



# Project development

Carbon- Money, market, mechanism  
Asia Carbon Global  
July 2008

Asia Carbon Global



# PDD Development

## Bible Documents

- CDM-PDD Guidelines
- CDM-SSCPDD Guidelines
- Tools for assessment and demonstration of additionality
- Simplified M&P for small scale CDM project activities
- [www.unfccc.int/cdm](http://www.unfccc.int/cdm)



# Project Development

## Stage 1: Project Screening

- will the project **mitigate / sequester GHG emission**?
- will the project result in **real, measurable, long term emission reduction**?
- Could the project have been undertaken as a result of normal business investment logic?

## Stage 2: Project Development

- Determine real emissions reductions:
  - Choose **project boundary**
  - Select **project baseline**
  - Set crediting period
  - Calculate emissions reductions
- **Prepare Project Design Document**
- Develop emissions monitoring and verification protocol

## Stage 3: National Approval

- Conduct stakeholders' consultation
- Submit PDD & PCN to DNA and present the project to DNA (India)
- Obtain host country approval



# Project Development

## **Stage 4: Validation and Registration**

- Designated Operational Entity (DoE) evaluates and validates project
- Designated Operational Entity (DoE) host the project in UNFCCC site for GSC
- Registration of the project with CDM- Executive Board

## **Stage 5: Implementation and Monitoring**

- Implement project
- Monitor emissions

## **Stage 6: Verification and Certification**

- Operational Entity verifies emissions reduction
- Executive Board certifies project and issues CERs

## **Stage 7: Trading & CERs Delivery**

- Identification of a suitable buyer (during project cycle also)
- Delivery of CERs to Buyers



