

CDM Project Initiation and Viability

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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

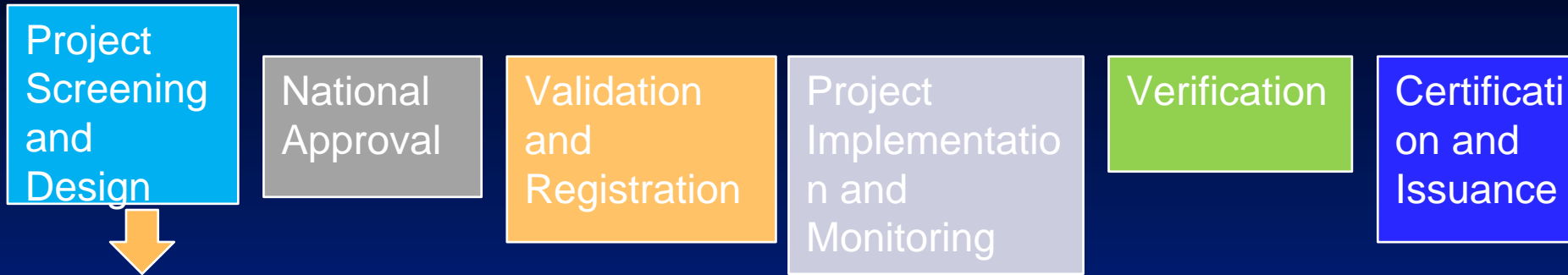
- The CDM project should be hosted by non-Annex I Parties (host Parties) that **have ratified the Kyoto Protocol** and **established a designated national authority (DNA)**
- The project should lead to **emission reduction** of at least one of the 6 GHG's mentioned under the Kyoto Protocol
- The project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

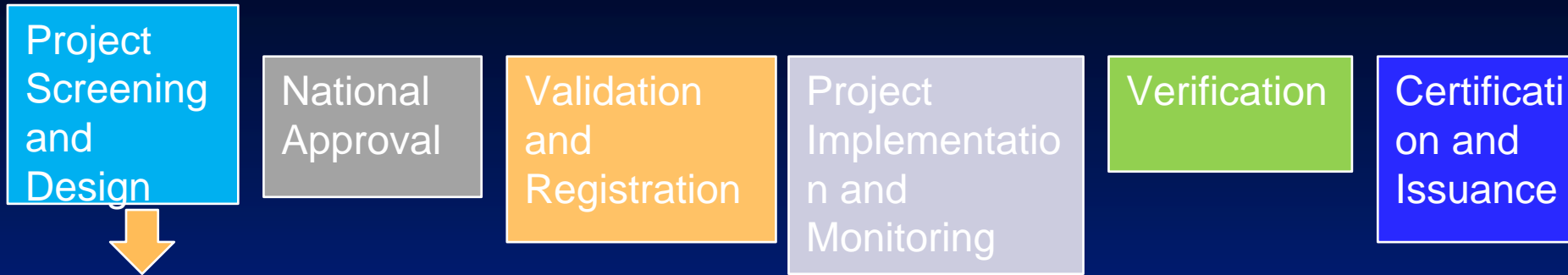
Once all the above conditions are satisfied than the project is eligible for CDM

