

CCS Capacity Building Challenge in Developing Countries

The World Bank



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World Bank Mandate

- ▶ To reduce poverty and promote sustainable economic growth;
- ▶ Address global challenges to advance sustainable and inclusive globalization
- ▶ Role in climate change:
 - Strategic Framework for Development and Climate Change
 - Mitigation: assist countries in transition to a low carbon economy
 - Adaptation: assist countries to adapt to unavoidable climate change



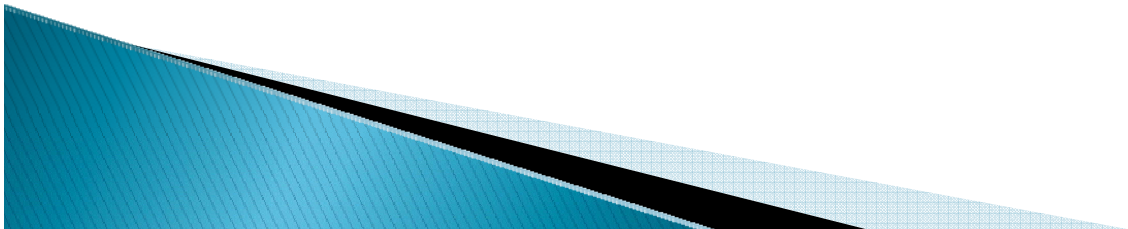
Promoting CCS in developing countries

- ▶ Institutional capacity
 - Technology
 - Policy dialogue
 - Regulatory regimes

- ▶ Financing:
 - IBRD financing instruments
 - Addressing Incremental Financing Gap – climate change financing instruments



Incorporating CCS Capacity Building into Bank Operational Instruments



Instruments for Financing Energy Sector Programs

Global Environmental Fund (GEF)

- For policy and transactions

Carbon Finance

- For enhancing the viability of investments
- WB managed Kyoto Carbon Funds
- Carbon Partnership Facility

World Bank and Clean Technology Funds

- Risk Mitigation for New Entrants

World Bank and IFC

- Investment Support for Projects and Institution building



WBG Development Support for Energy Programs: Comprehensive Approach...Discrete Activities

Policy and Capacity Building

Coal-Based Power Generation Development Project with a CCS Component

- Enhance policy framework incl. pricing and risk issues
- Transactions to develop brownfield and greenfield projects for private financing
- Long-term domestic capacity building

Carbon Finance and CCS

Project related CDM Transaction

- Purchase CER from a power project

Carbon Asset creation for CCS

- Develop framework for providing streamlined access to carbon financing to enhance viability of CCS projects.

