

# The role of carbon finance in business plan for clean energy projects

CTI PFAN West Africa Forum for Clean Energy Financing (WAFCEF)

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**UNFCCC secretariat, Sustainable Development Mechanisms Programme**

## OUTLINE

- The Kyoto Protocol
- Market-based mechanisms
- CDM support structure and
- CDM project cycle
- Programme of Activities (PoA)
- CDM Regional Collaboration Centre Lome



# KYOTO PROTOCOL

- Adopted in 1997; began in 2005
- Set legally binding targets for emissions of six major GHGs in industrialized countries
- With targets, emission reductions took on economic value
- Countries can meet reduction commitments through (3) market-based mechanisms

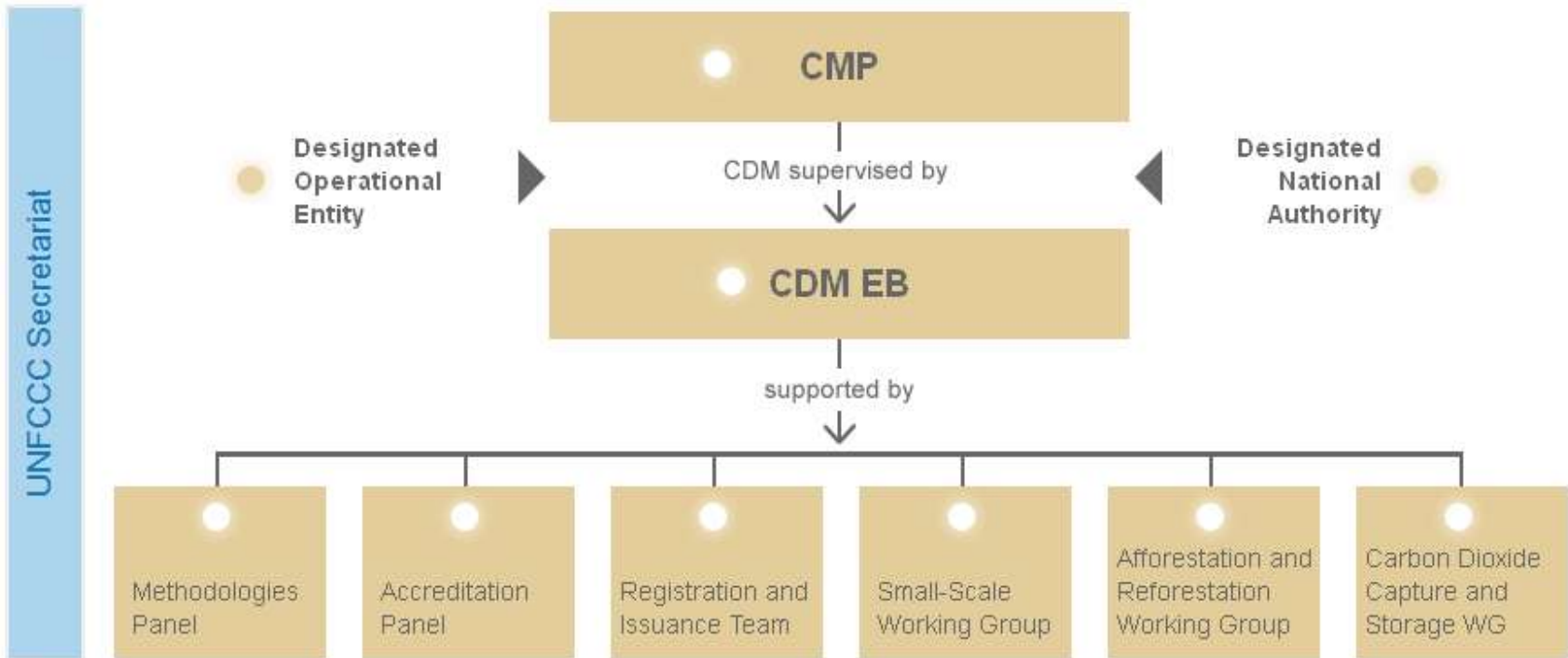


## MARKET-BASED MECHANISMS

- **Emission Trading (ET):** exchanging emission allowances among KP Parties – Article 17
- **Clean Development Mechanism (CDM):** credits for emissions reduced/avoided through sustainable development projects in developing countries (non-Annex I countries) – Article 12
- **Joint Implementation (JI):** credits for emissions avoided through projects in Annex I countries – Article 6



