Clean Development Mechanism (CDM): How it Works and New Carbon Finance Instruments

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Today's discussion

Introduction

How CDM works

The impact of carbon finance

New Carbon Finance Instruments

The World Bank carbon finance activities and business model

The World Bank currently has 10 carbon funds and 2 facilities; with 16 governments and 66 firms participating

Specialty funds/facilities	Country funds/facilities
Prototype Carbon Fund: pioneering Kyoto mechanisms since 2000	**Netherlands Clean Development Mechanism Facility**
Community Development Carbon Fund: Focused on small projects that measurably benefit poor communities	**Netherlands European Carbon Facility** *(jointly managed with IFC)*
BioCarbon Fund: Focused on land-use, land-use change, and forestry projects	**Spanish Carbon Fund**
Umbrella Carbon Facility – Tranche 1: Focused on two China HFC 23 projects	**Italian Carbon Fund**
	Danish Carbon Fund
	Carbon Fund for Europe *(jointly managed with European Investment Bank)*

Plus 2 new facilities focused on post-2012

THE CARBON PARTNERSHIP FACILITY

FCPF focused on reduced emission from deforestation and degradation (REDD)

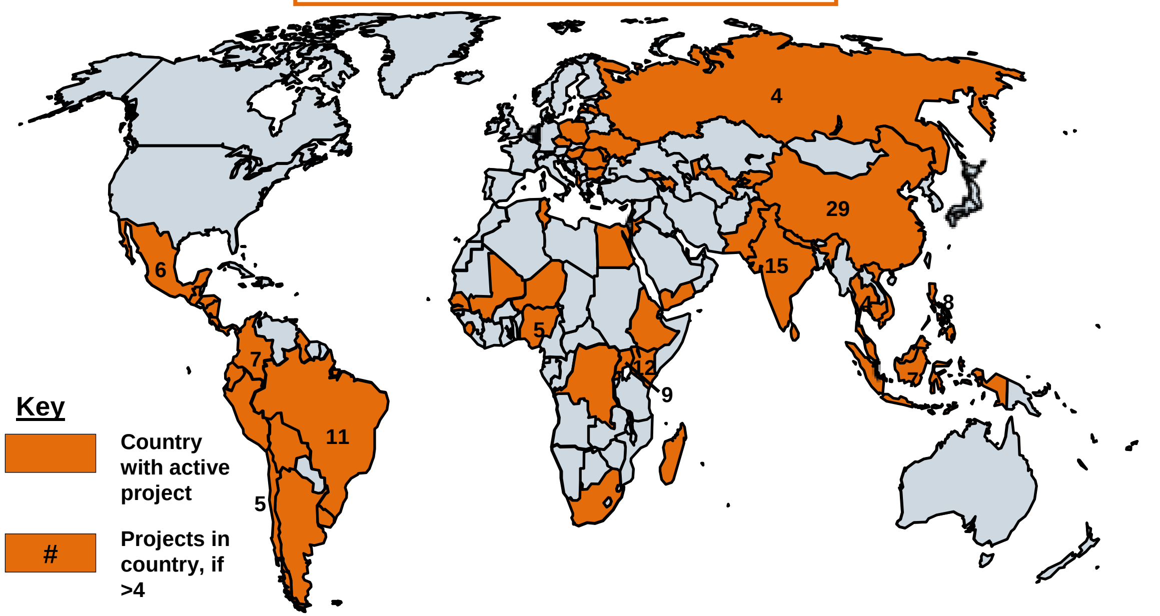
CPF focused on long-term investments programs and technologies for transition to low-carbon economy

The World Bank's portfolio

Currently consists of about 200 projects in 57 countries with diverse technologies

