale and motives of private sector engagement in adaptation, the challenges to Private Adaptation Finance, the options to leveraging private sector investment for adaptation and also some case studies.



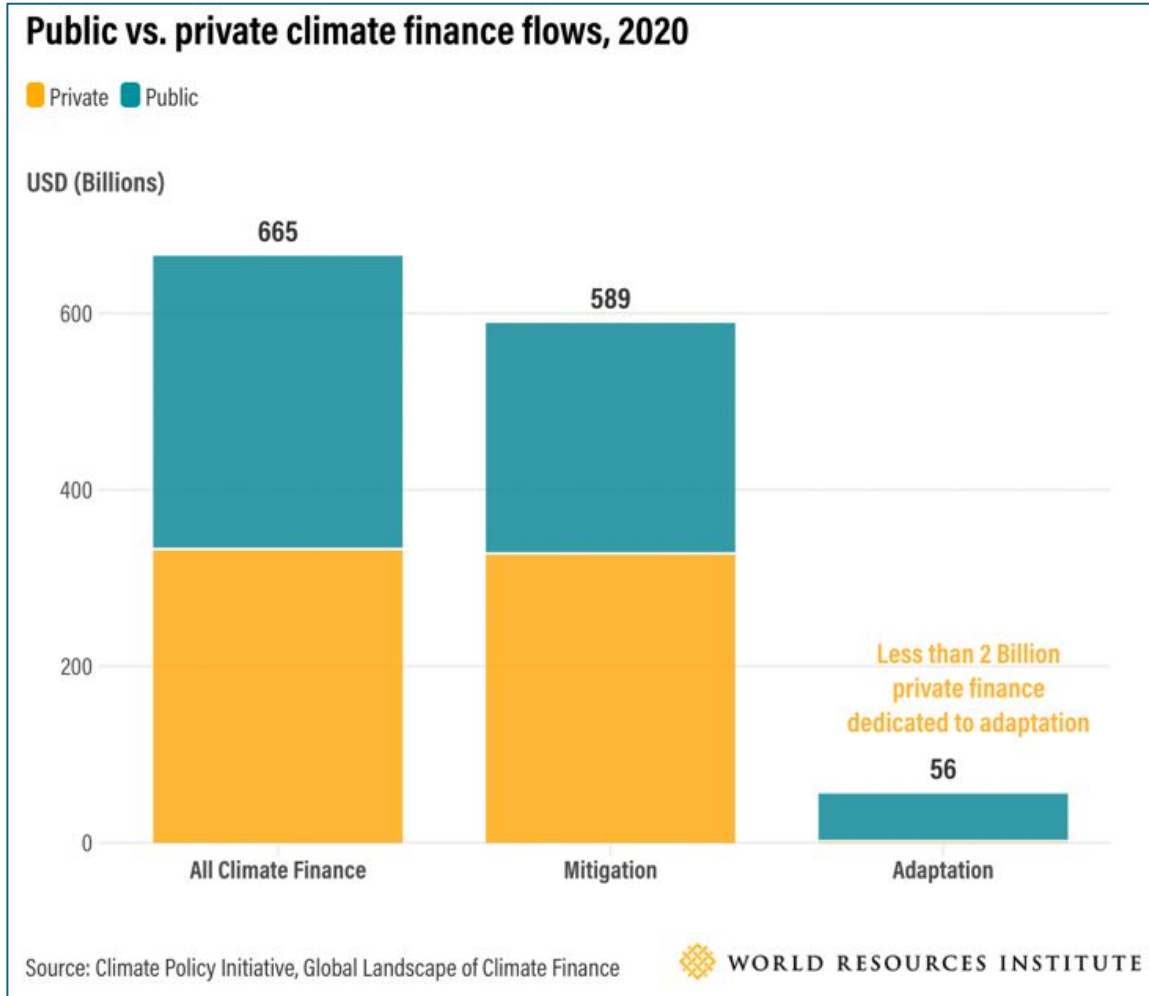
Public Finance vs Private Finance

Basis	Public Finance	Private Finance
Meaning	Expenditure and revenue of the government.	Expenditure and revenue of individuals and business firms.
Nature of the Budget	Government creates deficits, expenditure exceeds revenue.	Usually have a surplus budget, i.e., where revenue exceeds expenditure.
Objective	Encourage social welfare & provide public benefits	Enhance the profit of the entities and investors.
Elasticity of Finance	More elastic as it has a scope for significant change.	Less elastic than public finance as there is not much scope for changes in it.
Financial Transaction	In best cases, open and known to everyone.	The financial transactions are held in secret.
Sources of Revenue	Government has ability to print money and raise revenue	Private entities have limited sources to generate revenue.
Determination of Expenditure	Government determines expenditures and income generation	A private individual first evaluates his income before deciding how much money is needed to be spent.
Effect on Economy	Has significant impact on the overall economic system.	Private Finance has little or negligible impact on the overall economic system.