# CDM SUPPORT STRUCTURE



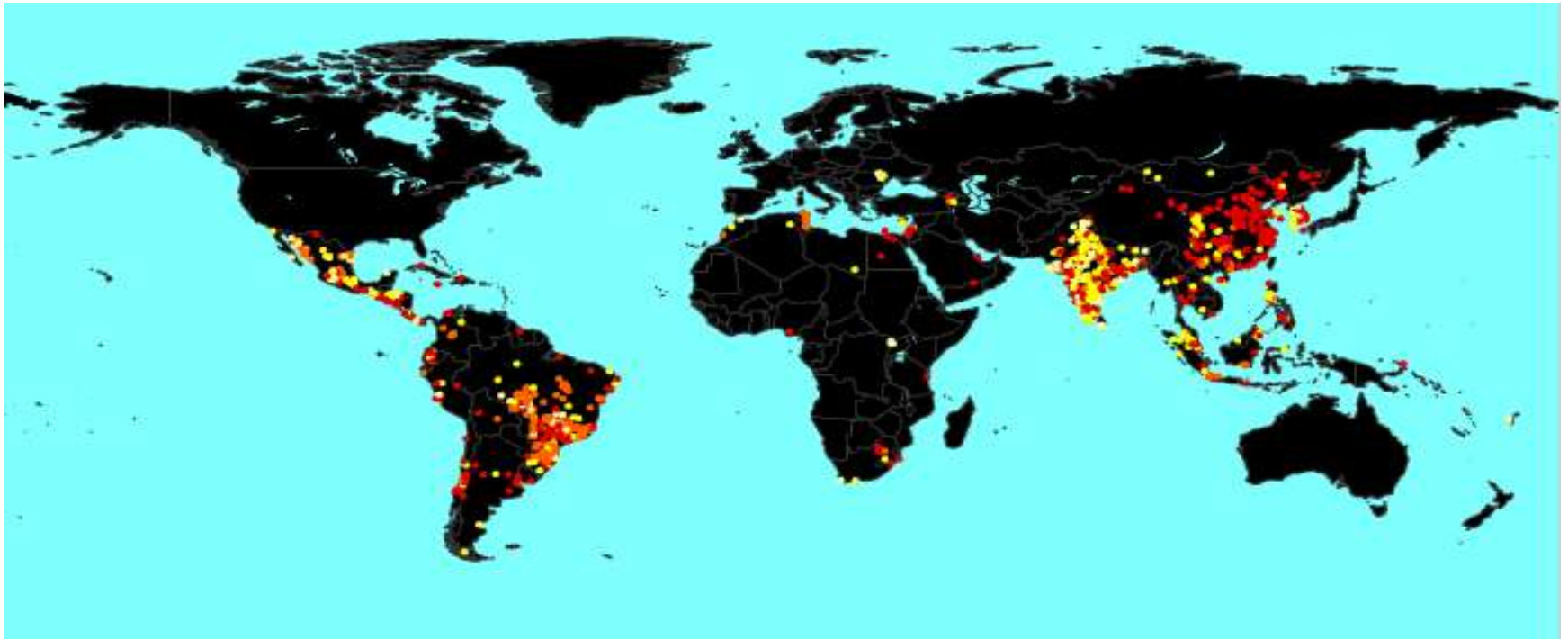
## CDM: GLOBAL REACH

**6950+** registered projects in **88+** countries

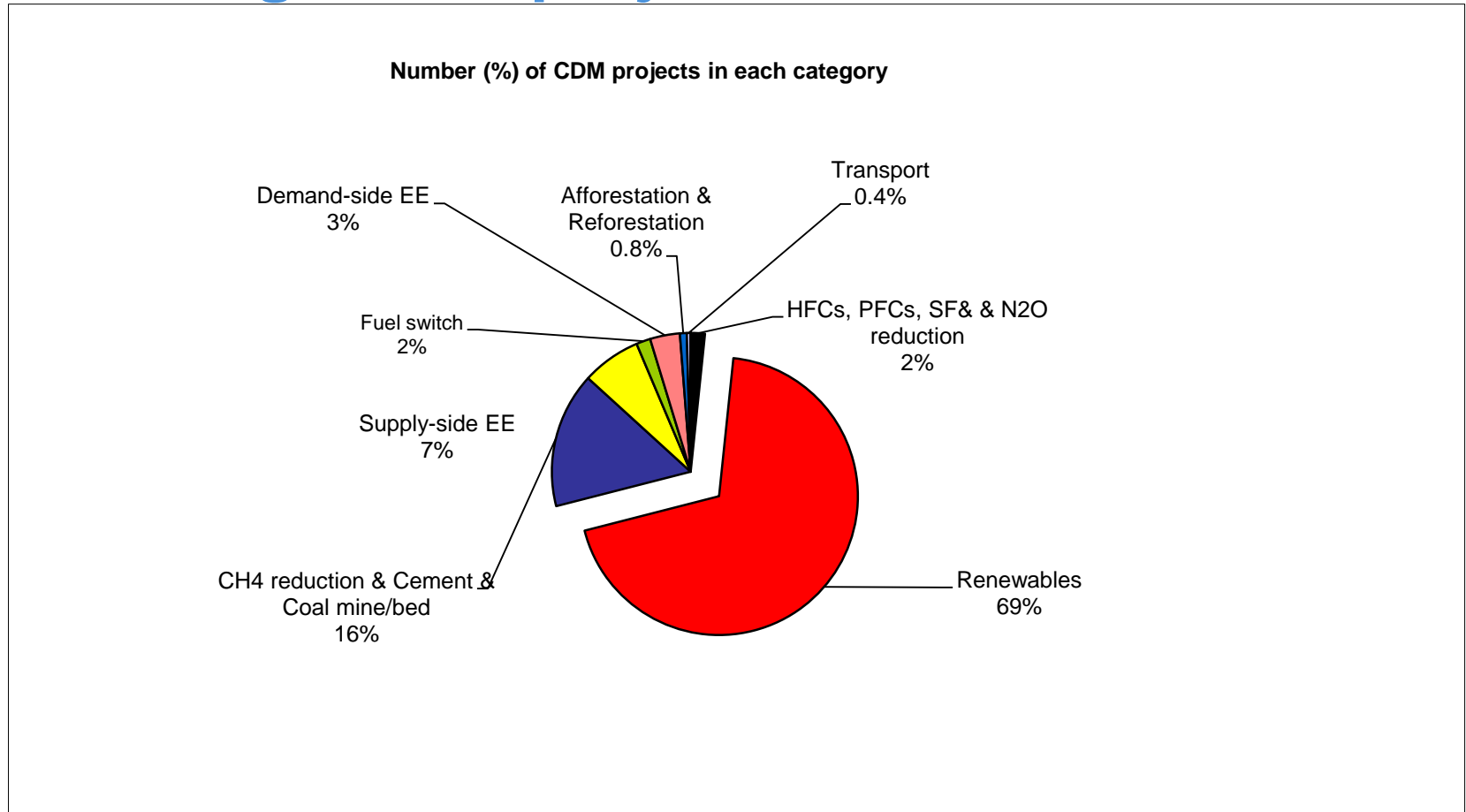
**9000+** projects in pipeline

**1.3 billion** CERs issued to date

**>1.7 billion** certified emission reductions expected by 2020

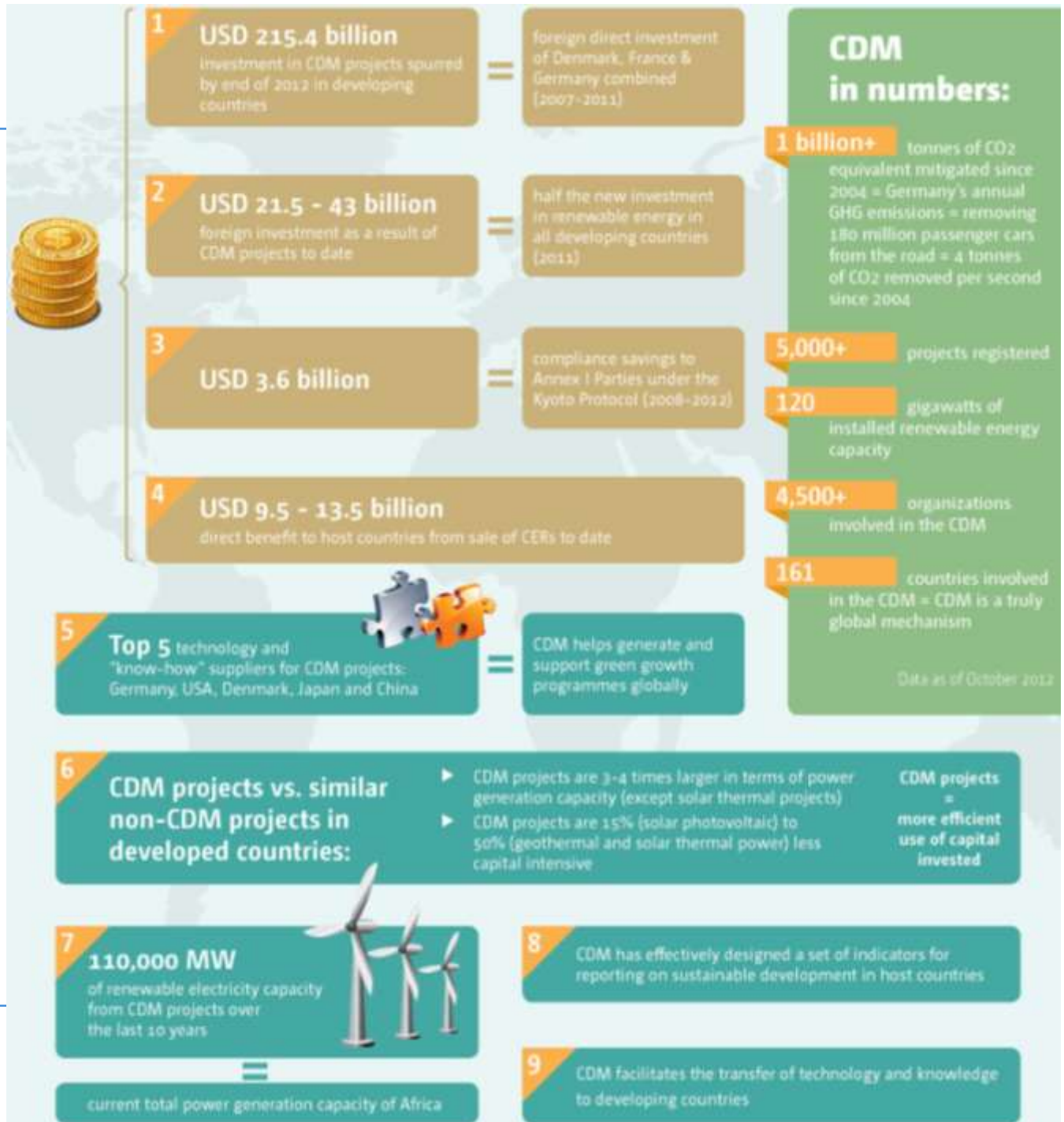


# CDM: registered project overview

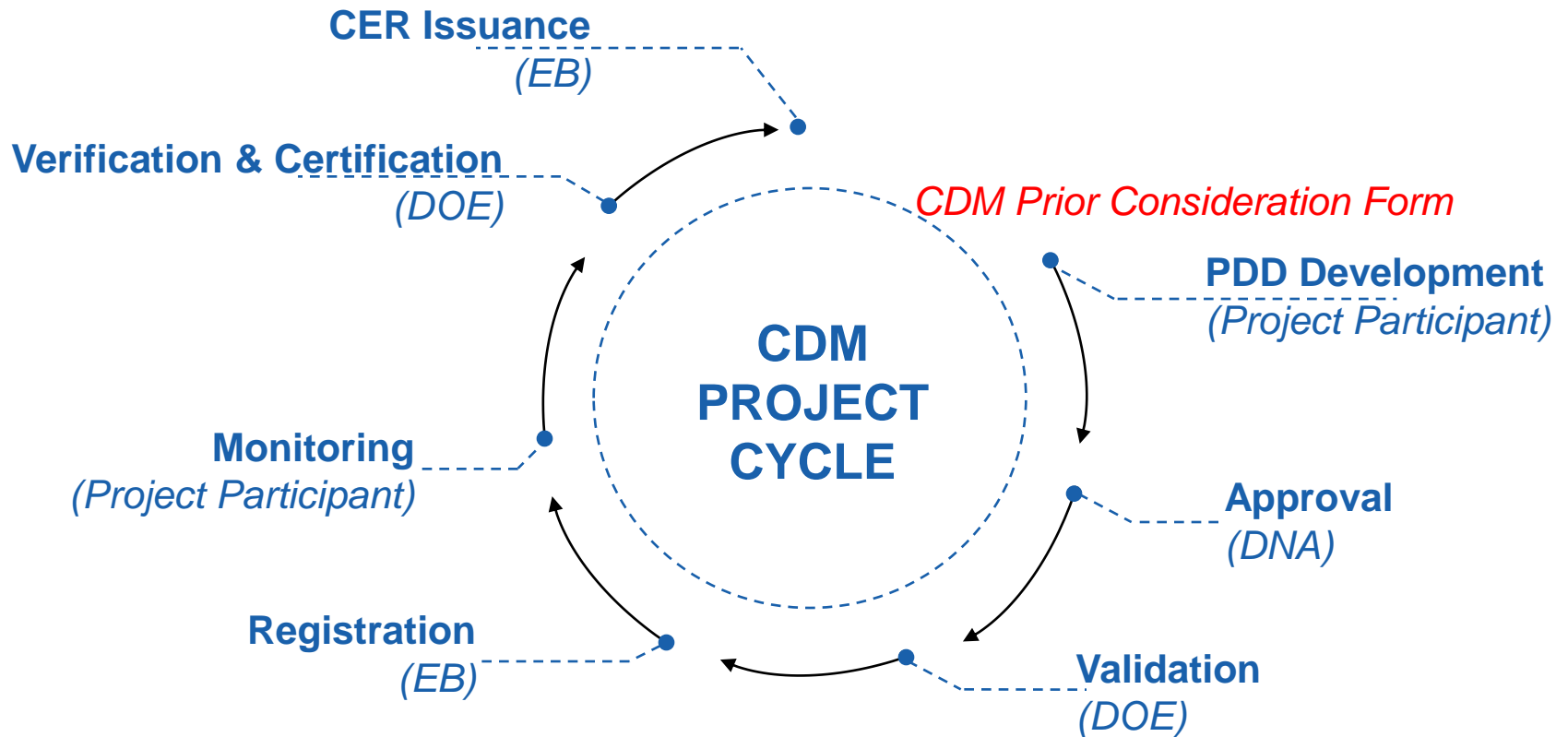




Available on CDM website:  
About CDM – CDM Benefits







Get a glimpse of the 7 steps of the Project Cycle

### 1 **Project Design**

👤 Project Participant

### 2 **National approval**

👤 Designated National Authority

### 3 **Validation**

👤 Designated Operational Entity

### 4 **Registration**

👤 Executive Board

### 5 **Monitoring**

👤 Project Participant

### 6 **Verification**

👤 Designated Operational Entity

### 7 **CER issuance**

👤 Executive Board

Project participant prepares project design document, making use of approved emissions baseline and monitoring methodology.

#### PROJECT DESIGN STEP IN DETAIL

- **Project Design Document (CDM-PDD):** The project design document form was developed by the Executive Board on the basis of Appendix B of the CDM modalities and procedures. Project participants shall submit information on their proposed CDM project using the **CDM-PDD form**.