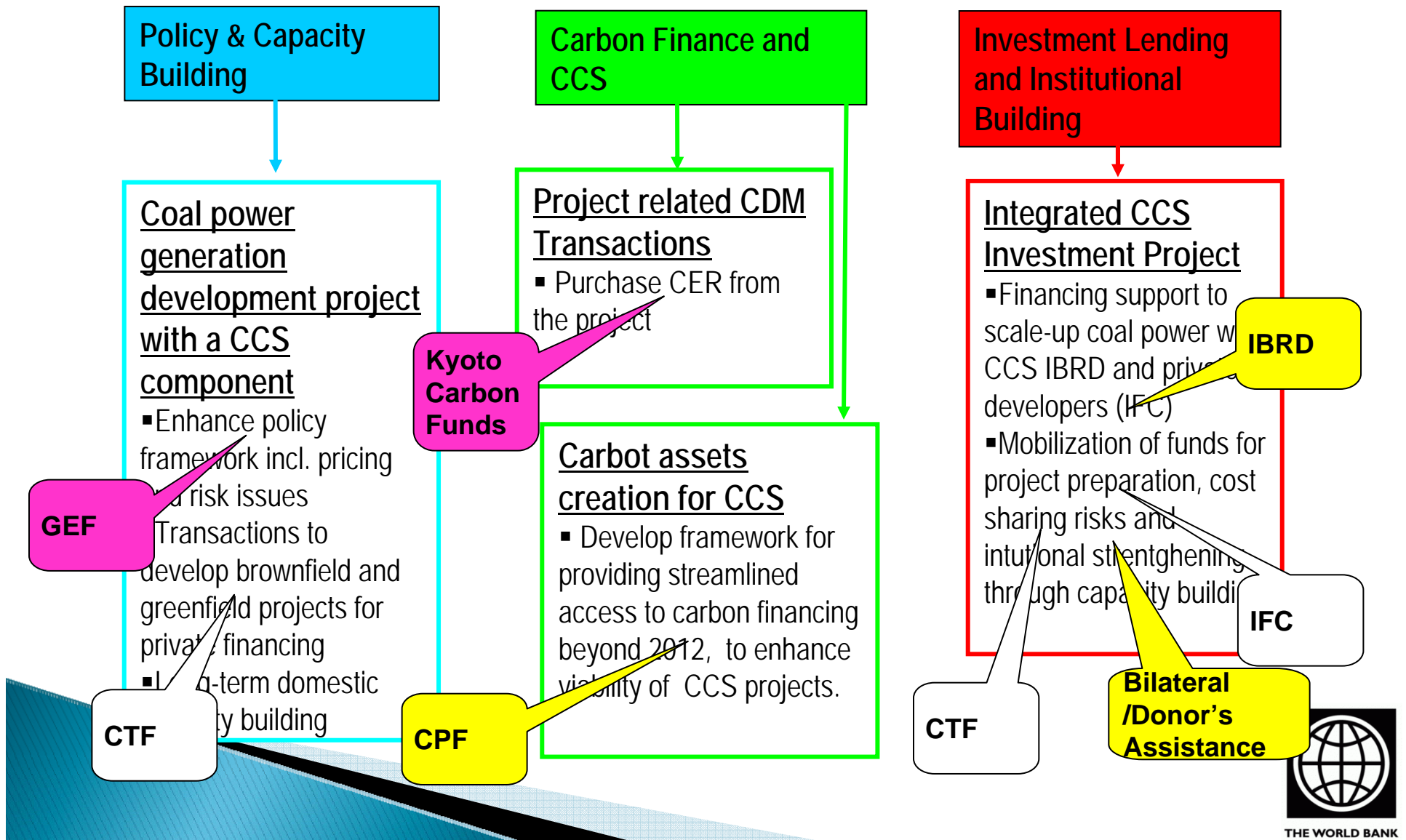
Investment Lending and Institutional Building

Integrated CCS Investment Project

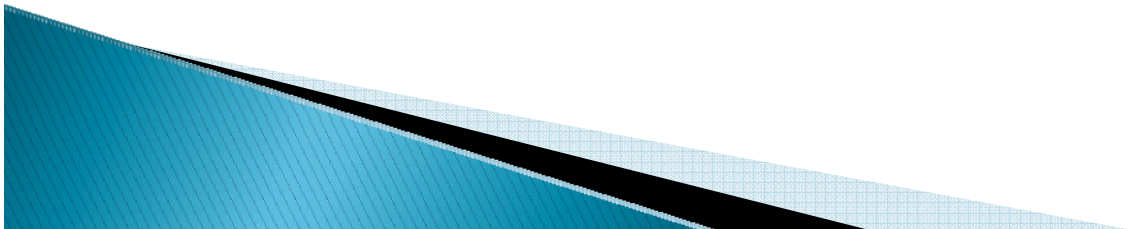
- Financing support to scale-up integrated CCS , with IBRD and private developers (IFC)
- Mobilization of funds for project preparation, cost sharing risks and institutional strengthening through capacity building



Multiple Instruments towards Strategic Objective...