# Project Cycle

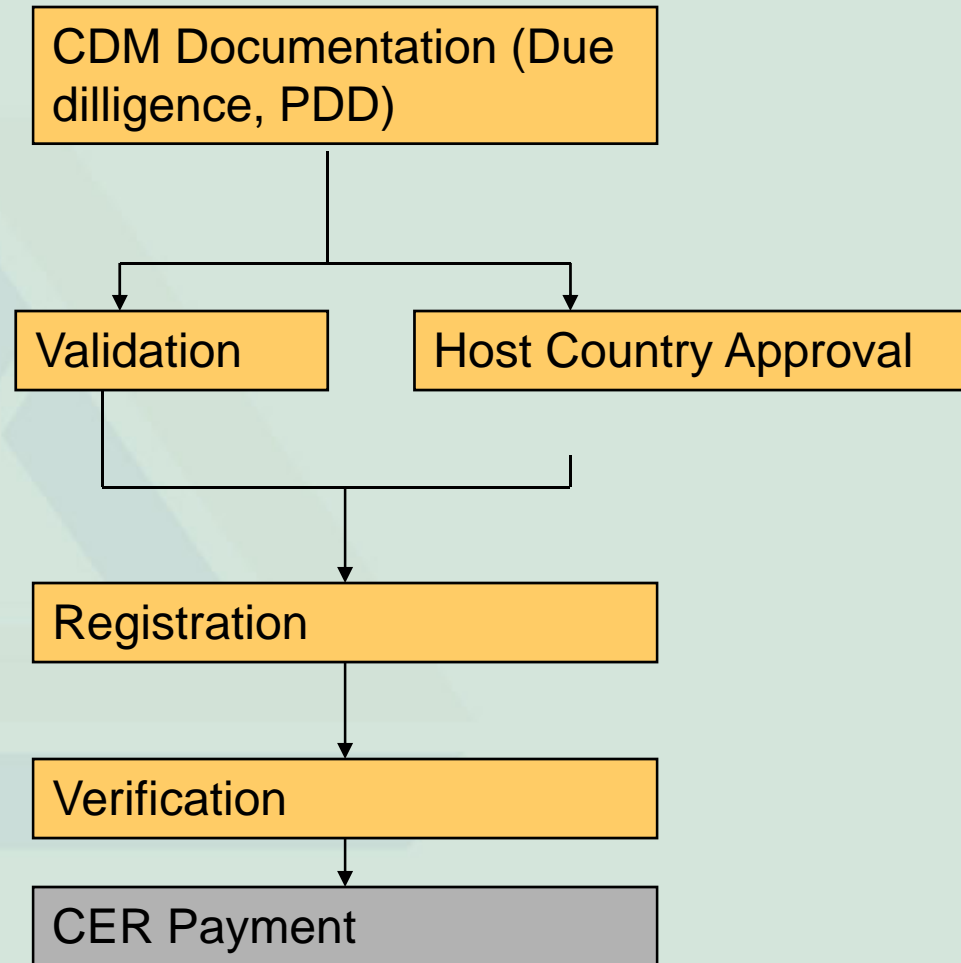
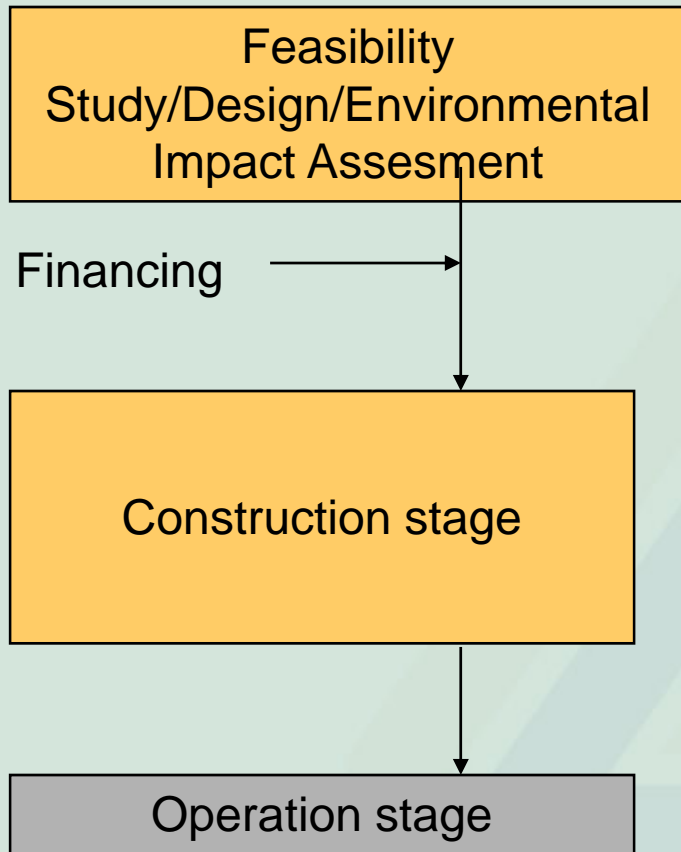
## General Details



| <b>Activity</b>                      | <b>Responsibilities</b>                    |
|--------------------------------------|--------------------------------------------|
| Project Identification / Feasibility | <i>Project Promoter</i>                    |
| Project design Documentation (PDD)   | <i>Project Promoter</i>                    |
| Host country approval – MoEF         | <i>Project Promoter</i>                    |
| Validation                           | <i>Designated Operational Entity (DOE)</i> |
| Registration                         | <i>CDM Executive Board (EB)</i>            |
| Monitoring                           | <i>Project Promoter</i>                    |
| Verification                         | <i>Designated Operational Entity (DOE)</i> |
| Request for CER issuance             | <i>Designated Operational Entity (DOE)</i> |
| Issuance of CER                      | <i>CDM Executive Board (EB)</i>            |
| Sale of CER                          | <i>Project Promoter</i>                    |



# Project Cycle

## Technical Project Cycle Vs. CDM Cycle



Legend  : Expenses  
 : Income



# PDD Development

## Steps for PDD Development

- Check the sectoral scope
- Check the methodologies within the sectoral scope
- Correlate the project details with the applicability of the respective methodologies
- Check the data availability for calculating the baseline, project emissions and leakage
- Develop emission reduction calculation template
- Discuss for additionality
- Conduct stakeholder meeting
- Conclude PDD