- **Proposal of a new baseline and/or monitoring methodology:** The proposed new baseline methodology shall be submitted by the designated operational entity to the Executive Board for review and approval, prior to validation and submission for registration of the project.
- **Use of an approved methodology:** An approved methodology is a methodology previously approved by the Executive Board and made publicly available along with any relevant guidance. When an approved methodology is used, the designated operational entity may proceed with the validation of the CDM project activity and submit the CDM-PDD with a request for registration.

<http://cdm.unfccc.int/Projects/diagram.htm>



Get a glimpse of the 7 steps of the Project Cycle

## 1 Project Design

Project Participant

Project participant secures letter of approval from Party.

The Designated National Authority (DNA) of a Party involved in a proposed CDM project activity shall submit a letter indicating the following:

- That the country has ratified the Kyoto Protocol.
- That participation is voluntary.
- And, from host parties, a statement that the proposed CDM project activity contributes to sustainable development (EB 16, Annex 6, paragraph 1).

## 2 National approval

Designated National Authority

## 3 Validation

Designated Operational Entity

## 4 Registration

Executive Board

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Project Participant

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Executive Board



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Project design document is validated by accredited designated operational entity, private third-party certifier.

Validation is the process of independent evaluation of a project activity by a designated operational entity against the requirements of the CDM as set out in CDM modalities and procedures and relevant decisions of the Kyoto Protocol Parties and the CDM Executive Board, on the basis of the project design document.



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Valid project submitted by DOE to CDM Executive Board with request for registration.

Registration is the formal acceptance by the Executive Board of a validated project as a CDM project activity. Registration is the prerequisite for the verification, certification and issuance of CERs related to that project activity.

#### REGISTRATION STEP IN DETAIL

- Completeness check by secretariat
- Vetting by secretariat
- Vetting by Executive Board
- If a Party or three members of Executive Board request review, project undergoes review, otherwise proceeds to registration



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**6 Verification**

👤 Designated Operational Entity

**7 CER issuance**

👤 Executive Board

Project participant responsible for monitoring actual emissions according to approved methodology.

Keep the data and records

Follow the monitoring plan strictly

Records = credits!

<http://cdm.unfccc.int/Projects/diagram.htm>





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Designated operational entity verifies that emission reductions took place, in the amount claimed, according to approved monitoring plan.

**Verification** is the independent review and ex post determination by the designated operational entity of the monitored reductions in anthropogenic emissions by sources of greenhouse gases that have occurred as a result of a registered CDM project activity during the verification period.

**Certification** is the written assurance by the designated operational entity that, during the specified period, the project activity achieved the emission reductions as verified.



