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## Complementary tools and initiatives

This session explores 4 further climate themes and/or tools of importance to Ministries of Finance and other government ministries



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01

### Climate Change Budget Integration Index

Diagnosing the extent of  
integration of CC into PFM systems

02

### Planning and budgeting for climate risks

Helping to ensure financial  
resilience

03

### Integrating climate resilience into public investment management

Using tools to build infrastructure  
resilience

04

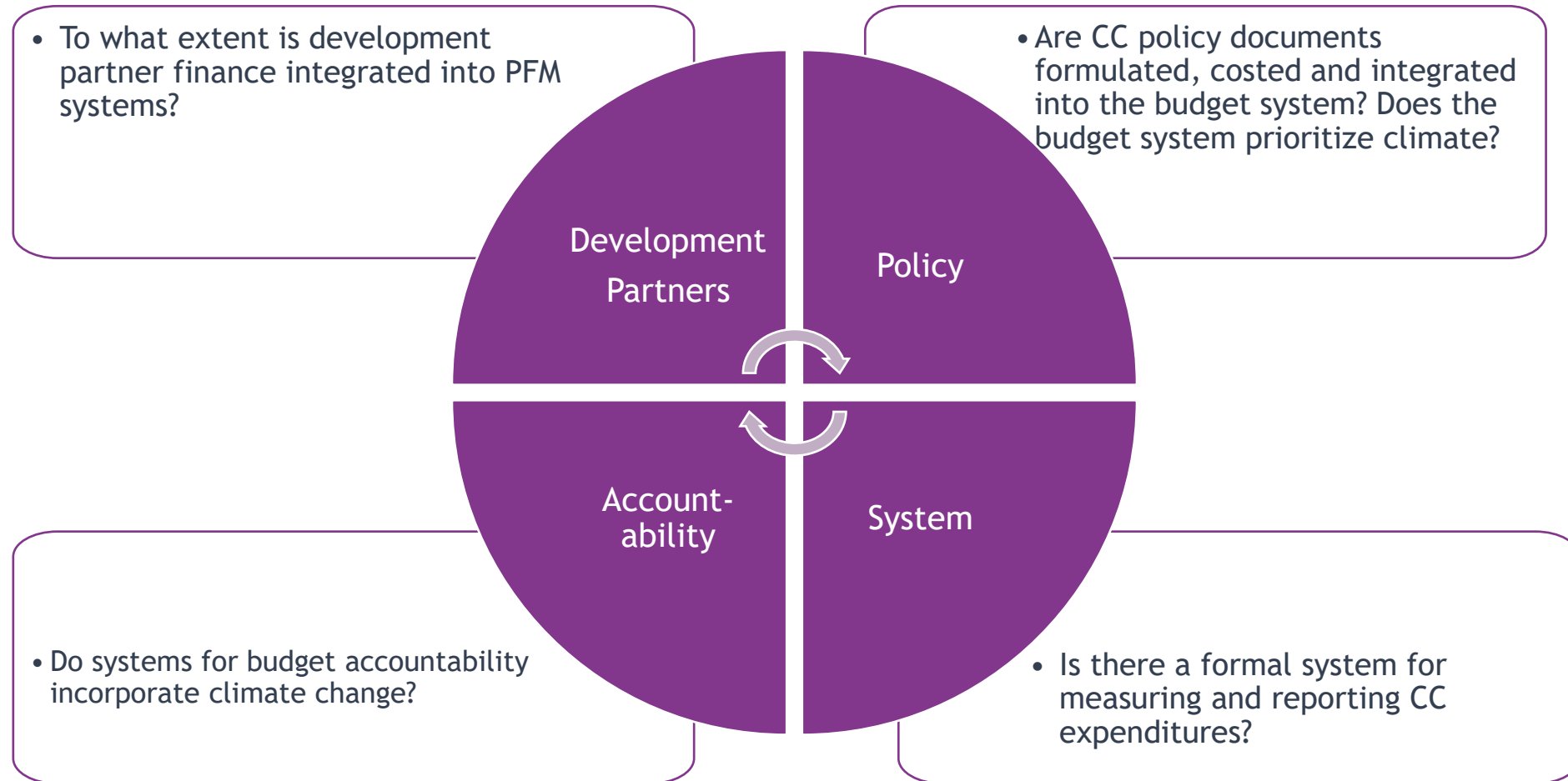
### Shadow carbon pricing

Helping reduce transition risk and  
preparing for a low-carbon future

# The CCBII helps countries understand whether the PFM system is enabling climate change policy outcomes



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Source: UNDP (undated) [Measuring the integration of climate change in PFM systems](#)