Private Adaptation Finance: The challenges

Many factors explain why private investment in climate adaptation is low.

- ❖ The perception that there is no money to be made in financing climate adaptation activities
- ❖ The information asymmetries and knowledge gaps
- ❖ The investment horizon and size of adaptation projects



Motives of private sector engagement in adaptation

Private sector investment might contain adaptation and mitigation benefits but profit-making is its main objective. In line with this objective, private firms can invest in adaptation for three main reasons:

to address potential impacts of climate change on their operations

to participate in an emerging market for new products and services.

to address adaptation as part of their 'corporate social responsibility'

Leveraging private sector investment for adaptation

Policy Incentives

Feed-in-tariffs
Tradable certificates
Tax incentives
Clean energy subsidies

Risk management

Guarantees
Insurance policies
Contract-based instruments

Grants

Cash transfers
In-kind support

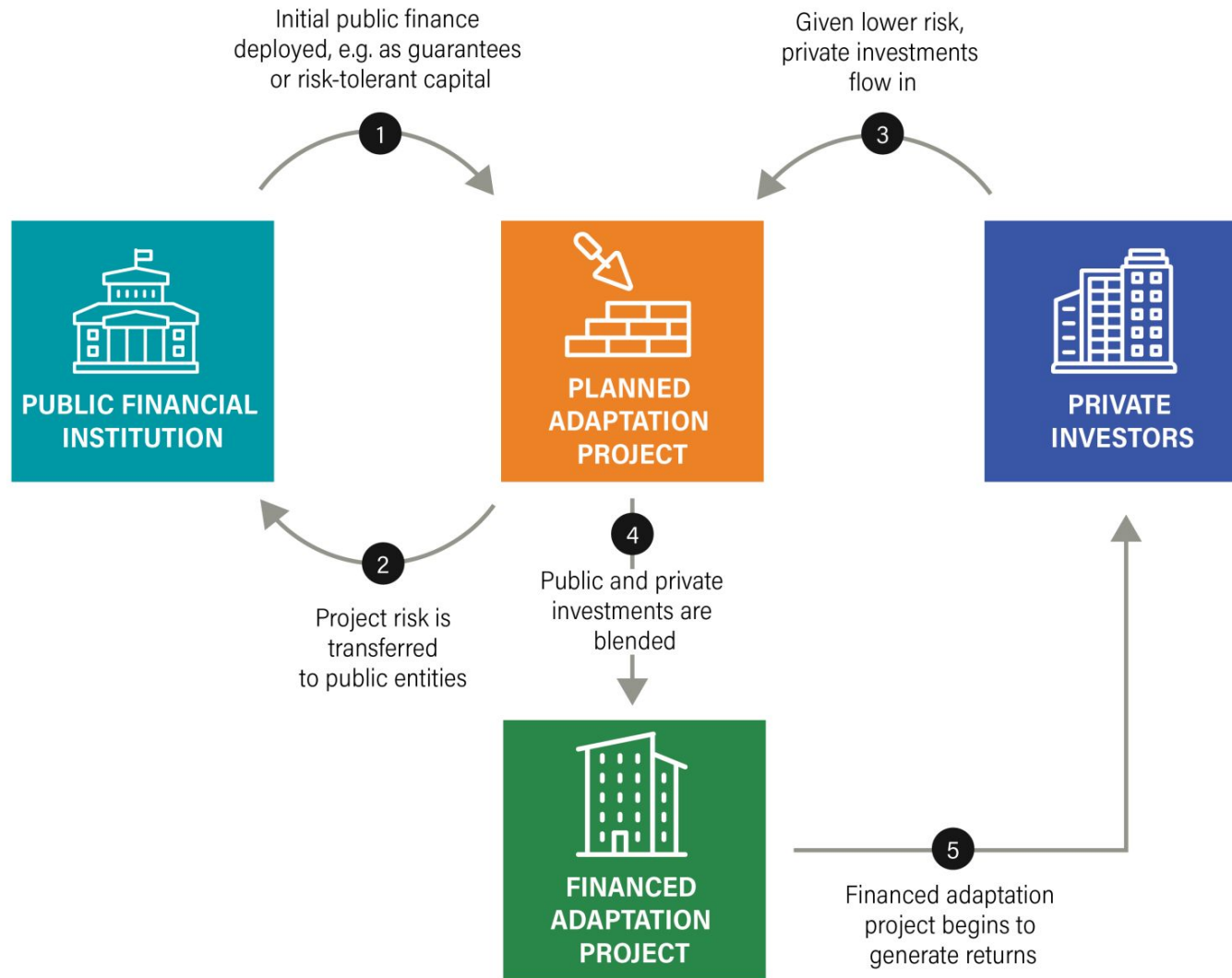
Low-cost project debt

Concessional loans

Capital instruments at commercial terms

Project-level market rate debt
Project-level equity
Balance sheet financing

De-risking adaptation opportunities for private investors



Ways to Involve Private Capital in Adaptation Finance

Examples of Debt For Carbon swaps

Case Studies	Overview	Solution	Impact
Oxfam and Global Parametrics in Ethiopia	Oxfam partnered with Global Parametrics, a company specializing in climate risk finance, to provide weather index insurance to smallholder farmers in Ethiopia.	Global Parametrics developed a weather index insurance product that triggers payouts based on specific weather indices. Oxfam helped facilitate the uptake of this insurance among farmers by providing education and support.	Provided a safety net enabling farmers to recover more quickly from adverse weather events, and incentivized investment in resilient agricultural practices
BIMA and Mobile Health Insurance in Ghana	BIMA launched a microinsurance product to help low-income populations access health services, thereby increasing resilience to climate-related health impacts.	BIMA offered affordable health insurance policies through mobile phones, allowing easy access and payment via mobile money. The insurance covers hospital visits, surgeries, and provides telemedicine services.	Increased access to healthcare for vulnerable populations, improved coping for climate-related health risks. Expanded customer base demonstrating viability of mobile-based insurance models in LDCs.
