

# **CDM Project Initiation and Viability**

# CDM Objectives

∅ To assist **non-Annex I** Parties to:

§ meet their **sustainable development** goals and priorities, by hosting projects that contribute to these goals

§ contribute to the UNFCCC's overall objective of **stabilizing global concentrations of GHG emissions** at a level that would prevent dangerous anthropogenic interference with the climate system

∅ to assist **Annex I** Parties to:

§ meet their **Kyoto targets** at a **lower cost** by allowing the use of **CERs generated** by emission reducing CDM projects in non-Annex I countries to meet in part their obligations.

# CDM Participants

- Ø **CDM project developer** – The local enterprise or organisation that develops and implements CDM projects
- Ø **CER Purchaser** – The entity that invests in the project to obtain CER's or purchases the CER's when produced
- Ø **Designated National Authority (DNA)** – Issues LoA and assess sustainable development contribution
- Ø **CDM Executive Board** – UN supervisory body of the CDM accountable to the COP to the Kyoto Protocol
- Ø **Designated Operational Entities (DOE)** – An independent legal entity, accredited and accountable to the Executive Board, that validates CDM activities and verifies emission reduction

# Initiating a CDM Project - Key Eligibility Criteria

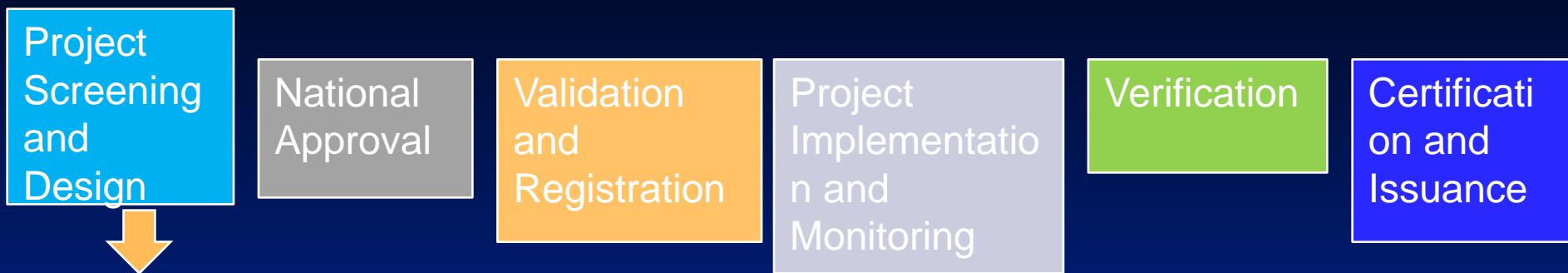
- ∅ The CDM project should be hosted by non-Annex I Parties (host Parties) that **have ratified the Kyoto Protocol** and **established a designated national authority (DNA)**
- ∅ The project should lead to **emission reduction** of at least one of the 6 GHG's mentioned under the Kyoto Protocol
- ∅ The project meets the **sustainable development requirements** specified by the host country
- ∅ There is no **Official Development Assistance (ODA)** or **public funding** from Annex -1 Parties for the project activity
- ∅ The project should not result in significant **negative impacts on the environment**

# Initiating a CDM Project - Key Eligibility Criteria

- ∅ The project once commissioned and operational, should result in **real, additional, measurable and verifiable** reductions in greenhouse gas emissions below an approved business as usual baseline scenario.
- ∅ **Prior CDM Consideration** - The Project Proponent has informed the **UNFCCC** and **Host country DNA** regarding intention to seek CDM status within 6 months of project starting date.

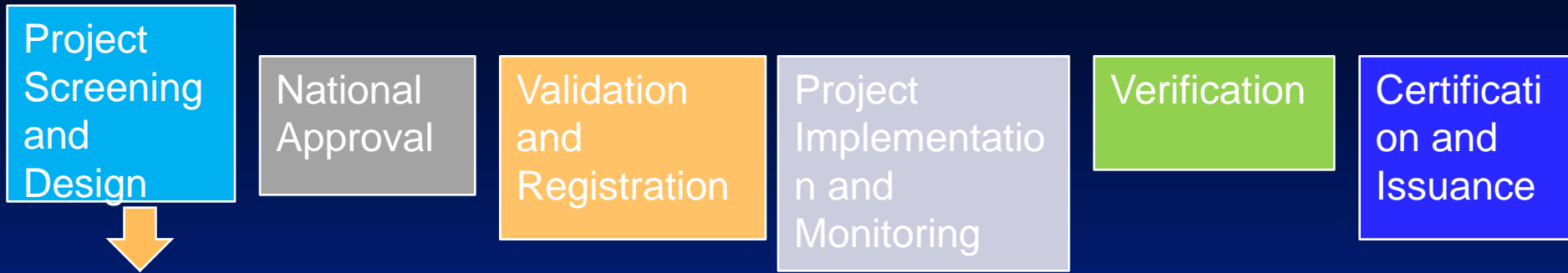
**Once all the above conditions are satisfied than the project is eligible for CDM**