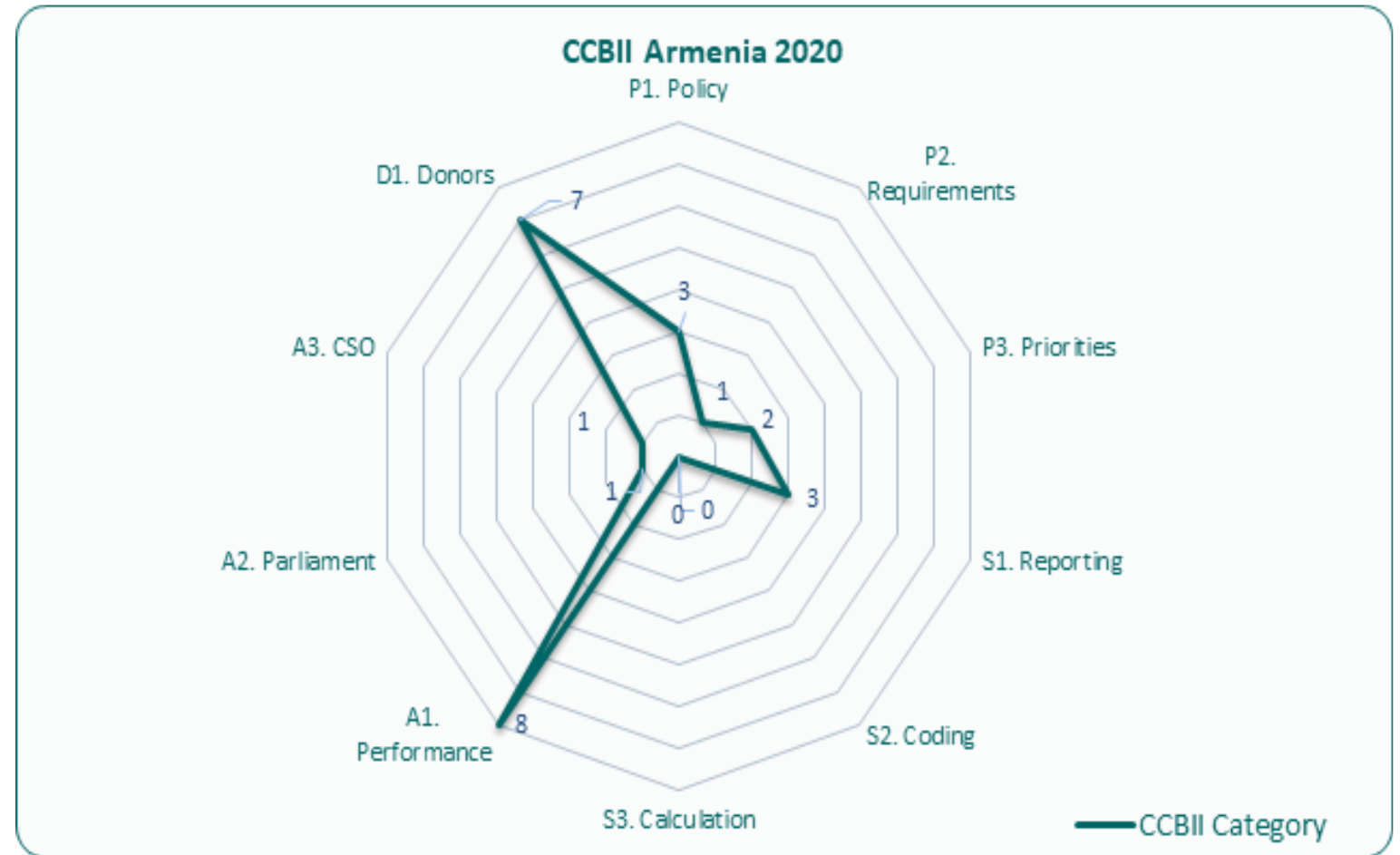
# The application of the CCBII tool in Armenia identified important opportunities for development



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- Generally low level of integration with budget system not well suited for cross sectoral objectives
- No current methodology for identifying, coding or calculating CC expenditures, or use of performance indicators
- Legislative requirements for reporting on CC budget expenditures did not exist



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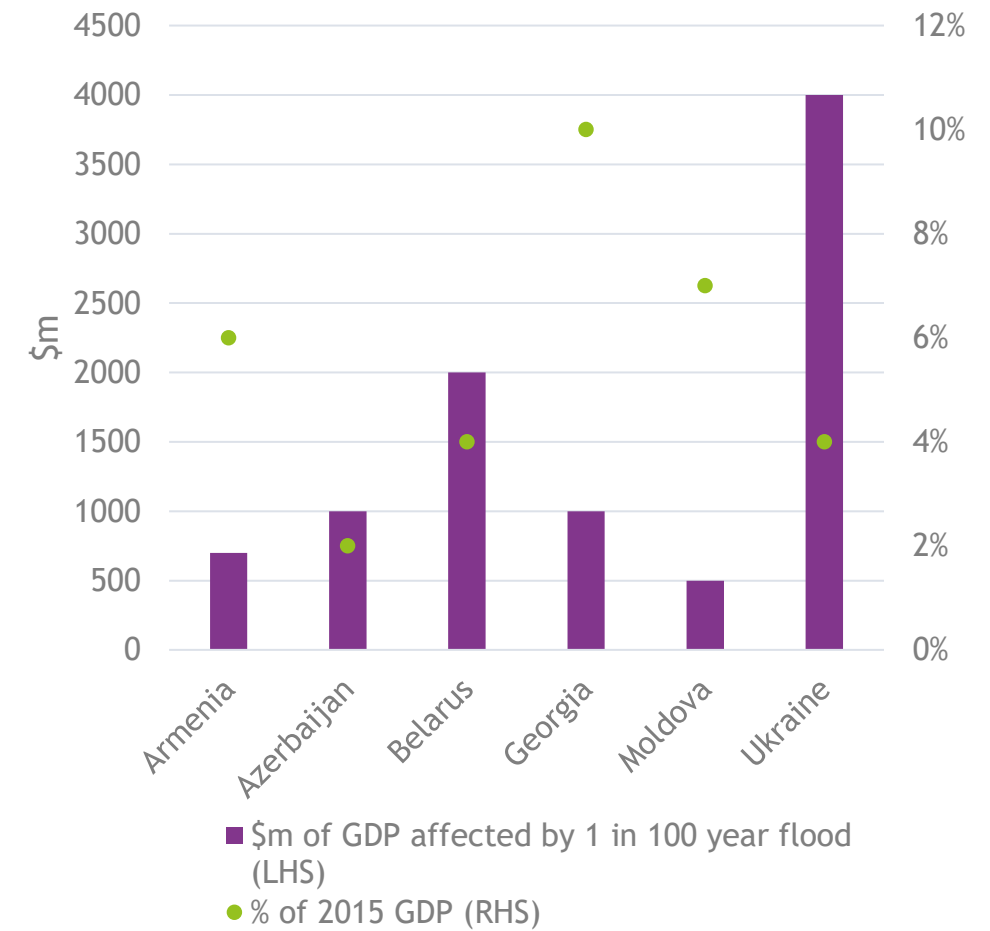
# All EU4Climate countries are affected by climate-related disasters which will create contingent liabilities