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## 7 CER issuance

Executive Board

Designated operational entity submits verification report with request for issuance to CDM Executive Board

### CER ISSUANCE STEP IN DETAIL

- Completeness check by secretariat
- Vetting by secretariat
- Vetting by Executive Board
- If a Party or three members of Executive Board request review, issuance request undergoes review, otherwise



## How to integrate carbon finance into your business plan?

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- Consider CDM transaction costs, CER sales revenue in the financial model
- Consider CDM design requirements (additionality, baseline, etc.)
- Consider CDM monitoring requirements
- Organization: consider CDM management structure
- Submit “*CDM Prior Consideration Form*” today!



# Programmes of Activities (PoAs)

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- Africa accounts for 22%+ of registered PoAs
- 102+ PoAs in the pipeline
- High co-benefits for local populations



## Programme of Activities - Design

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What are the main differences?

<b>Single Project</b>	<b>Bundle of projects</b>	<b>PoA</b>
Single location	Multiple locations within a country	Multiple locations, across countries
Single PP	Multiple PP	Multiple PP
1 project at a time	A number of activities submitted as 1 project activity at a time	Activities submitted over the life-time of the POA
One crediting period	One crediting period for all activities	Each activity has own crediting period
PP known ex-ante	All PP known ex-ante	At least one PP known ex-ante, rest join later



### How can a PoA be structured?

- No fixed rules.
- There are no specified size limits or criteria for CPA:
  - a) CPA can be geographic (e.g. a certain city/province),
  - b) CPA can be timebound (e.g. activities commencing in a certain year).
- Coordinating/managing entity (CME) is not restricted or defined, but is directly involved in the implementation of the PoA and distribution of CERs.