# Pre Screening/ PIN Preparation



- Ø Development of feasibility study
  - Ø Not mandatory but helps to obtain feedback from country / investors
- Ø PIN Preparation
  - Ø Project type, size, location
  - Ø GHG reductions
  - Ø Suggested crediting life time and expected CER price
  - Ø Financial structure
  - Ø Other socio-economic and environmental benefits

# PDD Development



- ∅ The CDM-PDD presents information on the essential technical and organizational aspects of the project activity and is a key input into the validation, registration, and verification of the project.
- A. General description of project activity
  - B. Application of a baseline and monitoring methodology
  - C. Duration of the project activity / crediting period
  - D. Environmental impacts
  - E. Stakeholders comments

# Host Country Approval



## Ø Institutions Involved

§ DNA, Public and Private Stakeholders

## Ø Critical Issues

§ National Sustainable Development Criteria

§ National Laws

## Ø Related Documents

§ Project Design Document

§ Stakeholder Consultation Documents

§ Sustainable Development Benefits

§ Proof of legal Capacity, etc



# Validation



## Ø Institutions Involved

§ Project Developer, Consultant, DOE, CDM Executive Board

## Ø Task of DOE

§ Public consultation process (30 days)

§ Validation of CDM project against requirements (VVM)

§ Submission to CDM-EB

## Ø Related Documents

§ Project Design Document

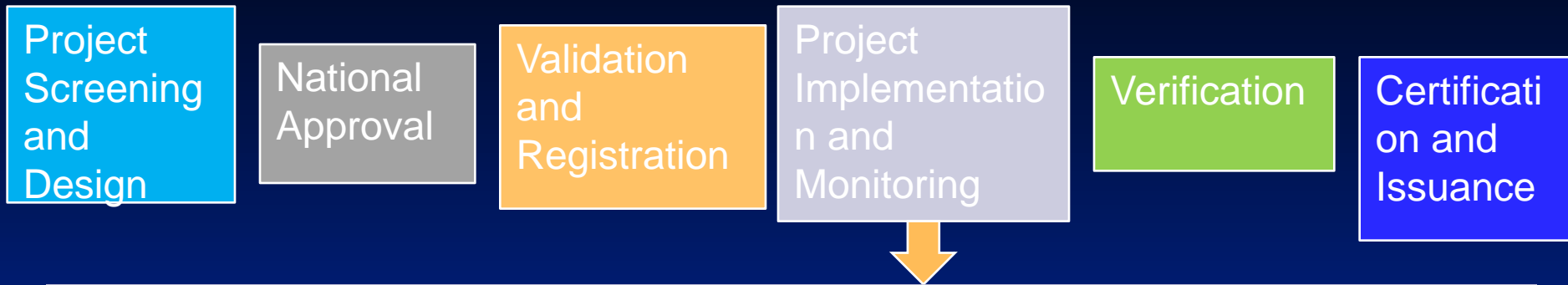
§ Validation report

## Ø Tasks of CDM Executive Board

§ Review (optional)

§ Registration of CDM project

# Project Implementation & Monitoring



Ø Monitoring required upon project implementation

§ In accordance with monitoring plan of PDD

§ For the entire crediting period

§ Must at least cover technical project performance

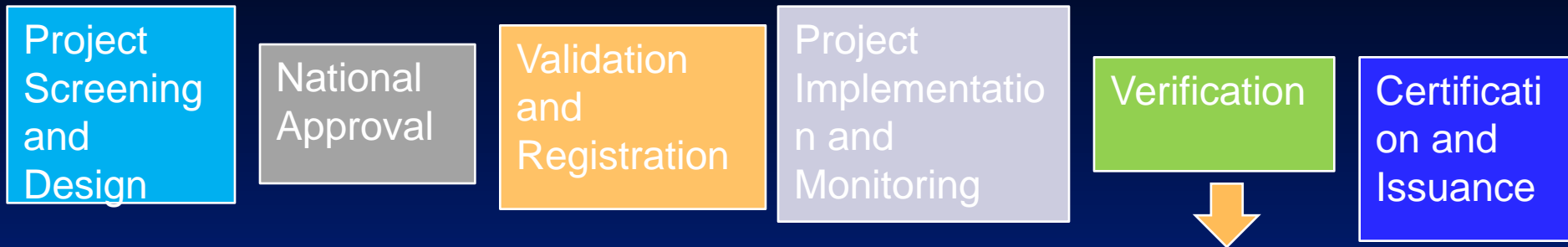
Ø Documentation

§ Monitoring Report based on monitoring plan mentioned in the PDD

§ Quality Assurance - Equipment maintenance, staff training, meter calibrations, etc