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- Climate related disasters can have a significant impact on the economic performance of all EU4Climate countries
- This creates explicit and implicit contingent liabilities on governments
  - Immediate response and longer term reconstruction efforts of publicly owned assets
  - Expectations regarding extra support for social protection
  - Reductions in tax revenues as economic activity declines
- The magnitude of these impacts can be estimated from existing databases or through bespoke modelling



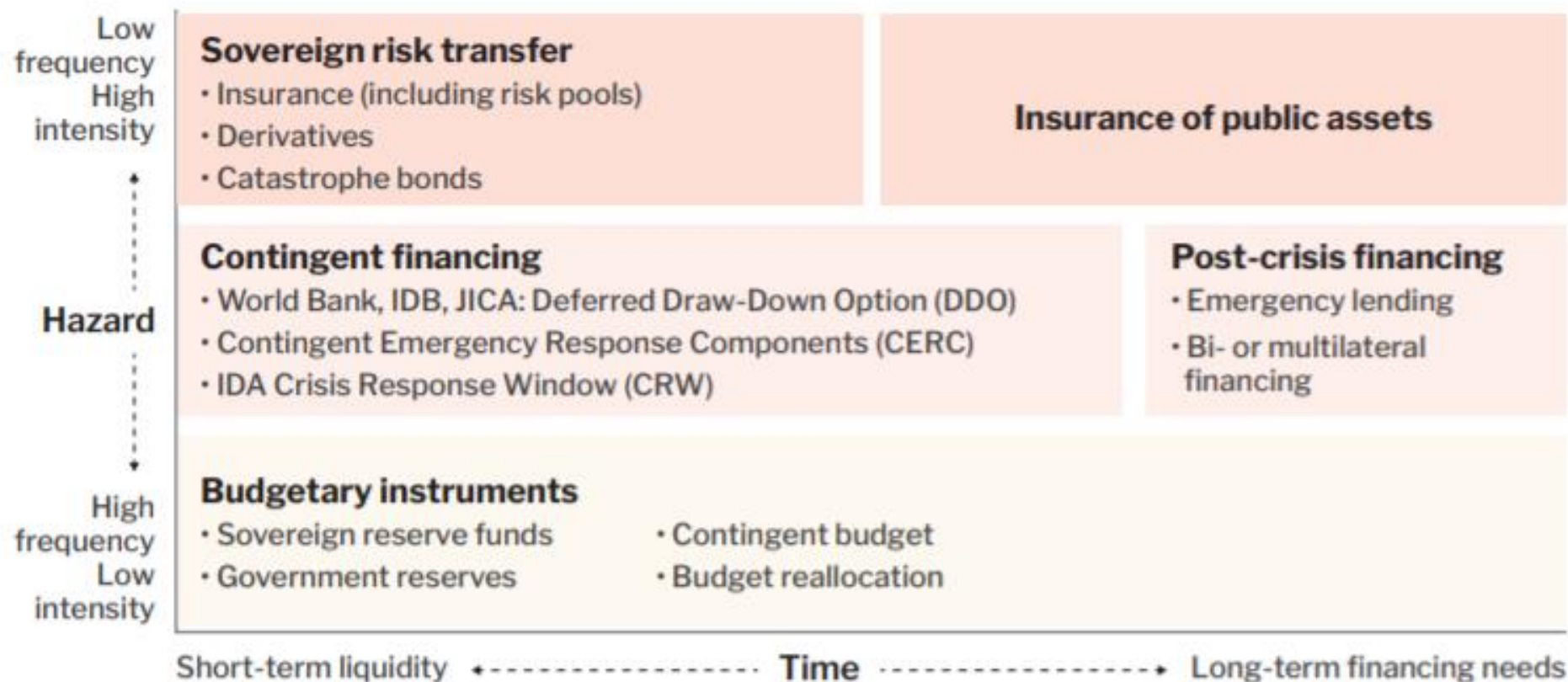
Source: GFDRR (2017) Various Disaster Risk Profiles



# Governments can use a variety of tools and instruments to budget for these contingent liabilities



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Source: World Bank 2017.