African Agriculture Fund and Farm Support Services in Mozambique	A private equity fund, invested in agricultural support services in Mozambique to enhance climate resilience of smallholder farmers.	Investment in providing inputs, training, and market access to farmers; introduction of climate-smart agricultural practices, drought-resistant crops and improved irrigation techniques.	Improved farmers' productivity and climate resilience. Generated returns for AAF, showing that private investment in climate adaptation can be profitable.
Zambian Breweries and Water Stewardship in Zambia	Zambian Breweries implemented water stewardship initiatives to secure water resources for its operations and surrounding communities.	Zambian Breweries invested in water conservation projects, including restoration of wetlands, rainwater harvesting, and community education programs on water management.	Ensured a sustainable water supply for the brewery and improved water availability for local communities.
Off-Grid Electric (Zola Electric) in Tanzania	Zola Electric provides off-grid solar energy solutions, expanded its operations in Tanzania to increase energy access and support climate adaptation.	Zola Electric offered affordable solar energy systems on a pay-as-you-go basis, enabling households and businesses to access clean and reliable electricity. This model also included maintenance and customer support services.	Access to solar energy reduced reliance on polluting and climate-vulnerable energy sources. The company achieved market penetration and demonstrated the viability of scalable, clean energy solutions in LDCs.

Session 4: Carbon Market Mechanisms for adaptation funding



Learning Objective

The learning objective of this session revolves around understanding how market mechanisms can support adaptation efforts in response to climate change impacts. By the end of the session, participants will have greater understanding of carbon markets, learn how carbon market mechanisms can contribute to adaptation funding, and understand the policy implications of using carbon market mechanisms for adaptation funding, including considerations related to equity, transparency, and governance.



Conceptual framing (1)

- Carbon market mechanisms, also known as emissions trading mechanisms, are regulatory systems and financial instruments designed to reduce greenhouse gas emissions.

They operate by creating a market for trading emission allowances or credits, providing economic incentives for businesses and governments to limit their carbon emissions.

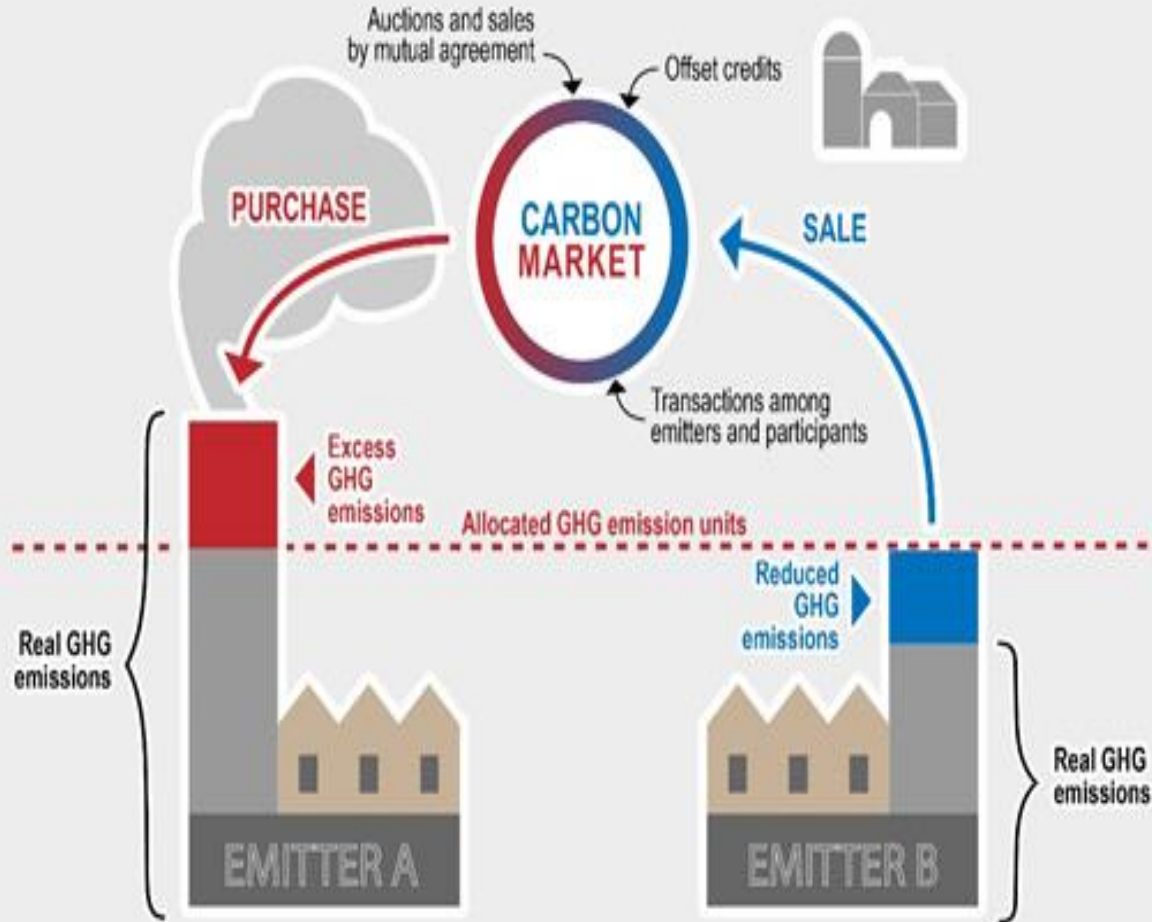
Conceptual framing (2)