# PDD Development

## General Details

- Technical Report explains **emission reductions** that have been **envisaged** from the CDM project activity
- Information about **Project Activity** & Project Developer
- Detailed Information about project **Baseline selection**
- Information about **Emission Reductions**
- Information about project **Additionality**
- Information about **Monitoring Protocol**
- Information about **Stakeholder Consultation Process**



# PDD Development

## Section A

- Title of the project
  - Title
  - Version
  - Date
- Project description
  - Project promoter
  - Project details
  - Emission reductions
  - Sustainable development
- Location
  - Exact location
  - Maps
- Technical Description
  - Design specifications
- Emission reductions
  - As per PDD guidelines

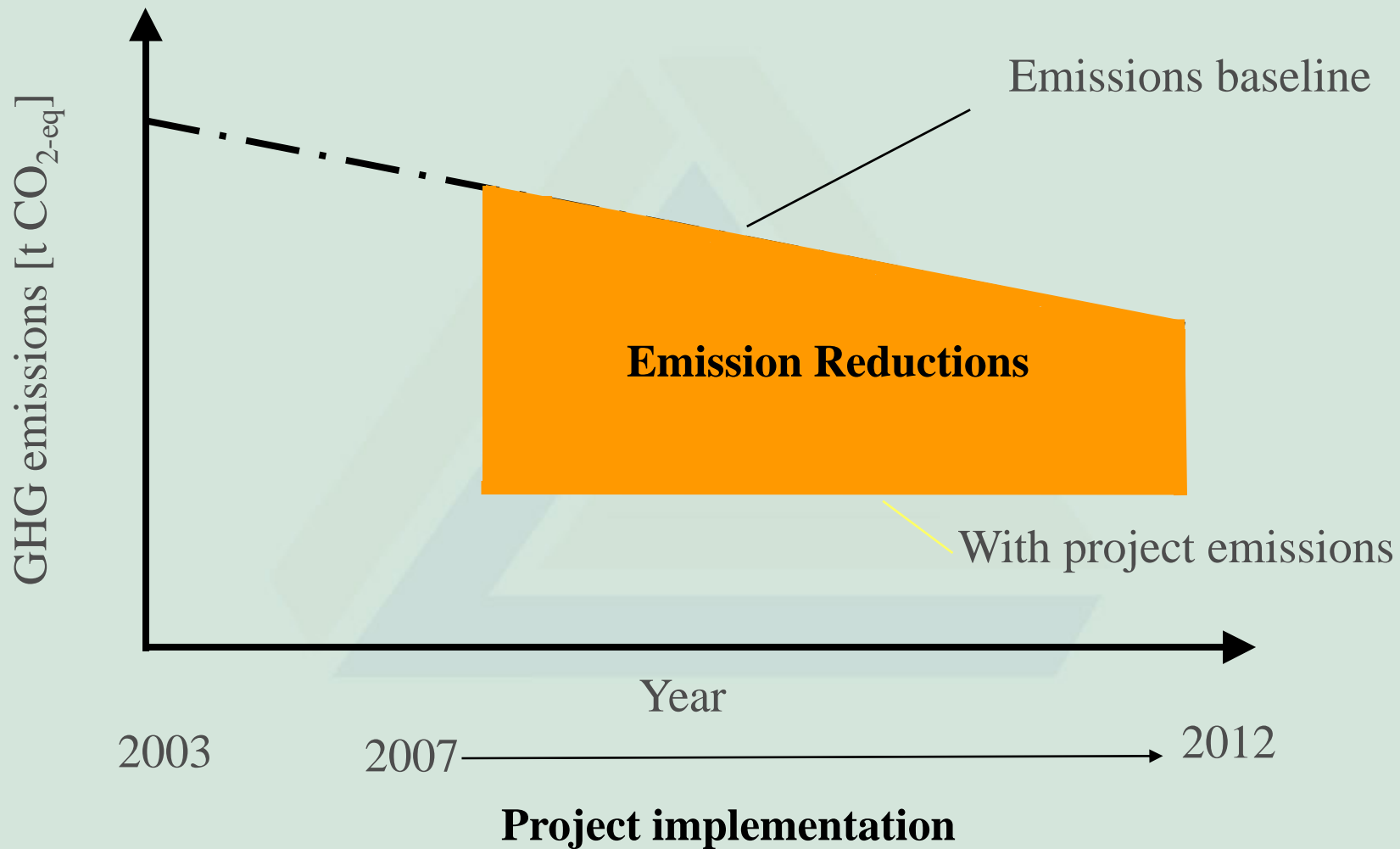


# PDD Development

## Section B

- Title of methodology
  - Version
  - Date
  - Reference
- Justification of the choice of methodology
  - Tabular format
- Baseline
- Additionality
- Data available at validation
- Monitoring plan
  - Monitoring structure
  - Metering
  - Schedules
  - Calibration
- Monitoring parameters

# Baseline and Additionality





# PDD Development

## Section C

- Project start date
  - How to choose a start date
  - Date format
  - How to choose a start date for a bundled project
- Project lifetime
  - How to address
- Choice of crediting period
  - Why to choose renewable / non-renewable crediting period
- Start date of crediting period

## Section D

- Environmental Impact Assessment
  - Refer the EIA notification of the respective region and /or country
  - Self analysis of the positive and negative impacts may be included