Note: IDB = Inter-American Development Bank; JICA = Japan International Development Cooperation Agency; IDA = International Development Association.

Source: Hallegatte et al (2020) [Adaptation Principles: A Guide for Designing Strategies for Climate Change Adaptation and Resilience](#)

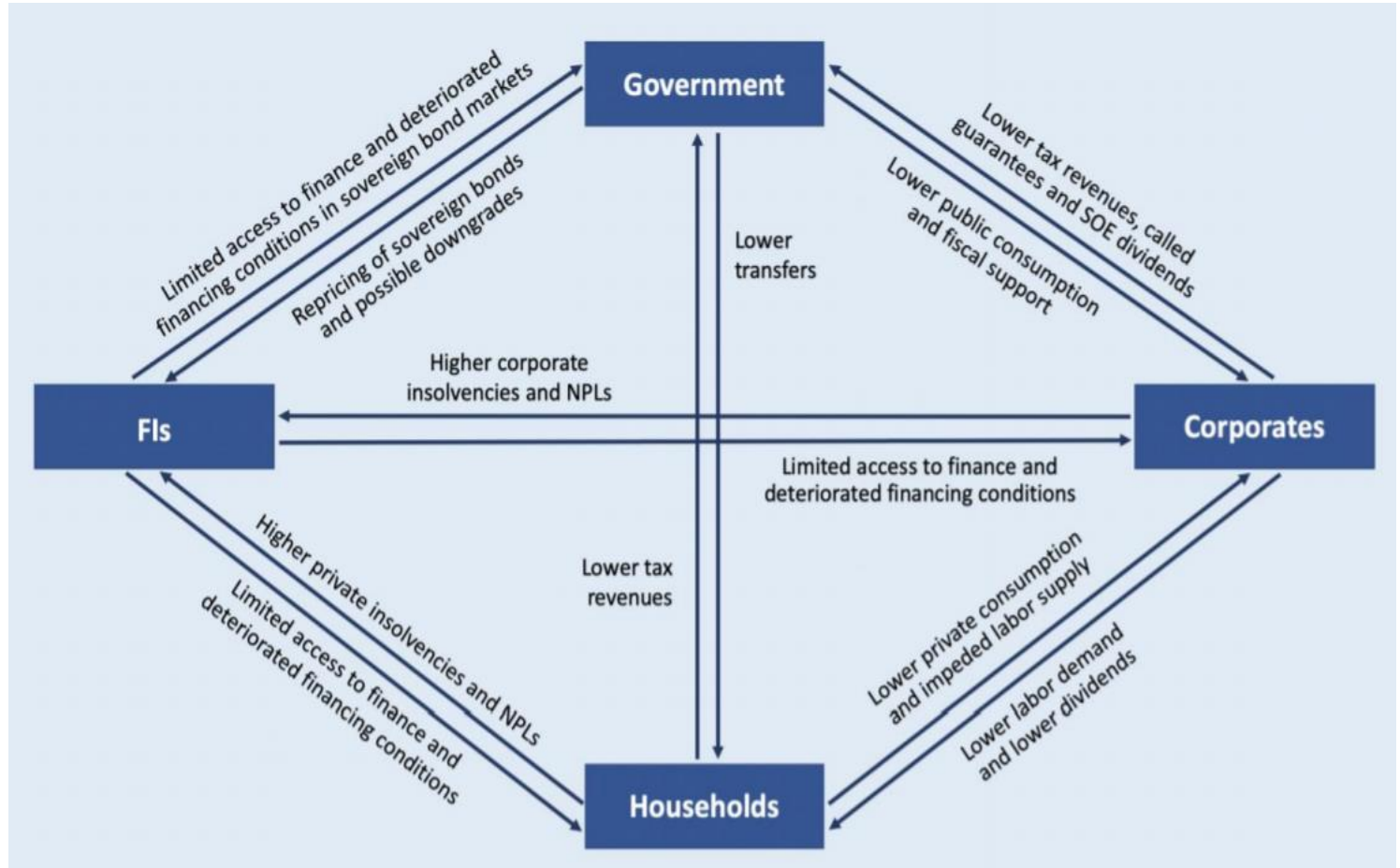
# Governments also need to take account of the longer-term macro-economic implications of climate change



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- Climate change might result in, for example, loss of income, property damage, supply chain disruptions, risk repricing and redirection of trade flows
- Potential for feedback effects, leading to negative systemic macroeconomic implications
- Governments need to incorporate climate change impacts into macroeconomic models and work with Central Banks to understand vulnerability of macro-financial system to climate change impacts (stress testing)



Source: Dunz and Power (2021) [Climate-Related Risks for Ministries of Finance: An Overview](#)