Carbon offset is a reduction or removal of emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere.

Carbon credits are permits that allow the owner to emit a certain amount of carbon dioxide or other greenhouse gases.

Carbon pricing is an instrument that captures the external costs of greenhouse gas (GHG) emissions—the costs of emissions that the public pays for (e.g. crop damage, health care costs from heat waves and droughts, and loss of property from flooding and sea level rise)—and ties them to their sources through a price, usually in the form of a price on the carbon dioxide (CO₂) emitted.

How the carbon market works?

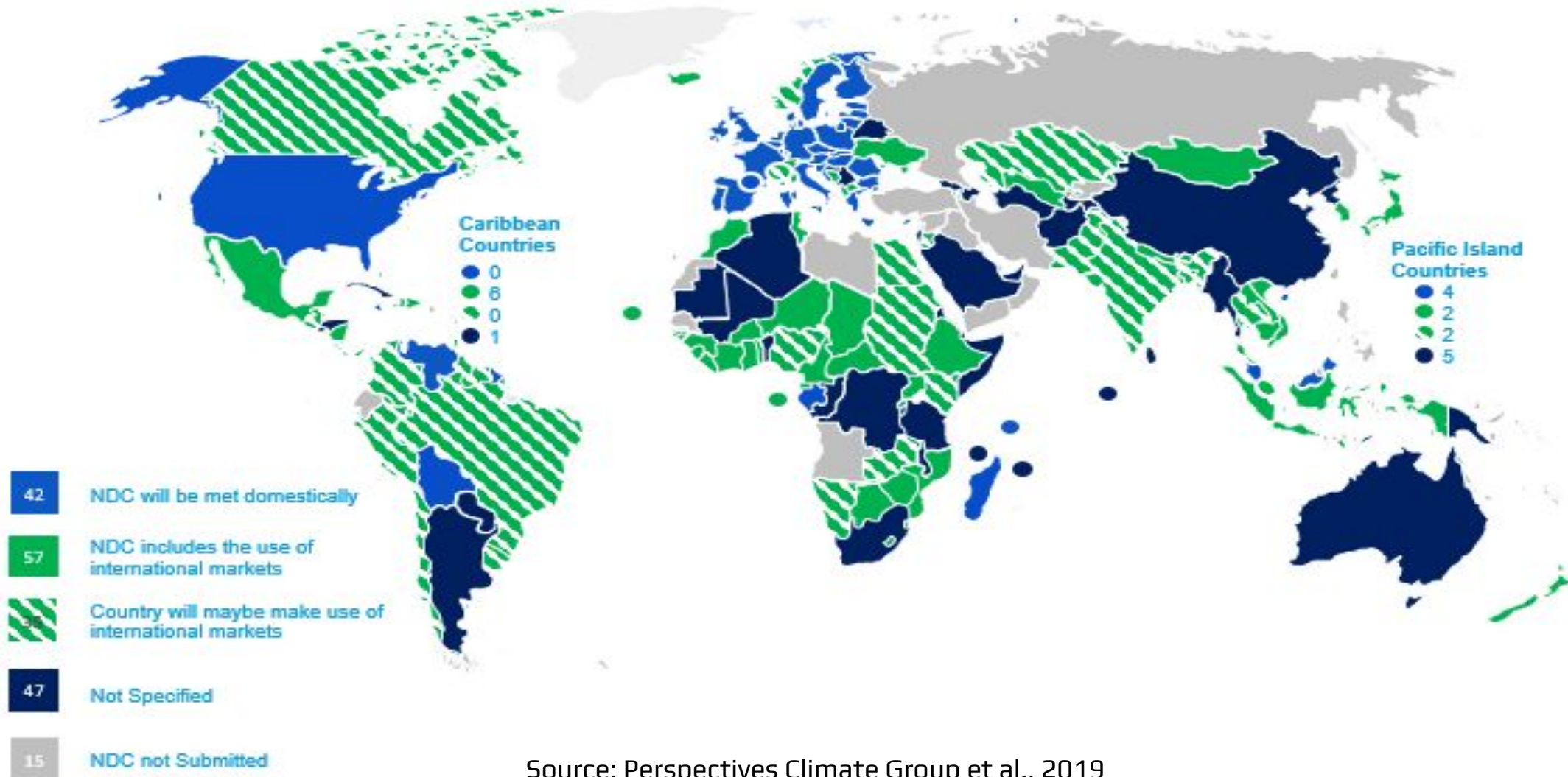


Generally, a carbon market works as describe as follow:

- Setting a Cap
- Allocating Carbon Allowances
- Trading Carbon Allowances
- Compliance and Penalties
- Carbon Offsets
- Verification and Monitoring