§ Data Recoding and archiving

# Project Implementation & Monitoring



## ∅ Institutions Involved

§ Project Developer, Consultant, DOE (must be different ,for large scale projects)

## ∅ Tasks of verification DOE

§ Verification of data accuracy and completeness and collection in accordance with monitoring plan

§ Preparation of verification report to CDM EB & public

## ∅ Documentation

§ Monitoring Report based on monitoring plan mentioned in the PDD

§ Verification Findings – prepared by DOE

# Certification & Issuance



## Ø Institutions Involved

§ CDM EB (through CDM Registry, Project Developer, Consultant, DOE)

## Ø Tasks of certification DOE

§ Certification of data accuracy and completeness and collection in accordance with monitoring plan

§ Preparation of and certification report to CDM EB

## § Documentation

§ Monitoring Report based on monitoring plan mentioned in the PDD

§ Verification Findings – prepared by DOE

# Summary – CDM Project Initiation

Project  
Screening  
and  
Design

National  
Approval

Validation  
and  
Registration

Project  
Implementatio  
n and  
Monitoring

Verification

Certificati  
on and  
Issuance

- Ø CDM project cycle follows specific predefined steps involving various documentation and players
- Ø Key documentation to provide - PDD, LoA, Validation Report and Verification Report
- Ø The key players are - Project Developer, Consultant, DNA, DOE , CDM EB
- Ø The emission reductions are based on the project baseline and in accordance with approved or proposed methodologies
- Ø There are transaction costs associated with the carbon asset development which vary with the type and complexity of the project

# CDM Project Viability

- Ø CDM projects produce both **conventional** project output and **carbon benefits(CERs)**.
  
- Ø The value of carbon benefits and its impact on project viability are **influenced** by several factors which include:
  - § **Quantity** of CERs generated by the project
  - § **Price** of CER
  - § **Transaction costs** involved in securing CERs

# CDM Project Viability – Quantity of CERs

- ∅ Depends on the **emission reductions** achieved and **crediting period** selected.
- ∅ Grid-based or off-grid projects that displace more **carbon intensive coal** and **diesel** fuels generate more CERs than those that displace **natural gas**.
- ∅ Projects that capture **methane** and GHG's other than CO<sub>2</sub> produce **more CERs** – GWP of methane and other gases are several times higher than that of carbon dioxide

# CDM Project Viability – Price of CERs

Key Determinants include:

- Ø **Risk** allocation (Registration risk; Delivery risk)
- Ø **Creditworthiness & experience** of project sponsor
- Ø **Viability** of underlying project
- Ø **Contract structure** (e.g. upfront payments incur discount, penalties for non-delivery, ability to pay penalties)
- Ø Emission reduction **vintage**
- Ø Host country **support & willingness** to cooperate
- Ø **Additional Environmental and Social Benefits**



# CDM Project Viability – Impact of CER Revenue

Ref. No	Project	IRR pre CDM	IRR post CDM	CER Price	Annual CER's
3539	Huadian Kulun 201MW Wind Farm Project (China)	6.08%	12.62%	€12.5	471,803
3127	Culiacan Northern Landfill Gas Project (Mexico)	2.3%	16.2%	\$15	42,746
3083	20 MW biomass based power project in Maharashtra, India	8.62%	16.29%	€12	71,369
1227	Yuyao Electricity Generation Project using Natural Gas	6.69%	10.24%	€7	804,794

# CDM Project Viability – Transaction Costs

- Ø Transaction costs vary depending on the **specific circumstances** of the project and the **service providers**.
- Ø Project participants may absorb the costs by carrying out the **task in-house** (e.g. development of a PDD)
- Ø Typical Transaction costs can include:
  - § Project **finding** and **assessment**
  - § New **methodology development** and submission
  - § **PDD** development
  - § **Validation**
  - § Host country **approval**
  - § **Contract** negotiation and **legal** costs
  - § **Monitoring**
  - § **Verification/Certification**

**THANK YOU**