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

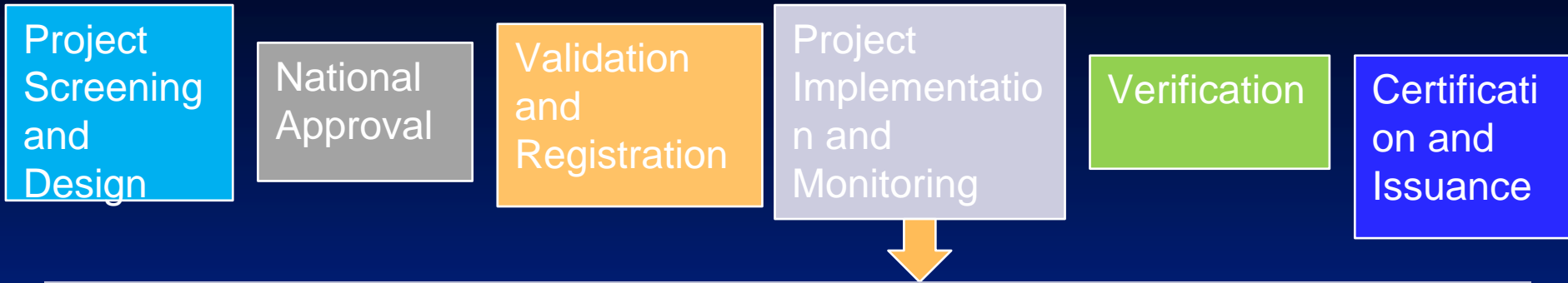
➤ Related Documents

- Project Design Document
- Validation report

➤ Tasks of CDM Executive Board

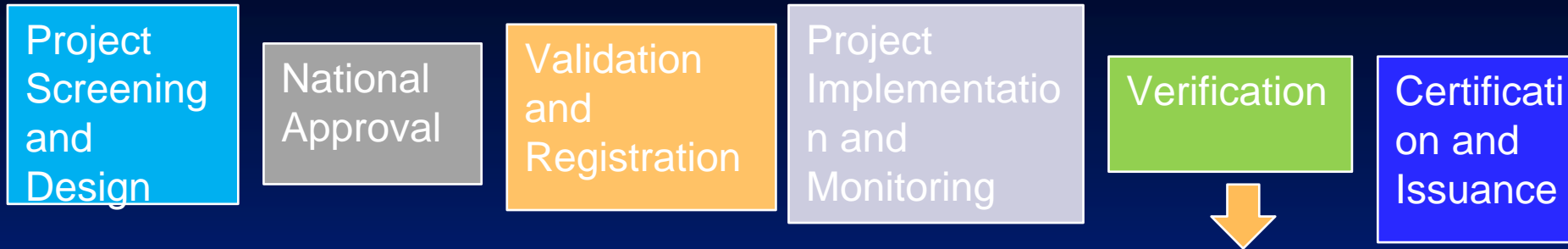
- Review (optional)
- Registration of CDM project

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)

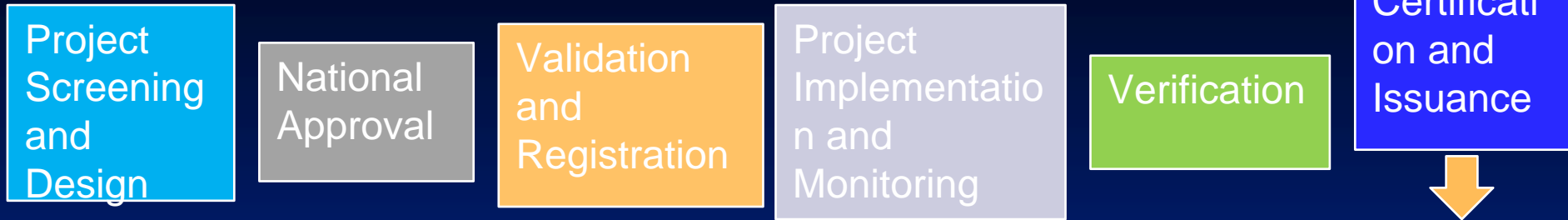
➤ Tasks of verification DOE

- 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 – Price of CERs

- 6–8 Euro for high quality post-2012 vintages
- 7.5-9 Euro for medium-risk forwards
- 9-9.5 Euro for low-risk forwards
- 10-11.5 Euro for registered projects

Source: CDM Highlights Carbon market news for the development community From GIZ Climate Protection Programme on behalf of BMZ: Issue no. 91, January 2011 (<http://www.gtz.de/en/themen/umwelt-infrastruktur/umweltpolitik/18324.htm>)

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**

Range of Transaction Costs

Project finding and assessment

Large scale Low: 3,000 - High: 29,000

Small scale Low: 3,000 - High: 21,000

PDD development

Large scale Low: 6,500 - High: 120,000

Small scale Low: 3,800 - High: 25,000

Approval by the Host and Investing Parties

Host and investing countries in most cases do not charge fees for granting approval. There may be actual expenses associated with obtaining an approval, e.g. travel costs in cases where DNAs require project participants to make a presentation.