- Voluntary vs. Mandatory Markets

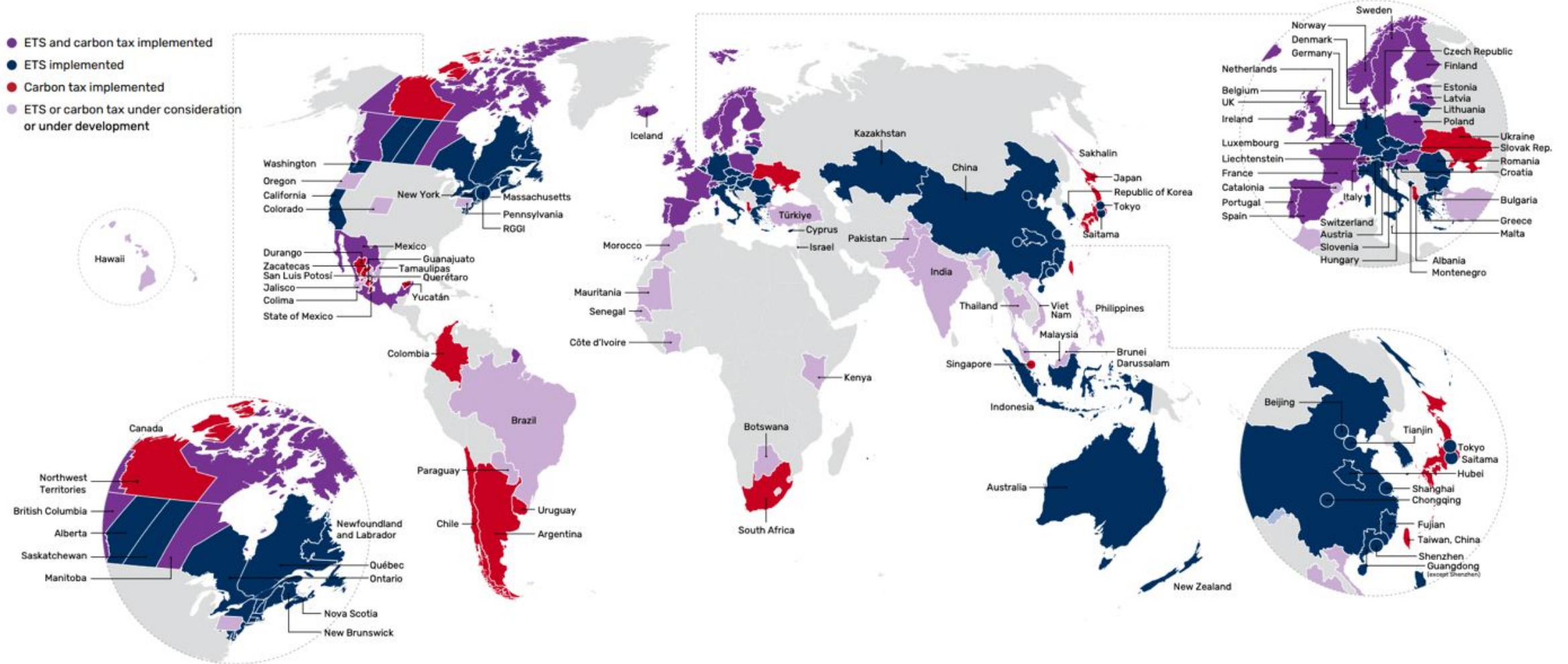
State and trends of carbon markets

NDCs and reference to the use of carbon market mechanisms (2019)



Source: Perspectives Climate Group et al., 2019

Map of carbon taxes and ETSs in 2024



Source: WBG, 2024

Carbon market mechanisms for adaptation funding

Carbon Offset Projects

They include activities that simultaneously benefit adaptation, such as afforestation and reforestation, renewable energy deployment, and sustainable land use practices. The revenue generated from these projects can be used for adaptation measures in the host countries. Offset programs enable entities to earn carbon offsets by investing in projects that sequester or reduce carbon emissions. These offsets can be used to compensate for emissions elsewhere, such as in a company's own operations.