# PDD Development

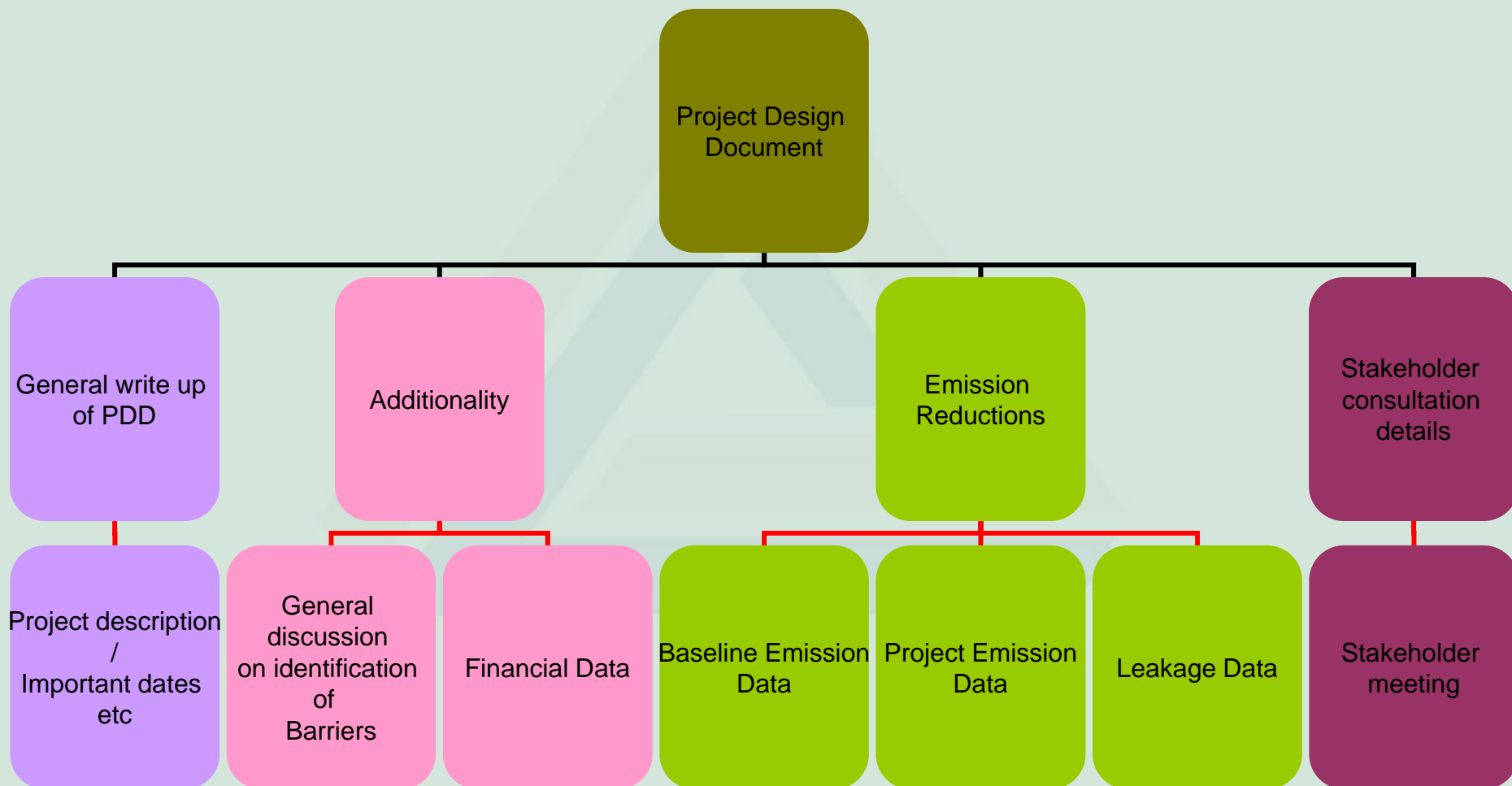
## Section E

- Organizing a stakeholder meeting:
  - Categories of stakeholders
  - Invitations
  - Conducting a stakeholder meeting
  - Invitation of responses from the stakeholders
- How stakeholders comments were invited and compiled
- Summary of comments received
- How due account was taken for the comments received
- Summarized response sheet



# PDD Development

## Ideal step by step approach for a PDD





# PDD Development

## Key skills

- Patience
- Persistence
- Micro-Detailing yet **Keep It So Simple (KISS)**
- Detailed & appropriate data collection
- Discussions
- Research
- Analysis



# PDD Development

## Points to ponder

- If Shakespeare says
  - ....“What’s in a name? A rose is still a rose...” I say “Gone are the days of Shakespeare”
- Hanging statements
  - ....Suicidal...!!!
- Tense
  - ....Preferably simple present
  - Also consider the project status
- File naming
  - Can you identify the latest version...!!!
- Simple sentences
  - Simplicity...!!! It’s a divine policy
- Document filing
  - Keep the client busy right from the beginning
  - Keep track of the available documents
- Footnotes
  - Real help in backtracking...!!!
- Packaging
  - Bad packets definitely repel...!!!
- Validation
  - Keep the validators in good humour...!!!
  - ....But delicate dominance...!!!