Contract negotiation/legal costs

Large scale Low: 5,000 - High: 63,700

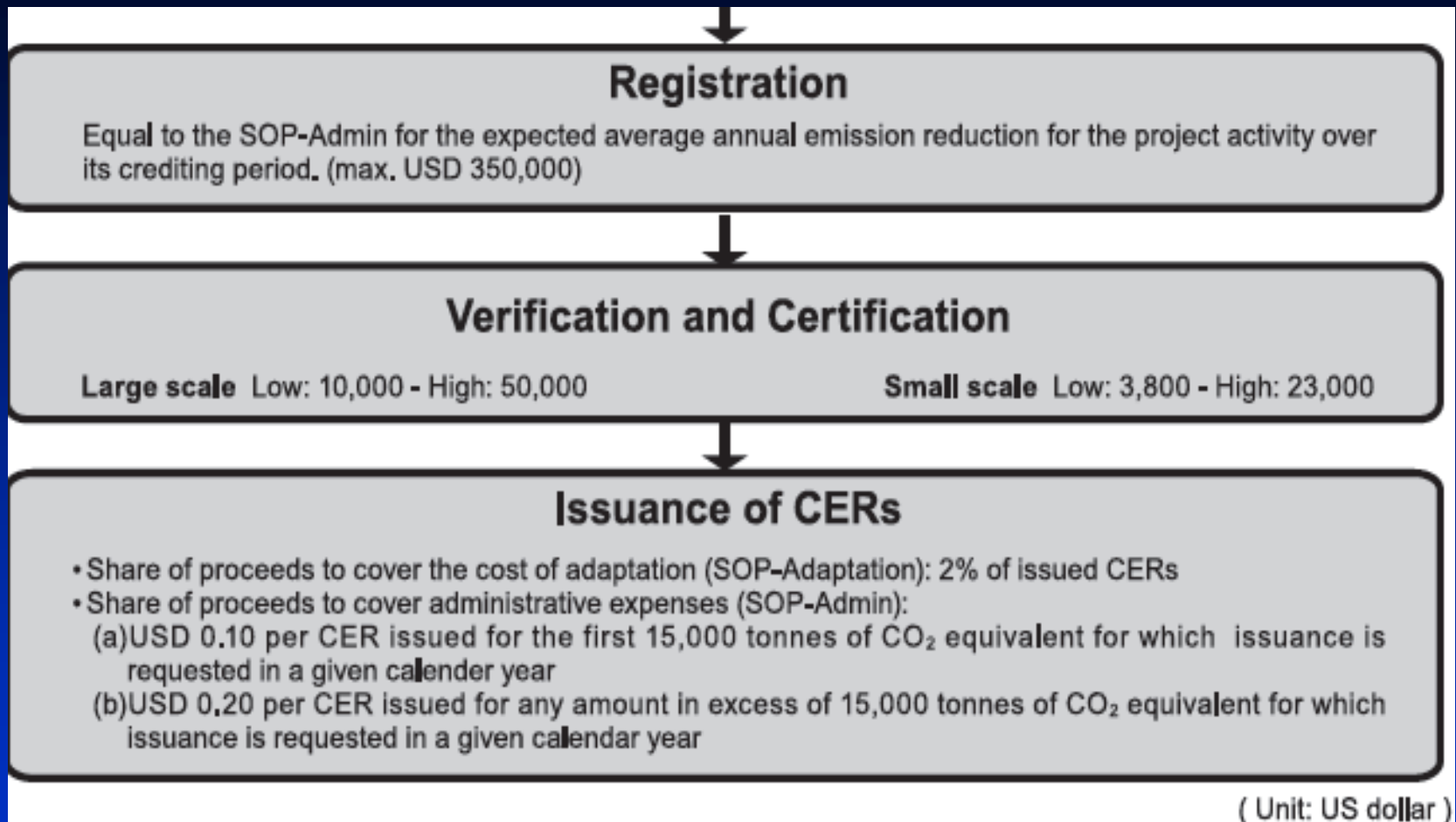
Small scale Low: 1,500 - High: 26,000

Validation

Large scale Low: 6,000 - High: 80,000

Small scale Low: 3,800 - High: 20,000

Range of Transaction Costs



Source: "CDM/JI Manual for project developers and policy makers." ed. Japan Ministry of the Environment (MOE). Tokyo.

THANK YOU