Offset programs enable entities to earn carbon offsets by investing in projects that sequester or reduce carbon emissions. These offsets can be used to compensate for emissions elsewhere, such as in a company's own operations.

Sectoral Approaches

Sectoral carbon market mechanisms, such as those for reducing emissions in the aviation and maritime sectors, may generate revenue that can be used to address adaptation needs in the transportation and coastal areas, respectively

Co-Benefit Projects

Carbon market projects that aim to reduce emissions can also have co-benefits for adaptation. For example, a renewable energy project can enhance energy access in a vulnerable community, improving their resilience to climate impacts. These co-benefits can be leveraged to secure additional funding for adaptation measures

Challenges in implementing markets mechanisms in LDCs

Lack of infrastructure

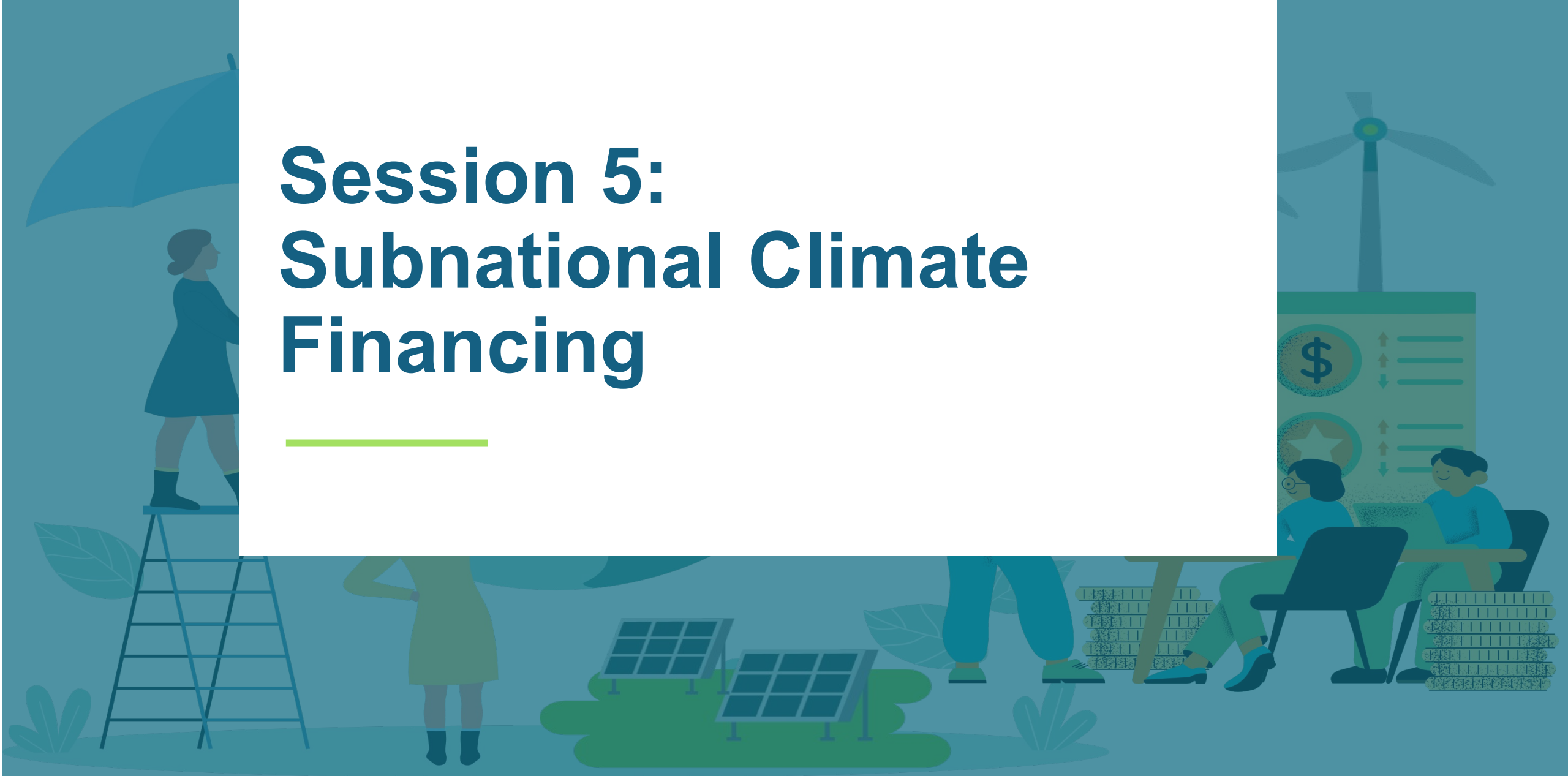
