

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

- **CDM project developer** – The local enterprise or organisation that develops and implements CDM projects
- **CER Purchaser** – The entity that invests in the project to obtain CER's or purchases the CER's when produced
- **Designated National Authority (DNA)** – Issues LoA and assess sustainable development contribution
- **CDM Executive Board** – UN supervisory body of the CDM accountable to the COP to the Kyoto Protocol
- **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

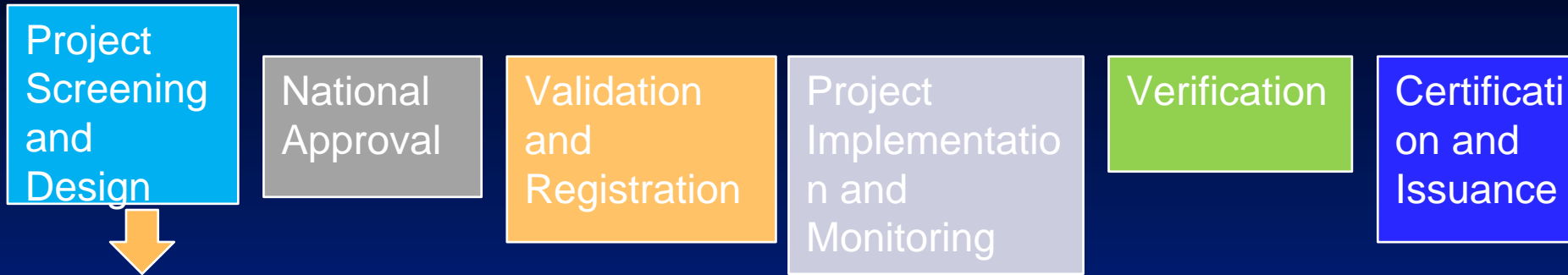
- The CDM project should be hosted by non-Annex I Parties (host Parties) that **have ratified the Kyoto Protocol** and **established a designated national authority (DNA)**
- The project should lead to **emission reduction** of at least one of the 6 GHG's mentioned under the Kyoto Protocol
- The project 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.

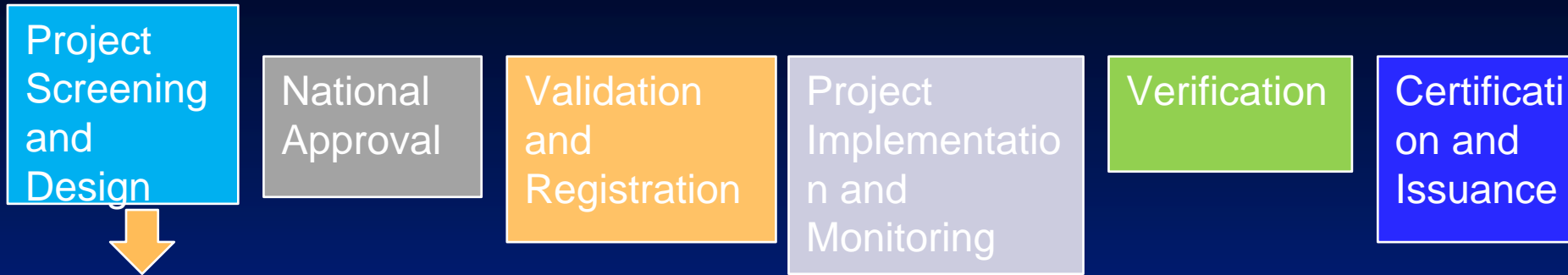
Once all the above conditions are satisfied than the project is eligible for CDM

Pre Screening/ PIN Preparation



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



➤ Institutions Involved

- DNA, Public and Private Stakeholders

➤ Critical Issues

- National Sustainable Development Criteria
- National Laws

➤ Related Documents

- Project Design Document
- Stakeholder Consultation Documents
- Sustainable Development Benefits
- Proof of legal Capacity, etc

Validation



➤ Institutions Involved

- Project Developer, Consultant, DOE, CDM Executive Board

➤ Task of DOE

- Public consultation process (30 days)
- Validation of CDM project against requirements (VVM)
- Submission to CDM-EB