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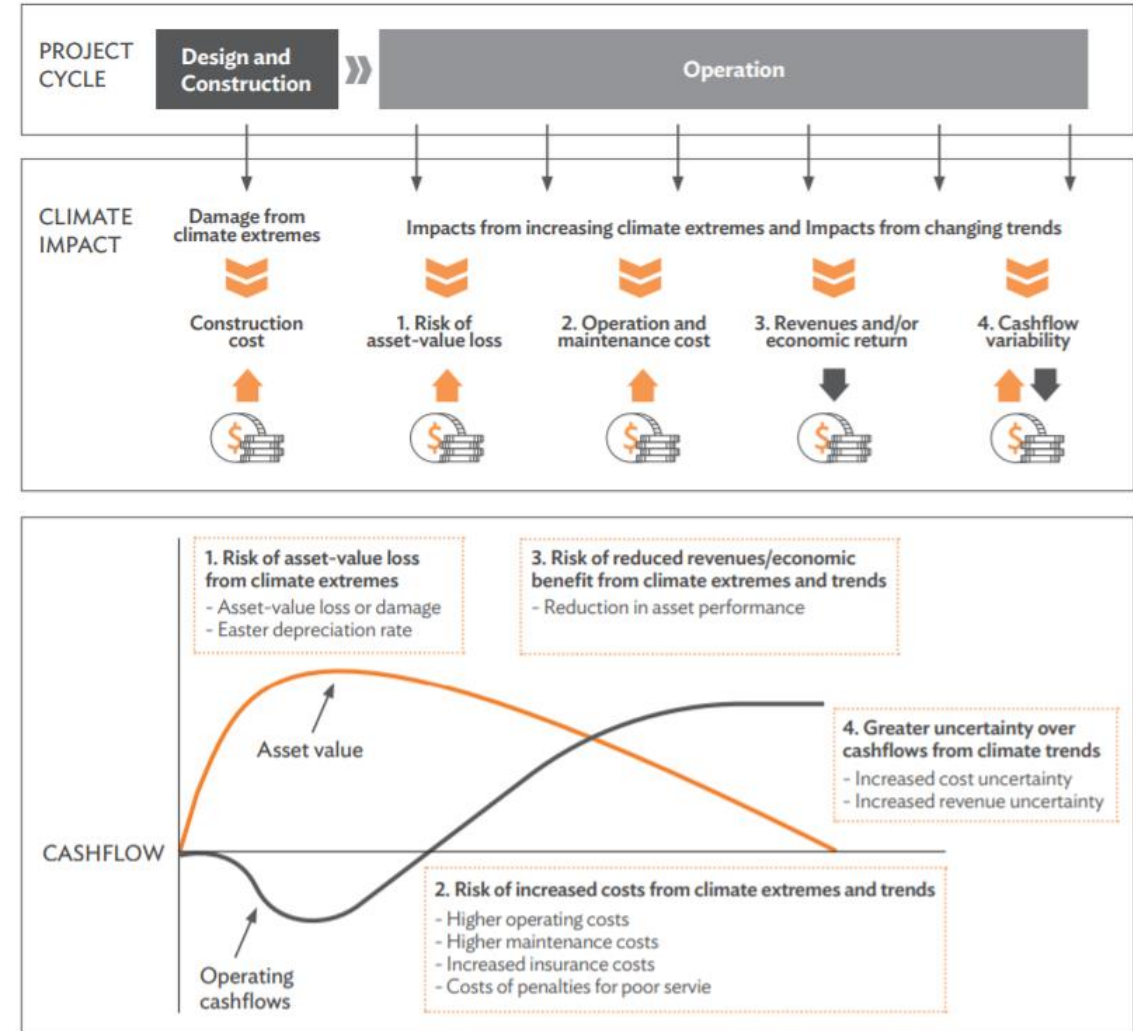
# Public infrastructure investments will become increasingly subject to climate risks



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- Climate change can affect the financial performance of infrastructure assets through
  - Asset value losses
  - Higher operation and maintenance costs
  - Reduced returns
  - Increased cashflow variability
- Infrastructure investments could also have an important impact on future climate vulnerability
  - Support urban development in flood plains, for instance



Source: Ward and Watkiss (2021) [A System-wide Approach for Infrastructure Resilience](#)

# In response, there are at least three actions that governments can consider



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*The risks posed by climate change require changes across the entire infrastructure value chain, and for all financing models*