World Bank carbon finance portfolio – by country

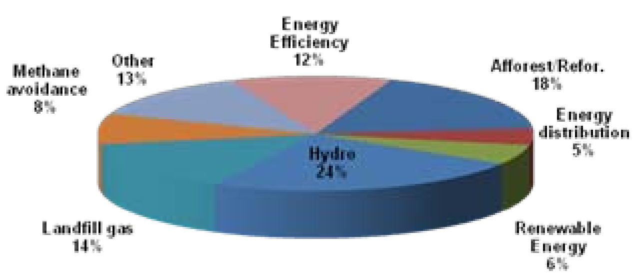
World Bank active projects
n=212



Key

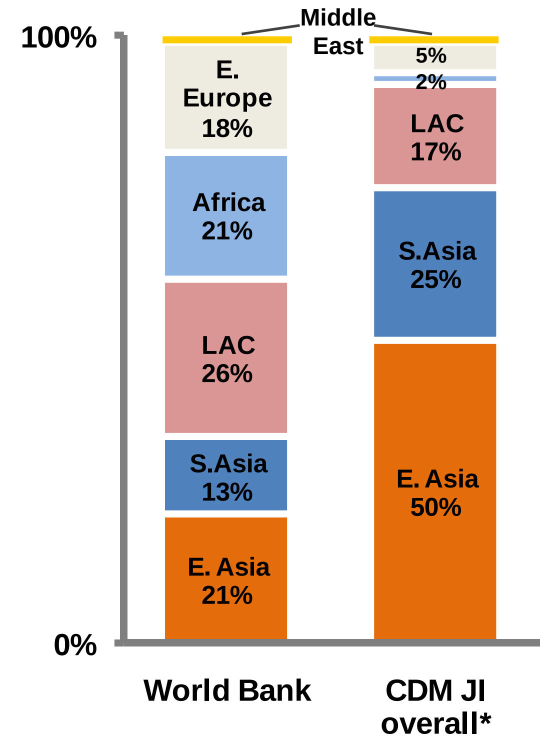
Country with active project

Projects in country, if >4



Regional breakdown

Projects by region
WB n=212; CDM JI overall n=4,820



*Source: UNEP RISØ

(as of November 2009)

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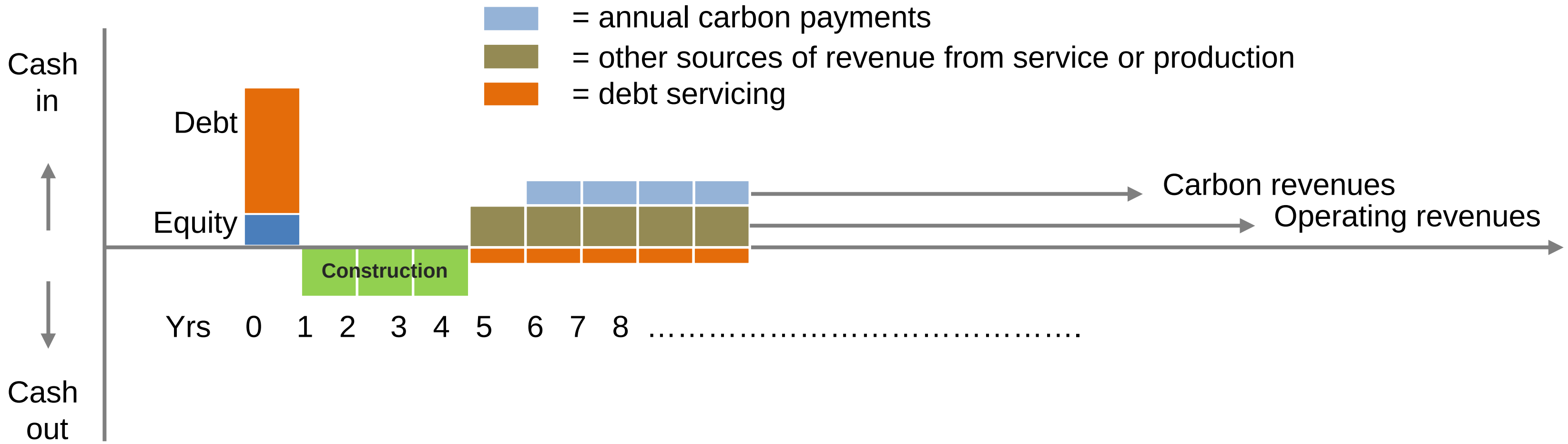
Carbon finance: provides an additional revenue stream