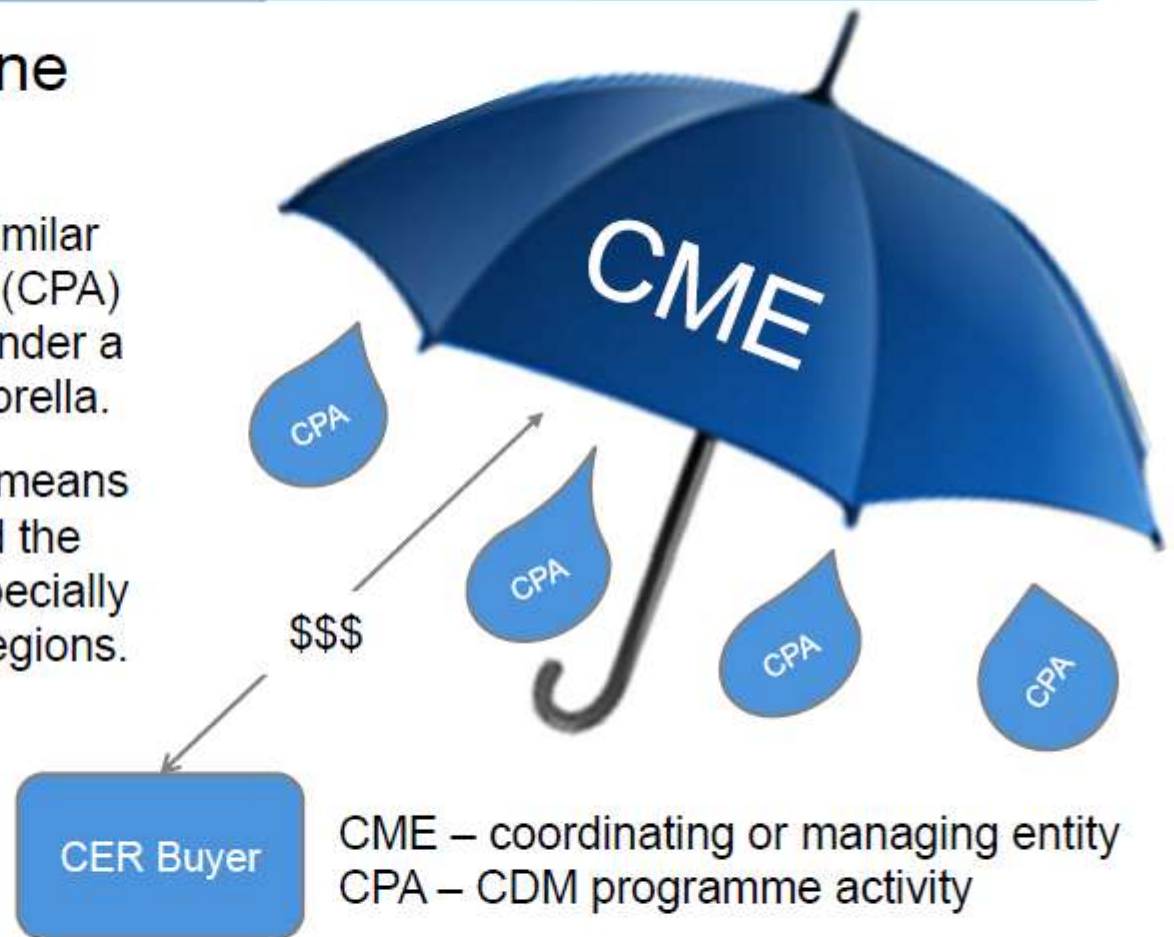




## Programme of Activities

### The basic outline

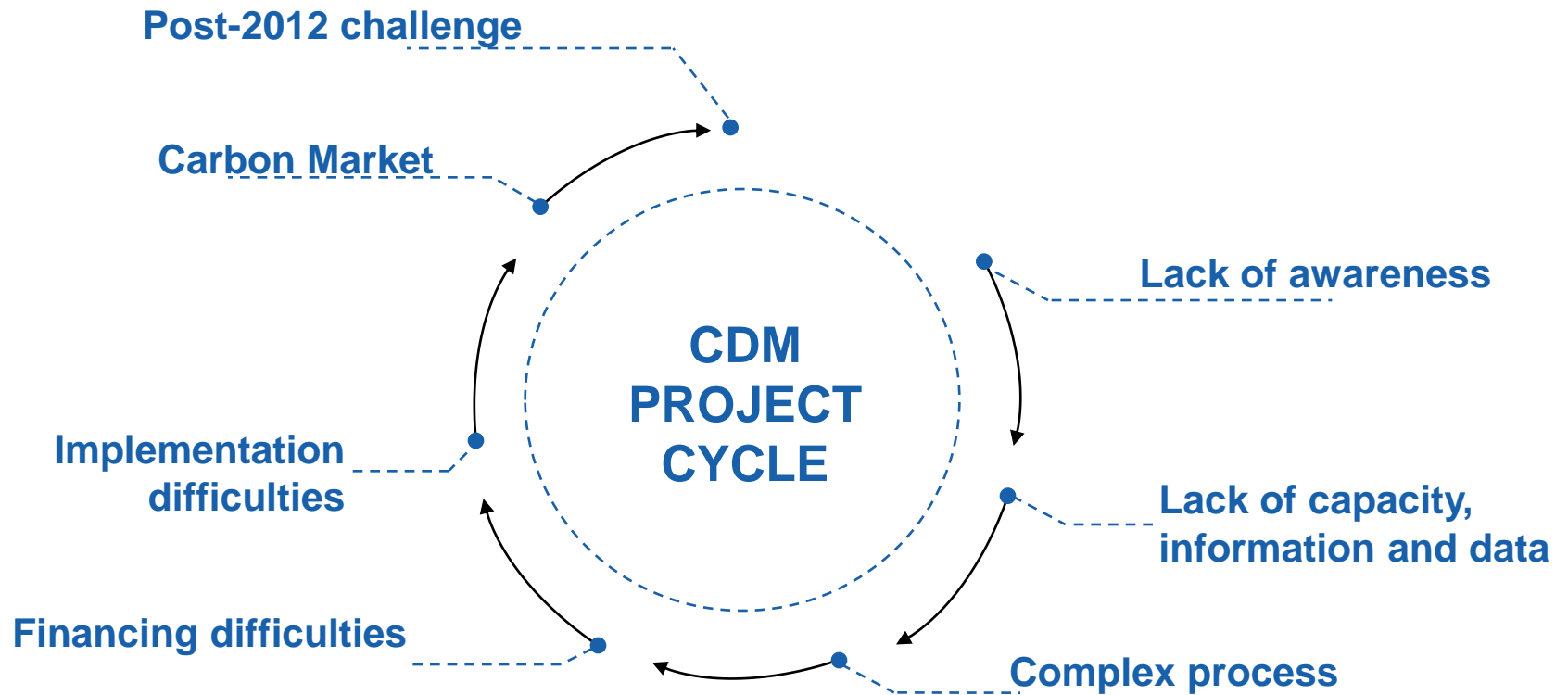
- Unlimited number of similar CDM project activities (CPA) can be administered under a single programme umbrella.
- Seen as an important means to scale up and extend the reach of the CDM, especially in underrepresented regions.