# PDD Development

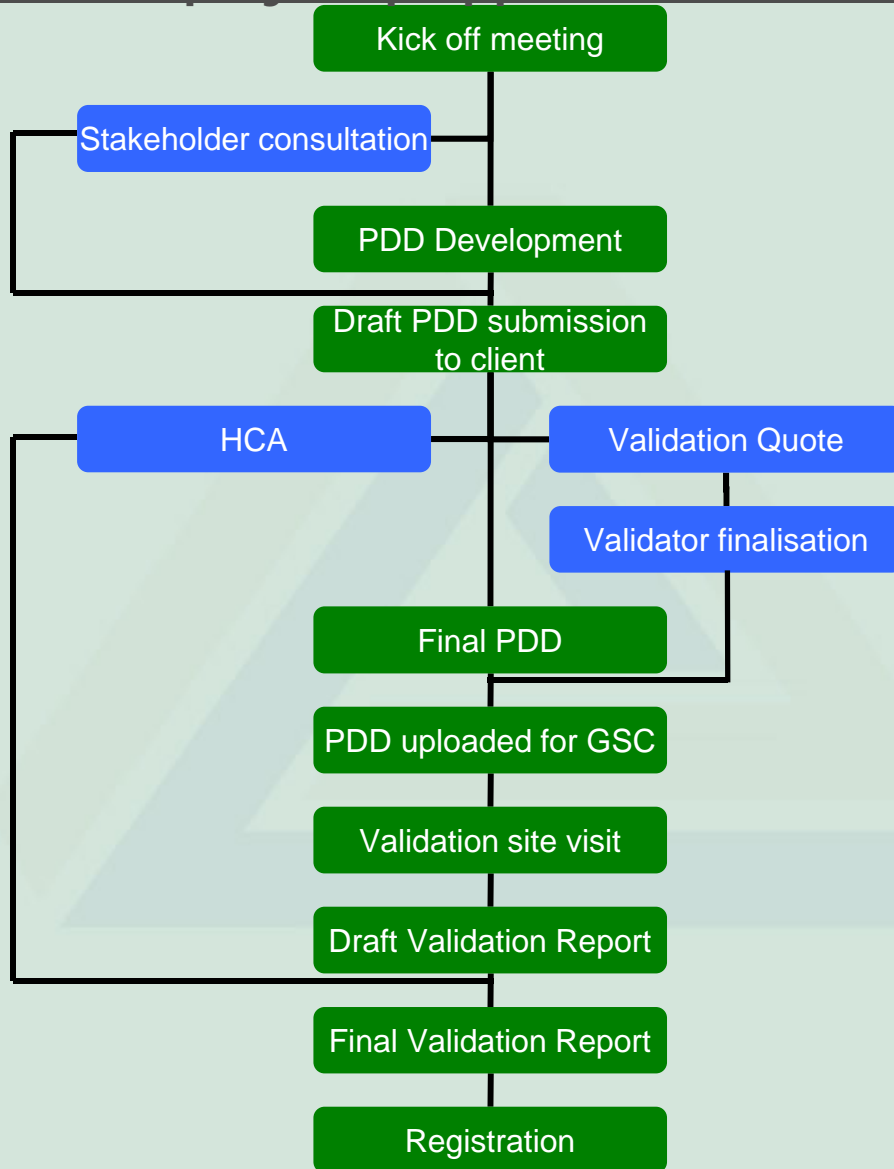
## Key Constraints

- Data inadequacy
  - Preparation of checklist ([example](#))
  - Explanation of the required inputs
  - Regular discussions for inputs
- Stakeholder consultation
  - Proper planning
  - Support from the project promoter
- Resolution of CARs and CRs raised by DOE
  - Justify
  - Debate
  - Convince
  - Conclude



# PDD Development

## Ideal step by step approach for a CDM project





# PDD Development

## Tackling validators

- Change your homepage today...
  - [www.unfccc.int/cdm](http://www.unfccc.int/cdm)
- Confidence the key...!!!
  - Knowledge... the key to confidence
- Preferably respond to documented queries
  - Verbal communications are immaterial
- Always cautious... you might be taken for a ride
- Don't open out all your cards



# PDD Development

## Monitoring: Key to CDM Revenue



# Monitoring Methodology

## Monitoring... The key to CDM

- Plays a significant role in the CDM cycle
- Monitoring procedure should be identical to the one proposed in the monitoring plan
- Types of parameters to be addressed:
  - Mandated by methodology
  - Mandated by law
  - As per the EMS / IQMS standards



# Monitoring Methodology

## Monitoring Parameters

- Primary
  - Basic minimum requirements as per methodology
  - Input
  - Output
  - Saving
  - RE generation
  - Losses
- Metering of all the variable parameters
- Monitoring as per EMS / IQMS standards
  - Reference to all the modules and documents
- Monitoring of other parameters required as per the state and / or national government norms



# Monitoring Methodology

## Data Inspection at the time of validation

- Environmental clearances / consents
  - Adherence to the all the relevant clauses
- Period inspection schedules
  - Inspection certificates
- Testing and certification of the equipments for monitoring
  - Proofs in the form of test certificates
- Procedure for periodic maintenance and repair
- Procedure for the maintenance of log books for monitoring
- Procedure and schedule for calibration of monitoring equipments
- Schedule for training of handling personnel
- Flow chart for monitoring structure
- Correlation of the monitoring parameters at site and in records
- Methodology applied for cross checking of data



# Monitoring Methodology

## Inclusions in Monitoring Plan

- Data availability:
  - Two years after the crediting period
- Mode of data archiving:
  - Paper / Electronic
- Notations to be used for the relevant parameters for emission reduction calculation
- Source of the data:
  - How the data will be collected
  - What equipment to be used for calculating
- Frequency of data monitoring
  - Daily, Weekly, Monthly, Yearly
- Data Accuracy
- Responsible person for the activity