Improves project cash-flows for climate-friendly projects

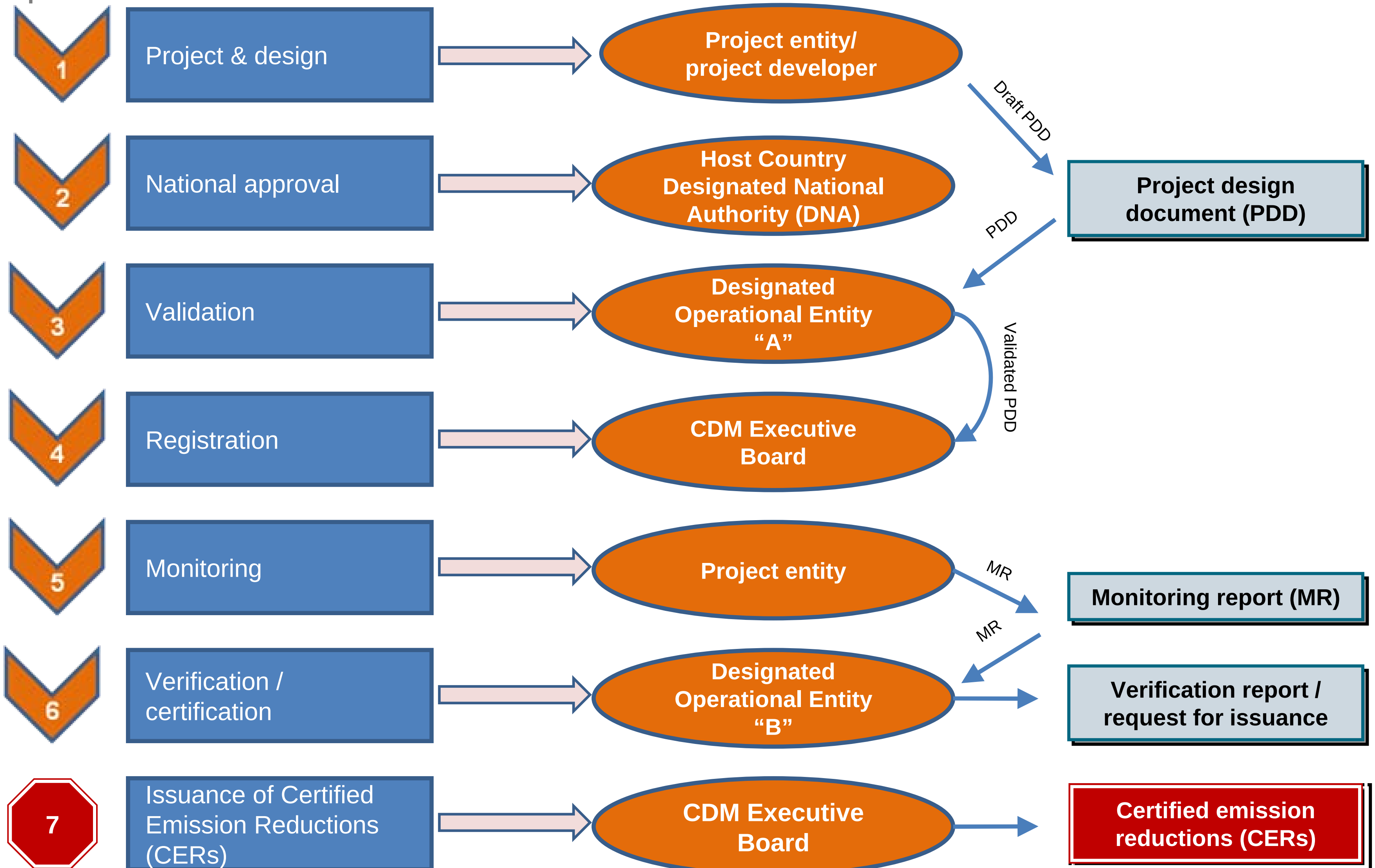
Carbon finance: stream of emission reduction revenues



- Carbon revenues provide an additional revenue stream that can help:
  - reward more GHG-friendly investment and purchase decisions,
  - create incentive for good management / operational practices to sustain emission reductions over time,
  - enhance the financial viability of the project,
  - leverage capital for underlying investments by
    - addressing the initial investment barrier;
    - providing incentives to overcome social inertia, lack of awareness, transaction costs and financing of programs, etc.