Lack of technical capacity

Financial resources

Regulatory frameworks & institutional capacity

Market Size and liquidity

Session 5: Subnational Climate Financing

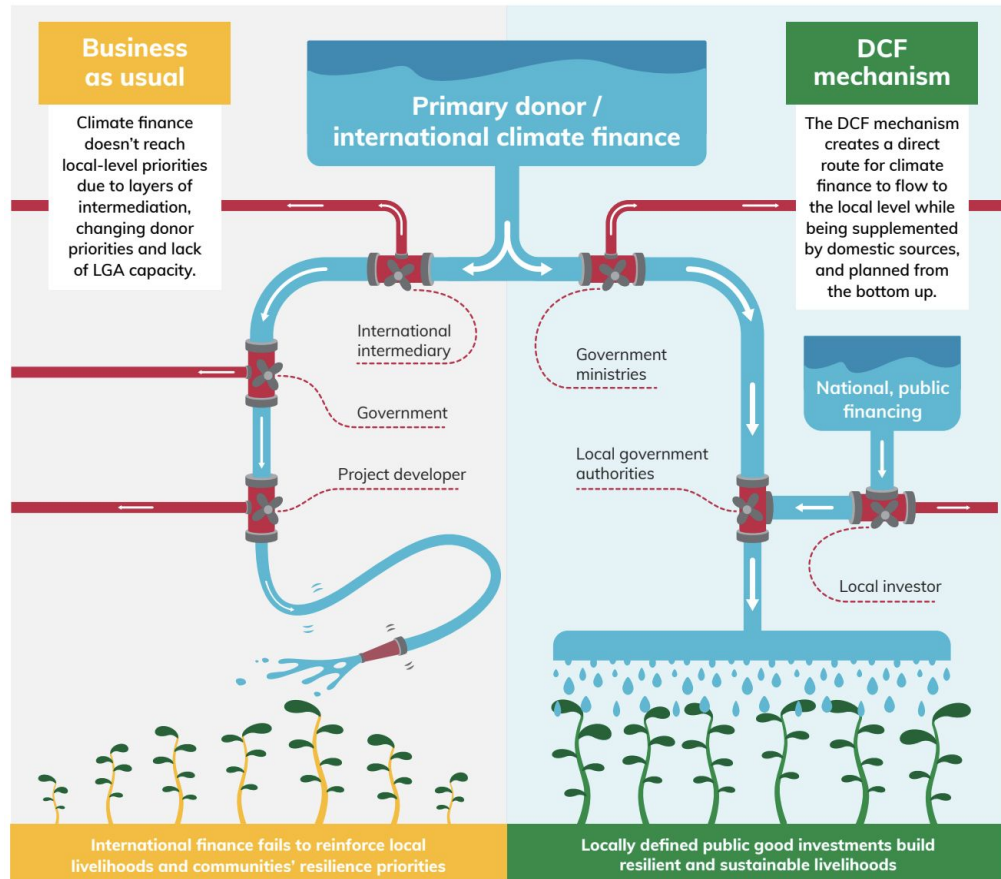


Learning Objective

The learning objective of this session on financing subnational climate adaptation actions will equip the participants with the knowledge and skills necessary to understand, plan, and implement effective financing strategies for subnational climate adaptation initiatives. By the end of the session, participants will have greater understanding of how to navigate the complex landscape of financing subnational climate adaptation actions.



Rationale for subnational adaptation financing



The rationale for subnational adaptation financing lies in the unique and crucial role that local and regional governments play in addressing climate change impacts and enhancing resilience.