# Monitoring Methodology

## Other issues in Monitoring Plan

- Data uncertainty
  - How is the data uncertainty addressed? (Double monitoring, monitoring for fossil fuels in biomass project)
- Emergency preparedness
  - Identify the most realistic emergency cases
  - Detailed plan to address the emergencies (Mock drills etc)



# Monitoring Methodology

## Monitoring Report

- Detailed report as per the monitoring plan
- Compilation of detailed monitored data
- Data adjustments
  - Individual projects
  - Bundled projects
- Documents to be provided
  - Receipts of purchases, sale etc
  - Log books of monitored data
  - Breakdowns and repairs
  - Maintenance shutdown



# Small Scale CDM Project

## Bible Documents

- CDM-SSCPDD Guidelines
- Simplified M&P for small scale CDM project activities
- [www.unfccc.int/cdm](http://www.unfccc.int/cdm)

## Assistance

- Tools for assessment and demonstration of additionality



# Small Scale CDM Project

## Preliminary Screening

- Category (Type I, II and III )
- Type I : Renewable Energy ; Type II : Energy Efficiency ; Type III : Others
- Installed Capacity  $\leq 15\text{MW}_e$
- Thermal Capacity  $\leq 45 \text{ MW}_{\text{th}}$
- Emission Reductions  $\leq 60\text{k tCO}_2\text{e}$  annually
- Debundling



# Small Scale CDM Project

## Additionality

- Two options:
  - Option 1: Tools for demonstration and assessment of additionality
  - Option 2: Barrier analysis as per the Simplified Modalities and Procedures for Small Scale CDM Project activities



# Small Scale CDM Project

## Option 1 Vs Option 2

| <b>Additionality Tool</b>                                                                                                                                                                                             | <b>Simplified M&amp;P</b>                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <i>Investment Barrier</i>                                                                                                                                                                                             | <i>Investment Barrier</i>                                                                               |
| Similar activities have only been implemented with grants or other non-commercial financial terms                                                                                                                     | <i>A financially more viable alternative to the project activity would have led to higher emissions</i> |
| No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented. | -                                                                                                       |



# Small Scale CDM Project

## Option 1 Vs Option 2

| <b>Additionality Tool</b>                                                                                                                                                                                    | <b>Simplified M&amp;P</b>                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Technological Barrier</i>                                                                                                                                                                                 | <i>Technological Barrier</i>                                                                                                                                                                                                                            |
| Skilled and/or properly trained labour to operate and maintain the technology is not available, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other Underperformance | <i>A less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher Emissions</i> |
| Lack of infrastructure for implementation and logistics for maintenance of the technology                                                                                                                    | -                                                                                                                                                                                                                                                       |
| Risk of technological failure                                                                                                                                                                                | -                                                                                                                                                                                                                                                       |
| Technology is not available in the relevant region                                                                                                                                                           | -                                                                                                                                                                                                                                                       |



# Small Scale CDM Project

## Option 1 Vs Option 2

| <b>Additionality Tool</b>                       | <b>Simplified M&amp;P</b>                                                                                                                       |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Barrier due to prevailing practice</i>       | <i>Barrier due to prevailing practice</i>                                                                                                       |
| The project activity is the "first of its kind" | <i>Prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions</i> |