## Upstream planning

### Upstream planning

Develop risk-informed infrastructure needs assessments

## Climate risk assessments

### Climate risk assessments

Mandate climate risk assessments alongside other infrastructure due diligence

## Build climate risk into PPPs

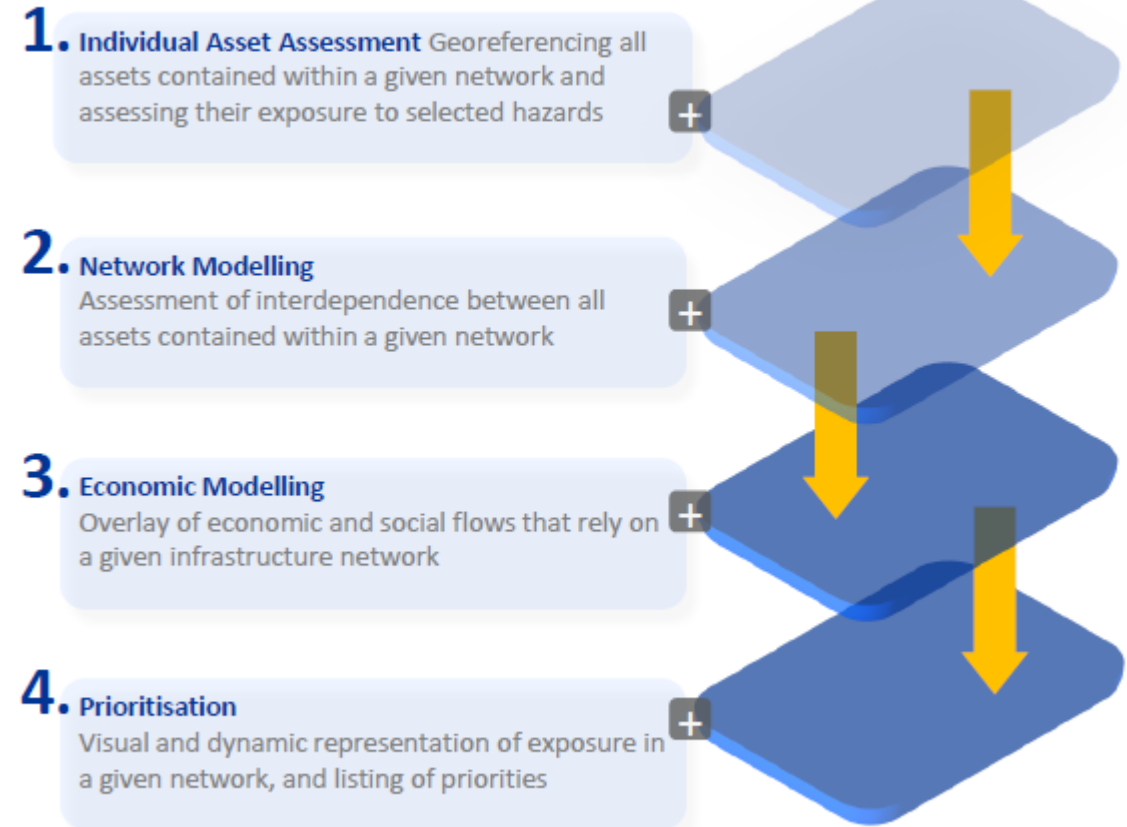
### Build climate risks into PPPs

Ensure risk allocation in PPPs includes climate risks

# Risk-informed infrastructure development plans can help build resilience

- Climate change will alter **what type of infrastructure assets** is needed and **where it should be situated**
- Medium-long term infrastructure plans need to be developed to take this into account
- Systems analysis can explore inter-dependency between infrastructure systems and identify critical vulnerability points
  - Either ensure that development avoids these areas or identify the additional protection that these ‘hot spots’ demand
- Examples in Jamaica, Ghana, Fiji