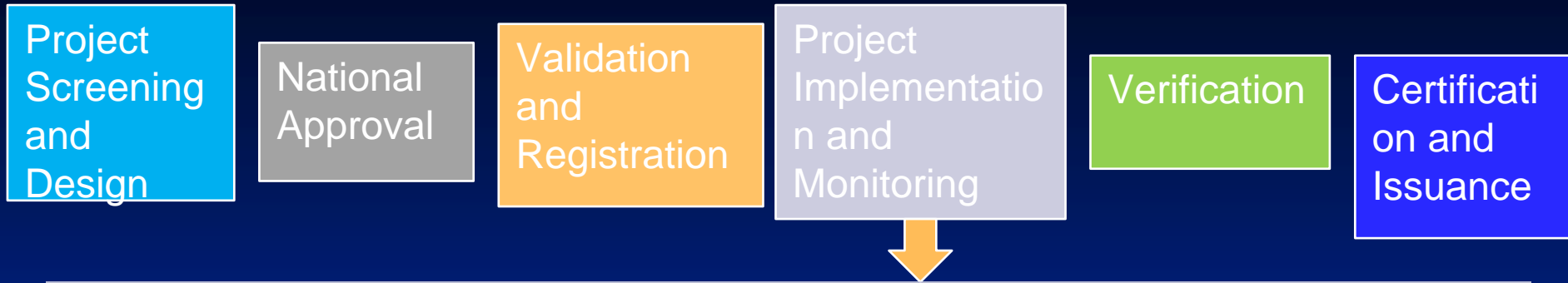
➤ Related Documents

- Project Design Document
- Validation report

➤ Tasks of CDM Executive Board

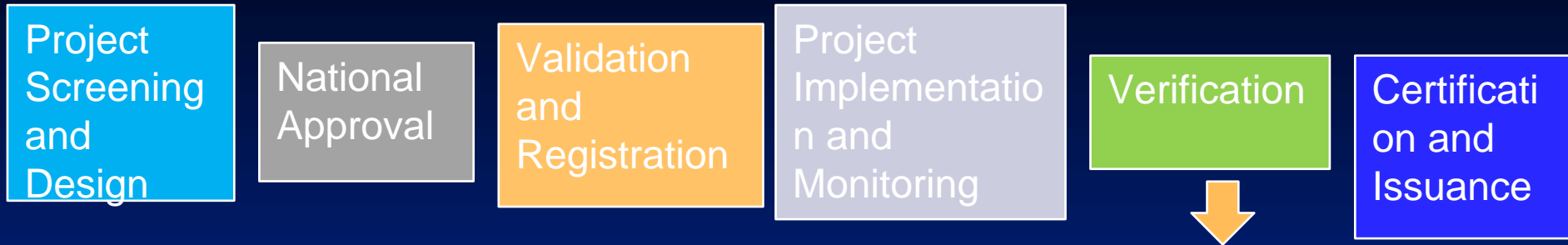
- Review (optional)
- Registration of CDM project

Project Implementation & Monitoring



- Monitoring required upon project implementation
 - In accordance with monitoring plan of PDD
 - For the entire crediting period
 - Must at least cover technical project performance
- 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)

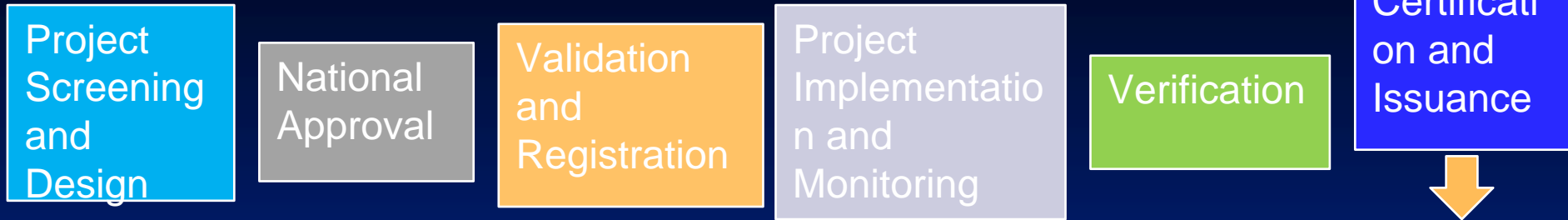
➤ Tasks of verification DOE

- 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



➤ Institutions Involved

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

➤ 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

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

CDM Project Viability

- CDM projects produce both **conventional** project output and **carbon benefits(CERs)**.
- 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 CO₂ 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:

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

- Transaction costs vary depending on the **specific circumstances** of the project and the **service providers**.
- Project participants may absorb the costs by carrying out the **task in-house** (e.g. development of a PDD)
- 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