# PoA pipeline in West Africa

Title	Host country	Coordinating Entity	PoA-Type	CPA-Type
Promotion of Energy-Efficient lighting using Compact Fluorescent Light Bulbs in rural areas in Senegal	Senegal	Agence Senegalaise d'Electrification Rurale	EE households	EE households
Solar Water Heater Programme in Tunisia	Tunisia	Agence Nationale pour la Maîtrise de l'Energie (ANME)	Solar	Solar
Solar Water Heater Programme in Tunisia – CPA 8	Tunisia	Agence Nationale pour la Maîtrise de l'Energie (ANME)	Solar	Solar
Landfills' gas capture, flaring and use program in Morocco	Morocco	Fonds d'Equipement Communal (FEC)	Landfill gas	Landfill gas
Distribution of fuel-efficient improved cooking stoves in Nigeria	Nigeria	C-Quest Capital	EE households	EE households
Improved Cooking Stoves for Nigeria Programme of Activities	Nigeria	Developmental Association for Renewable Energies	EE households	EE households
Promoting Efficient Stove Dissemination and Use in West Africa	Togo	E+Carbon	EE households	EE households
Côte d'Ivoire and Cameroon Efficient Cookstoves Program	Côte d'Ivoire	Envirofit International	EE households	EE households
African Improved Cooking Stoves Programme of Activities	Ghana	Envirofit International	EE households	EE households
Côte d'Ivoire and Cameroon Efficient Cookstoves Program	Côte d'Ivoire	Envirofit International	EE households	EE households
Promoting Efficient Stove Dissemination and Use in West Africa	Togo	E+Carbon	EE households	EE households
Programme for Grid Connected Renewable Energy in the Mediterranean Region	Morocco	Renewable Energy for the Mediterranean (REM)	Mixed renewables	Mixed renewables
Distribution of Improved Cook Stoves in Sub-Saharan Africa	Senegal	C-Quest Capital Malaysia Global Stoves Limited	EE households	EE households
Standard Bank Renewable Energy Programme	Ghana	Standard Bank	Mixed renewables	Mixed renewables
Standard Bank MSW Composting Programme	Ghana	Standard Bank	Methane avoidance	Methane avoidance
Energy Efficiency of Nigeria's Residential Lighting Stock by Distributing up to 40 Million Compact Fluorescent Lamps (CFLs) to Residential Households Connected to the National Grid	Nigeria	Icimi	EE households	EE households
Oando Low Cost LPG Cook Stove Initiative Nigeria	Nigeria	Oando Marketing PLC	EE households	EE households
Clean Cook Stoves in Sub-Saharan Africa by ClimateCare Limited	Ghana	ClimateCare Limited	EE households	EE households
Biogas Programme in Central Mexico 01	Mexico	Islan Group	Methane avoidance	Methane avoidance
PoA for fuel switching at micro and small-sized enterprises in Egypt	Egypt	CDM-APU/EEAA	Fossil fuel switch	Fossil fuel switch
Fuel switching at two bakeries in EL-Zawya El-Hamra	Egypt	CDM-APU/EEAA	Fossil fuel switch	Fossil fuel switch
PoA for small scale renewable energy development in Egypt	Egypt	CDM Awareness & Promotion Unit	Mixed renewables	Mixed renewables
Installing PV panels at the New Basaisa Village Guest House	Egypt	CDM Awareness & Promotion Unit	Solar	Solar
ONE Wind Program of Activity, Morocco	Morocco	Office National de l'Electricité	Wind	Wind
Tarfaya Wind Farm Project (300 MW) - ONE/MAROC/WIND/TARFAYA 300	Morocco	Office National de l'Electricité	Wind	Wind
PoA for Water Pumping Efficiency Improvement and Rehabilitation for Egyptian Pumping Stations	Egypt	CDM Awareness and Promotion Unit	EE service	EE service
Nassr 5 Irrigation Station	Egypt	CDM Awareness and Promotion Unit	EE service	EE service
Promoting Efficient Stove Dissemination and Use in West Africa	Burkina Faso	E+Carbon	EE households	EE households
Tunisian cogeneration development programme (PoA)	Tunisia	Tunisian National Agency for Energy Conservation	EE supply side	EE supply side
Cartonnerie Tunisienne cogeneration project	Tunisia	Tunisian National Agency for Energy Conservation	EE supply side	EE supply side
Programme of Activities for the development of solar water heating systems in the tertiary sector in Tunisia - PROSOL tertiary	Tunisia	Tunisian National Agency for Energy Conservation	Solar	Solar
Man and Man Enterprise Improved Cooking Stoves Programme in Togo	Togo	Man & Man Enterprise	EE households	EE households





## UNFCCC CDM Regional Collaboration Centre in Lome, Togo

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- Partner with West Africa Development Bank (BOAD)
- Support 30 West and French-speaking African countries
- Identification and direct support for CDM project development
- Identification and direct support for standardized baseline development – for instance, grid emission factor
- Assist in addressing any serious issues arising from Project Design Document writing
- Direct support during validation process



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FURTHER INFORMATION:  
<http://cdm.unfccc.int>

THANK YOU!

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