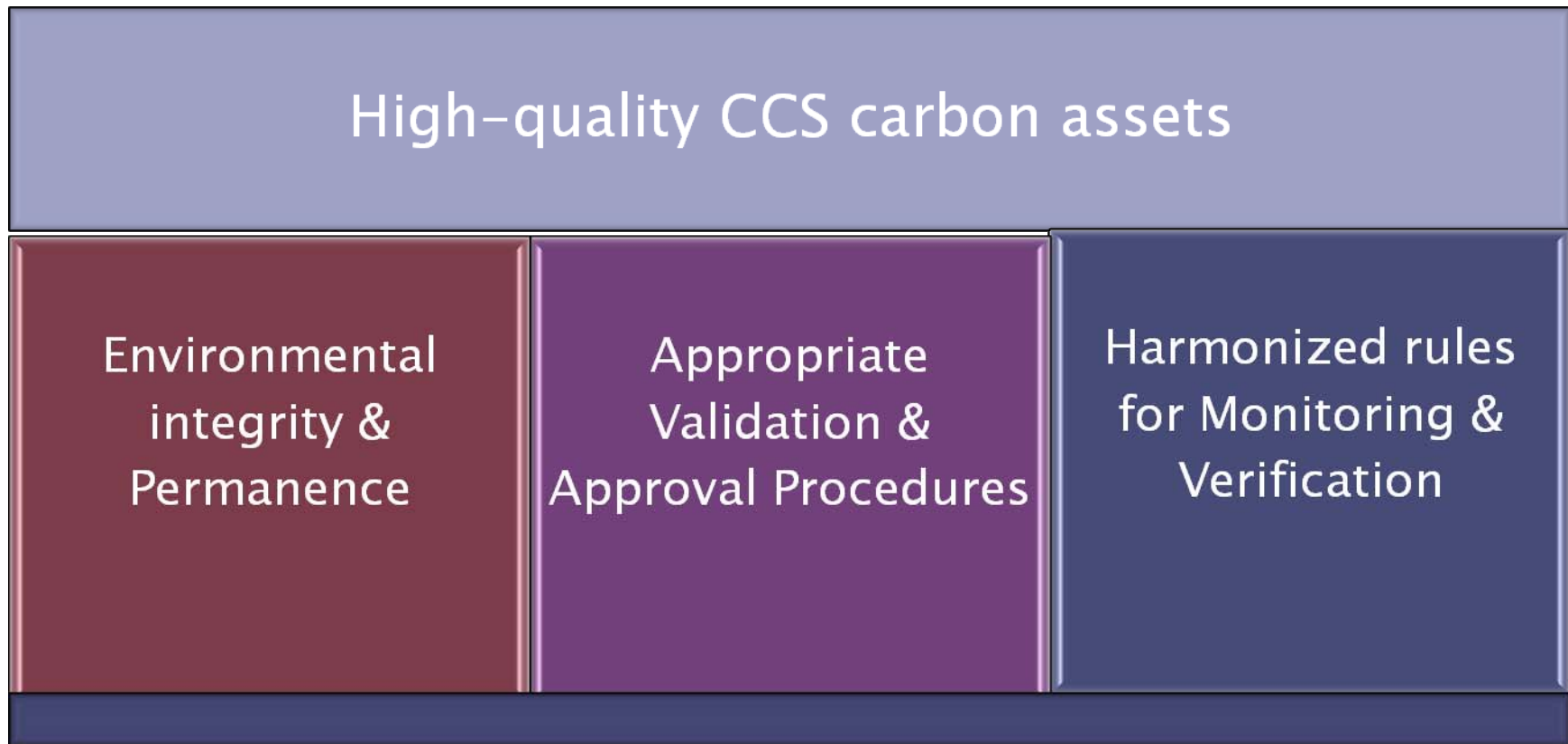


CCS Carbon assets creation in developing countries



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International carbon markets: integrating CCS?



Creating fungible CCS carbon assets through collaborative capacity building

Applicable in developing countries

- Consistency with national policies and priorities
- Capacity building for validation & approval
- Harmonized development of regulatory tools

Access to international expertise

- Extensive knowledge sharing from pilot activities
- Appropriate supervisory bodies & procedures
- New requirements for Independent Entities

Modular methodologies & Tools

- Comprehensive scope of methodologies
- Flexibility in context of limited knowledge
- Build upon emerging protocols & guidelines