## Technical Stages for Tool Development\*

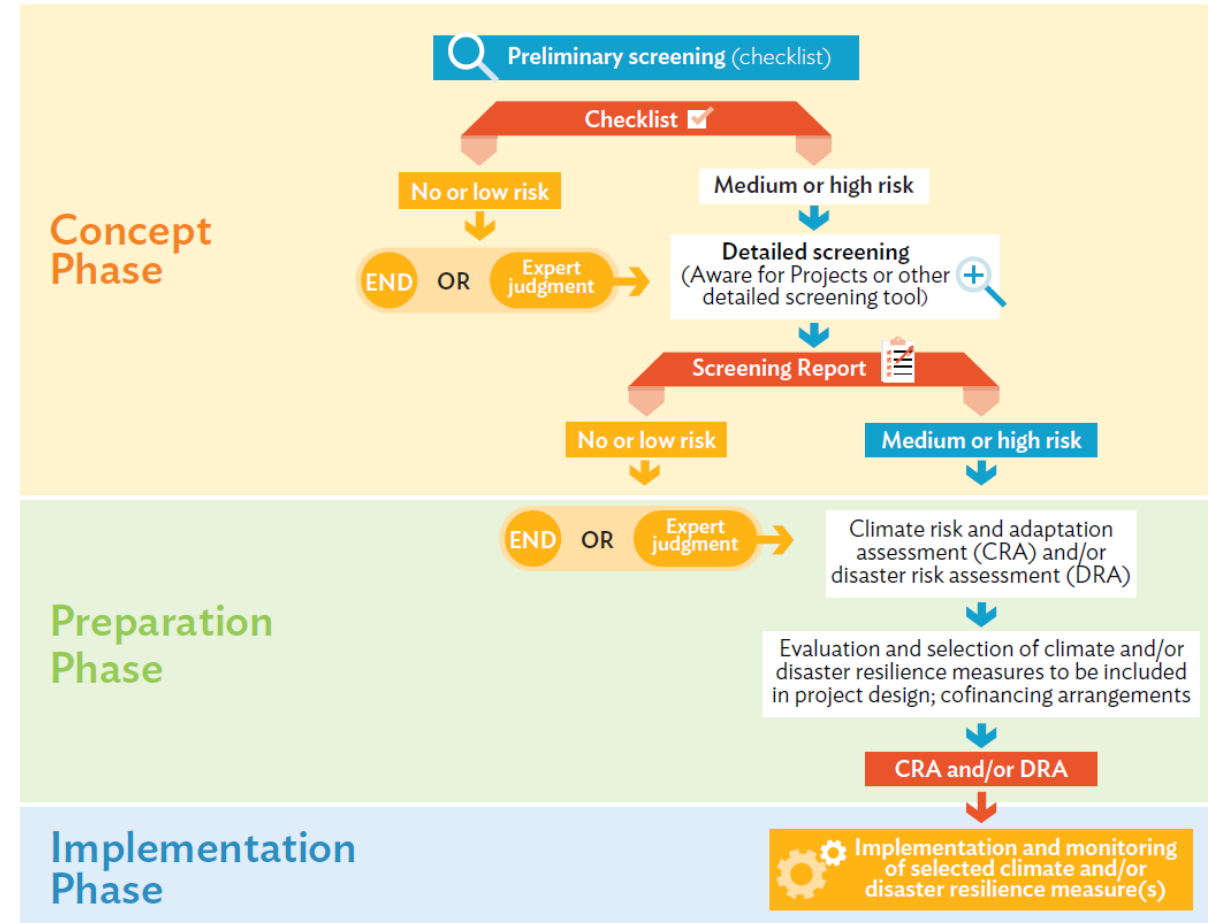


\*Stages followed for a given infrastructure network in a given country

Source: CCRI (2021) Road to Glasgow 2021

# Climate risk management can enhance the resilience of individual infrastructure assets

- Climate risk assurance normally proceeds in two stages
  - Screening at the concept phase
  - Detailed analysis for sensitive projects at the preparation stage
- Importantly, all considerations involve assessments of **expected future** climate, not the current climate
- Adaptation options should include both technical and non-technical options e.g. changes in way asset is used
- Adaptation options should be subject to an economic assessment of costs and benefits
  - Not necessarily cost benefit analysis, if uncertainties are high



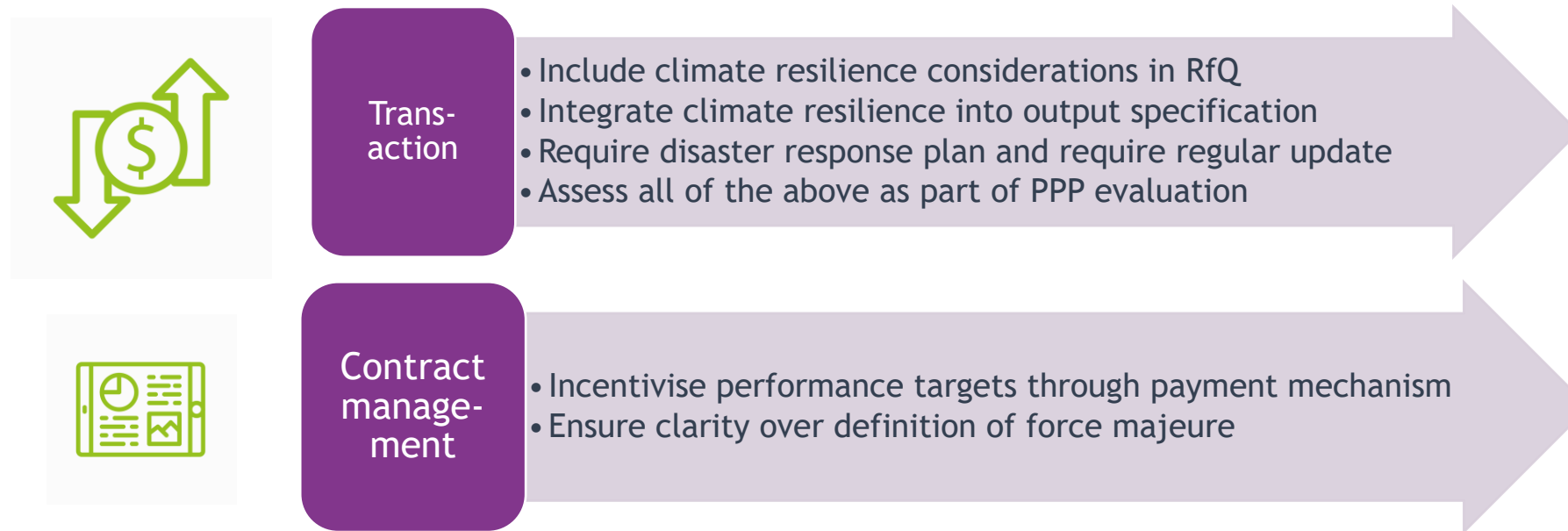
Source: ADB (2014) [Climate risk management in ADB projects](#)

# There is also a need to embed climate resilience in PPP contracts

PPPs account for around \$10bn of infrastructure transactions per year in Europe (outside EU) and Central Asia

Climate risks are typically not explicitly considered, which could lead to problems when climate change causes infrastructure failure

Responses are needed at both the transaction and project management stage



Source: IDB (2020) [Climate resilient public private partnerships: a toolkit for decision makers](#)



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# Shadow carbon pricing can be used by to prepare for a low-carbon future