Background: CDM project cycle

Carbon credits are created project-by-project under the CDM regulatory process



Features of successful CDM and JI projects

Key elements found in successful carbon finance projects mirror those for development projects

1. A committed project champion

- Champion should be within project proponent company or ministry
- External technical assistance also necessary when low capacity

2. Strong project design & planning at start (feasibility, financial, methodology assessments)

- Detailed upstream (financial & technical) due diligence on project ideas
- Important to consider monitoring requirements early on

3. Underlying financials must be strong

- Projects must make financial – as well as technical - sense to lead “to real, measurable and long-term benefits related to mitigation of climate change” (Kyoto Protocol, Article 12)

4. Potential to reduce emissions

- Projects that can reduce large volumes of GHG reductions relative to their baseline will be more attractive to investors and carbon buyers
- The possibility of earning significant amounts of carbon revenues through certified emission reductions incentivizes performance over time
- Projects w/ larger emission reductions volume better absorb CDM transaction costs

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Carbon finance: building on experience and looking forward

Market mechanisms and carbon finance: a proven tool to support policy-makers

- Can help leverage low carbon investments, address barriers and help sustain projects over time
- Potential to better exploit synergies between policies and various financial instruments

Scaling-up carbon finance to meet the climate challenge

- Longer term visibility on commitment period(s) to enhance long-term carbon revenues and help sustained viability of projects
- Examine governance structure for processing larger volumes, build consistency, coherency and trust
- Address practical hurdles for Programs of Activities (PoAs)

Sustaining and enhancing capacity building in host countries

Consolidation of learning and predictability enhancement (for greater consistency & lower transaction costs)

- Ensure greater compatibility between the carbon finance project cycle and typical investment cycle – to increase efficiency (investment decisions and cash flow needs)
- Clarify and streamline rules, procedures & documentation requirements
- Consider greater standardization, benchmarks, pre-defined additional projects (applicable under specified circumstances) and deemed values
- Work towards defining approaches which can be considered adequately "conservative" (as an alternative to seeking 100% accuracy) whilst not compromising environmental integrity
- Increasing opportunities for exchange between regulatory bodies and practitioners

Some technical decisions could help reach new areas (project types and countries)

- Broadening of scope, coverage and eligibility criteria of methodologies; practical monitoring requirements
- Potential to enhance attractiveness of Africa and LDCs to carbon markets

Maintaining environmental integrity is essential

Stepping stones to facilitate greater numbers of projects

Paving the way for scaling-up

Methodologies to have a broader reach and be more accessible

Working towards workable consolidations & revisions of existing methodologies

- Making them more user-friendly
- Providing choices between conservative or simpler discounting to improve usability

Scaling-up by advancing programs

Making programs of activities (PoAs) implementable and attractive

- Opens door for dispersed micro activities, particularly demand-side energy efficiency
- Key challenges: (i) liability of DOEs; (ii) greater complexity of CDM project design; (iii) capacity of coordinating entity; (iv) need for practical sampling guidance

Streamline project cycle and increase communication with practitioners

Continually examine streamlining opportunities *throughout* the regulatory process

- Increase avenues for stakeholder consultations and outreach to industrial expertise

Pragmatic approach to monitoring

Establishing reasonable and practical sampling procedures

- An approach that can accept less than perfect accuracy when GHG impact is negligible

Greater certainty with deemed (default) values & benchmarking

Conservative deemed values and / or benchmarks can be used to calculate reductions