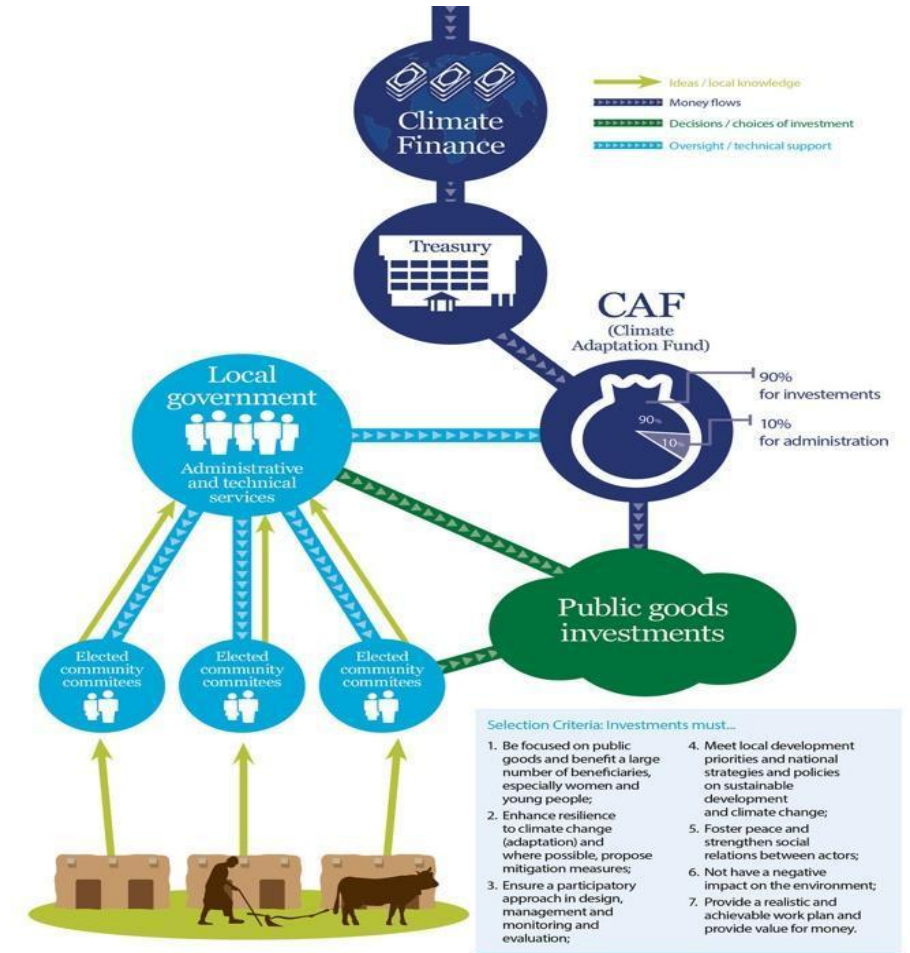
- ❖ Climate change impacts are often felt most acutely at the local level
- ❖ Subnational entities are better positioned to understand localized impacts
- ❖ Effective financing at the subnational level is crucial for translating national climate adaptation plans into concrete actions on the ground.
- ❖ Decentralized governance structures allow for more flexible decision-making processes
- ❖ Subnational adaptation financing can enhance the effectiveness and relevance of climate adaptation efforts, ensuring that they are context-specific, inclusive, and responsive to local needs

Barriers to subnational adaptation financing

Types of barriers	Description
Institutional	<ul style="list-style-type: none"> ▪ Lack of coordination between different levels of government and between different sectors, which can lead to fragmented efforts and inefficiencies in funding allocation. ▪ Inadequate policies and regulatory frameworks can hinder the flow of funds to subnational levels. ▪ Subnational entities may lack the institutional capacity to design, implement, and manage adaptation projects
Technical	<ul style="list-style-type: none"> ▪ Effective adaptation requires robust data and information on climate risks and vulnerabilities, and subnational governments often lack access to relevant and reliable climate data ▪ There may be a shortage of technical expertise required to design and implement adaptation measures
Financial	<ul style="list-style-type: none"> ▪ There is a general scarcity of funds dedicated to adaptation compared to mitigation. Subnational governments often have limited budgets and may prioritize immediate development needs over long-term adaptation strategies ▪ Subnational entities may face difficulties accessing international and national climate funds due to complex application processes and stringent eligibility criteria ▪ Many subnational governments, especially in developing countries, lack the creditworthiness required to attract private investment or to secure loans for adaptation projects
Socio-economic	<ul style="list-style-type: none"> ▪ There may be low levels of public awareness and understanding of climate risks and the importance of adaptation ▪ Adaptation measures need to be equitable and inclusive, addressing the needs of vulnerable populations ▪ Subnational governments often face competing priorities, which can overshadow the long-term benefits of adaptation measures

Cases studies and lessons learnt from the Devolved Climate Finance (DCF)

Lessons	Implications in practice
Community managed funds for public good investments are valuable in areas with high reliance on shared or common resources.	Communities can address immediate development and resource needs. While communities focus on short-term development deficits, higher level committees must consider long-term climate risks.
Devolving decision making responsibility to local adaptation planning committees widens and enhances participation in decision making and builds understanding of climate challenges, and bridge community knowledge and planning with formal local government systems.	Trust has been developed between new actors to make decisions with positive outcomes for men and women. More work is needed to guarantee that perspectives of marginalized groups are acted upon. This includes challenging traditional social norms and seeking to ensure that people from marginalized groups maintain positions in decision making spaces.
New tools and devolved institutions reduce the cost of government planning while improving accountability and efficiency.	Integrating new tools and institutions can save costs but training and quality assurance mechanisms take time to change existing norms. Working with in-country training institutions can help integrate new skills into government. training programmes and build knowledge of new approaches in-country.
Working through consortia improves problem solving, conflict resolution and builds cross-sectoral relationships.	Consortia take time to build trust and reduce hierarchies between different actors. Regular consortium meetings where all partners can share perspectives and responsibility for decision making help address these challenges. Need for availability of flexible funding to support a range of government and civil society partners.



Source: DCF Alliance, 2019

THANK YOU