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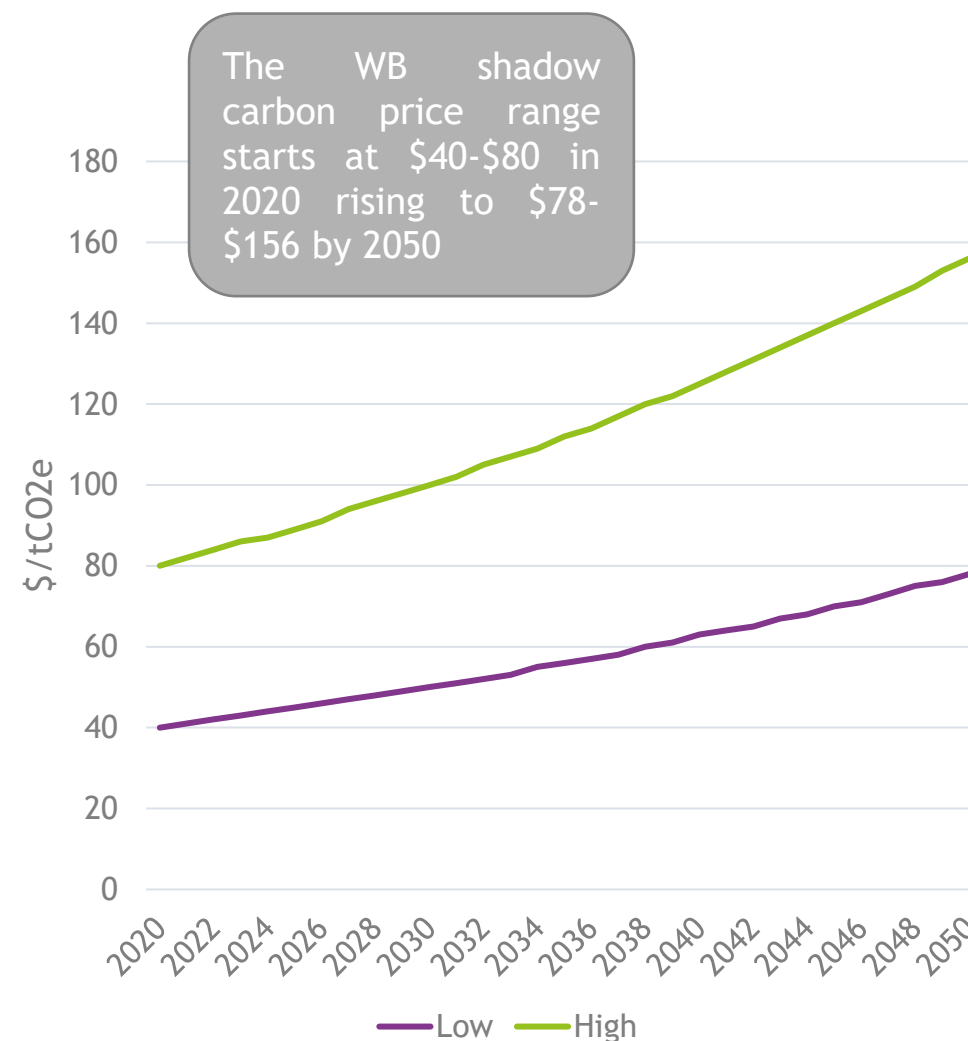
Shadow carbon pricing is a hypothetical charge applied to emissions associated with public (investment) projects

**No** actual financial transaction

Instead, analytical tool applied at appraisal stage, so as to make high-carbon projects look less financially attractive

Helps governments deliver on NDC commitments, and ensure country is prepared for a future where emissions are more constrained

Already applied by MDBs and most other IFIs



Source: World Bank (2017) [Guidance note on shadow price of carbon in economic analysis](#)

# The Coalition of Finance Ministers for Climate Action convenes 62 countries to identify how finance ministries can support climate action



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ALIGN

## Align

- Supporting finance ministries fiscal, economic, and planning instruments to facilitate a smooth trajectory of transition



MAINSTREAM

## Mainstream

- Developing tools to address knowledge gaps in macroeconomic forecasting and fiscal planning for climate change impacts,
- Preparing guides to integrate climate into policy and budget processes



SHARE

## Share

- Reviewing the design, organization and exercise of climate policy (mitigation and adaptation/resilience), and the role of the Ministry of Finance
- Sharing national approaches and bridging gaps



MOBILIZE

## Mobilize

- Develop tools for mobilizing private sector financing, share experience, support international standard setting, and share best practice among Members



PROMOTE

## Promote

- Working towards carbon pricing measures including reviewing state of play, increasing technical knowledge and developing toolkits.
- Better understanding of the benefits and challenges



ENGAGE

## Engage

- Improve finance ministry ability to evaluate the macro-fiscal impacts of NDCs and long-term climate strategies, and provide effective guidance to the NDC development process.

# Summary



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1. CBT is just one way in which governments can engage finance for climate action.
2. The CCBII tool can be used to help identify opportunities for deeper integration between the PFM system and climate action including, but not limited to, climate budget tagging.
3. Ministries of Finance, working with other ministries, need to develop strategies to budget for extreme weather events (that will be worsened by climate change) as well as other disasters.
4. Medium- to long- term macroeconomic planning by Finance Ministries and other ministries should seek to understand how climate impacts might pose risks for macro-fiscal stability.
5. The public investment management process should consider how infrastructure might be affected by climate change and seek to adapt to these impacts through upstream planning, climate risk assessments and consideration of climate risks in PPPs.
6. Shadow carbon pricing can be used in investment and policy appraisal to support climate action and reduce transition risk.
7. The Coalition of Finance Ministers for Climate Action provides a forum for discussion on how Ministries of Finance can engage on the climate change agenda.