- Help lower monitoring costs
- A relevant industry sector benchmark can also be used to calculate the baseline

Programmatic CDM – A New Direction in Carbon Finance

- CDM Program of Activities (PoA) approach
  - Enables a single regulatory approval for program involving similar activities, without requiring all activities to be identified at registration
  - Has potential to support systematic approaches to low carbon growth, reduce CDM registration backlogs and broaden coverage to urban transport, energy efficiency
  - PoAs have not been tested yet in practice – Two PoA s are registered, several in the pipeline
- UNFCCC negotiations are exploring other -based approaches (sectoral? NAMAs?)
  - Political agreement and extensive design work are needed to progress the sector-based model

Carbon Partnership Facility (CPF)

- Carbon finance for the post-2012 world
- Support implementation of a post-2012 regulatory framework
  - Engage where the private sector cannot succeed alone
  - Support long-term investments and technologies for transition to low-carbon economy by integrating carbon finance into public and private investment decisions
  - Shift toward programs of investments & sector based approaches
  - Promote introduction of cutting edge technologies
- Catalyze increased supply of international carbon offsets

Emission Reduction Programs

- Series of investment activities over time in a common implementation framework (utilizing the Program of Activities approach)
- Undertaken by a single entity or coordinated by an intermediary
- May utilize existing CDM methodologies but methodology development in priority areas such as energy efficiency and urban a key part of the CPF
- CPF might explore sector-based crediting approaches
- Most programs expected to be linked to operations of the World Bank

CPF - Buyers and Sellers in a Partnership

BUYERS

(governments, companies)

Minimum financial contributions

Willingness to purchase emission reductions when generated over the long term

Program development

Carbon Asset Development Fund (CADF)

ER sale and purchase

Carbon Fund

SELLERS

(governments, companies)

ER contribution

Willingness to develop and implement specified emission reduction programs and sell ERs

Partners (Host Governments, other) and Donors

Carbon Asset Development Fund (CADF)

- Provides funds for:
  - Methodology work
  - ER program identification and development, carbon asset feasibility work
  - Project Design Document and monitoring plan preparation
- Includes direct preparation grants to Sellers and Host Countries
- Also covers all Facility costs for ER Program preparation and supervision functions
- Funded by:
  - Charge from Buyers due upon signing of Participation Agreement
  - Donor contributions of minimum €2 million per Donor

Carbon Fund

- Holds funds for Emission Reduction (ER) payments
- First tranche to provide carbon finance to several key sectors (e.g. power, energy efficiency, waste, transport, thematic/cross-cutting programs)
- Carbon Fund will buy part of CERs from programs, CPF can assist sellers with marketing additional CERs
- Buyers and sellers together as members of Partnership Committee will decide on ER pricing approach

ER Program Development

- 5 Program Idea Notes approved:

  - Morocco Solid Waste Management Program

  - Vietnam Renewable Energy Development Program

  - China IGCC (may include a CCS pilot plant);
- Hubei Province Biogas Program (households and farms
- Indonesia Carbon Finance Framework for Geothermal Power Development
- About 10 other ER programs being developed
  - E.g. Mexico (Urban Transport, Energy Efficiency), Brazil, Nigeria, India, Egypt
- Close coordination with World Bank lending & Clean Technology Fund

Additional Programs under Development

Latin America

- Mexico Urban Transport (BRT mostly, CTF)
- Mexico Energy Efficiency (CFLs, appliances, CTF)
- Brazil Waste Management (lending)

Middle-East and North Africa

- Amman City (city wide methodology approach)
- Concentrated Solar Power (multi-country, CTF)

Africa

- Nigeria IPPs (DPL)
- Nigeria Gas Flaring
- Ghana Oil & Gas Sector/Gas Flaring
- South-Africa/Botswana power sector (lending, CTF)

South Asia

- Indian Railways (lending)
- Power grid (lending)
- Urban sector programs

East Asia

- Buildings EE (methodology development)

Thank You

Questions?
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For more information http://carbonfinance.org