# Small Scale CDM Project

## Option 1 Vs Option 2

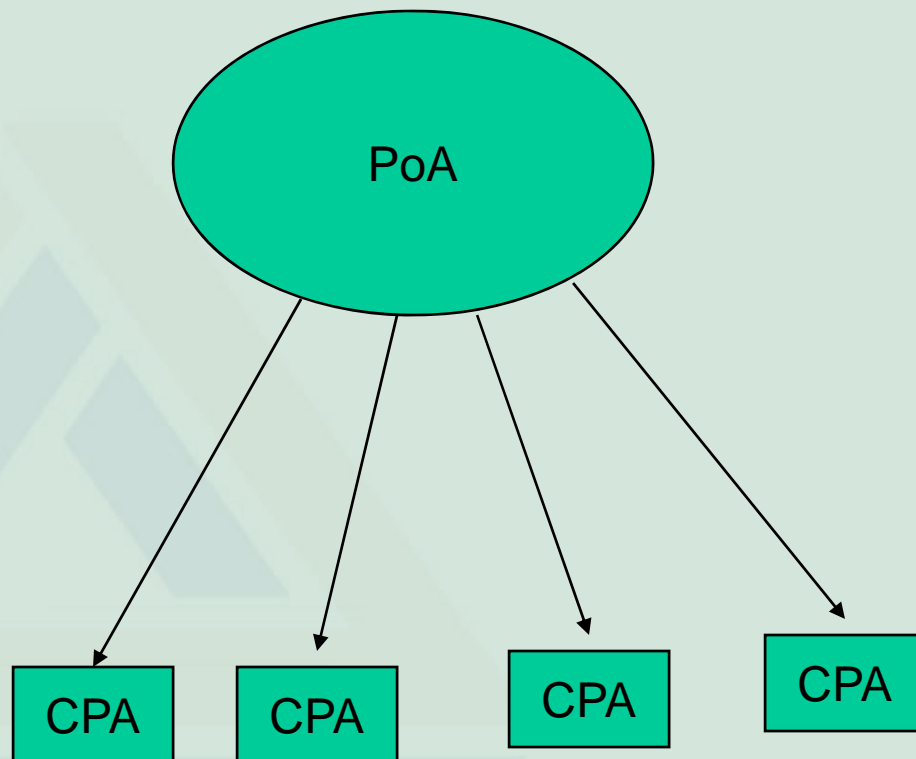
| <b>Additionality Tool</b> | <b>Simplified M&amp;P</b>                                                                                                                                                                                                                                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Other methodology</i>  | <i><b>Other barriers</b></i>                                                                                                                                                                                                                                                                                |
| Methodology specific      | <i>Without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher</i> |



# Programmatic CDM

## Definitions

- "...is a voluntary coordinated action by a private or public entity which coordinates and implements any policy/measure or stated goal (i.e incentive schemes and voluntary programmes), which leads to anthropogenic GHG emission reductions..."
- PoA constitutes of individual CDM project activities (CPAs), with no limits on CPAs under a PoA





# Programmatic CDM

## Exciting features

- **The physical boundary** may go beyond country boundaries, provided each country confirms that the activities assist in achieving sustainable development
- **PoAs addressing mandatory** local/regional/national policies and regulations are permissible provided it is demonstrated that they have not been implemented systematically and non compliance is widespread
- **Single managing entity** for coordination with the UNFCCC
- Possibility of **change of project participants**
- A **common AM** to be used for all the CPAs
- **Random sampling** allowed
- **Registration fee** is based on the total estimated CERs from all the CPAs submitted with request for registration of the PoA



# Programmatic CDM

## Exciting features

- Duration allowed:
  - 60 years for A&R projects
  - 28 years for other projects
- Crediting period:
  - Maximum of 7 years (20 for A&R) renewable twice
  - Maximum of 10 years (30 years for A&R) with no renewal option



# Programmatic CDM

## Constraints

- Although mandated policies are allowed under the PoA, yet it has been seen that with regards to the actual implementation the success is considerably difficult
- Crediting period of a CPA is limited to the duration of the PoA
- If an AM is put on hold / withdrawn no new CPAs can be added to the PoA
- If an AM is revised or replaced the entire PoA has to be reworked accordingly
- CER issuance only at PoA level



# Programmatic CDM

## Registration

- One CPA to consist of a single or a set of interrelated measure to reduce GHG
- Identification of a similar technology and common baseline and monitoring methodology for all the CPAs
- Approved SSC methodology can be used provided leakage is addressed
- Sampled monitoring, if appropriate
- Stakeholder consultation
  - At PoA level
  - At CPA level
- Host Country Approval from every participant country for the PoA
- PoADD submitted with at least one CPADD (Master PDD) for registration
- Each CPA to be monitored as per monitoring plan



# Programmatic CDM

## What kind of activities are appropriate?

- Continual increase of individual project activities with possibility of reaching large scale level
- Individual projects of small capacity
  - Community based biogas plants
- Replacement of incandescent bulbs with CFL



***Thank You***

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