



Clean Development Mechanism (CDM) and Role for Financial Institutions

***Workshop for Financial Institutions and Insurance
companies on Financial Risk Management***

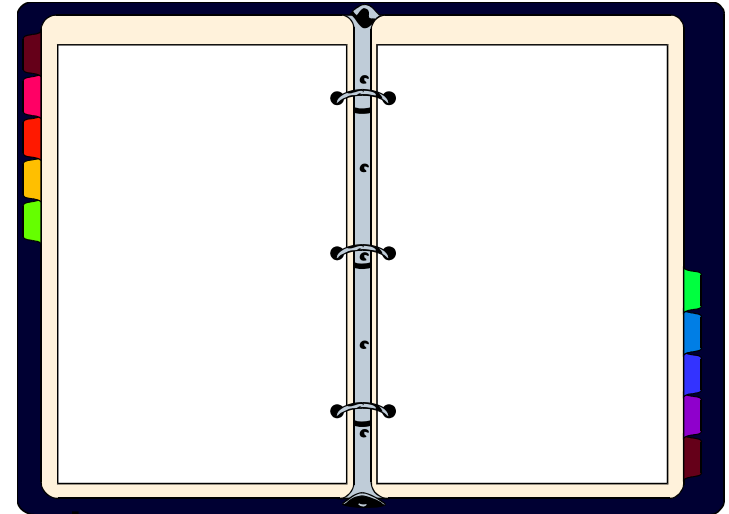
18 May 2007

**Nishant Bhardwaj
IT Power India**



Organisation

- Climate Change
- UNFCCC
- Kyoto Protocol and Mechanisms
- CDM – Process & Stakeholders
- Role for FIs in CDM





Climate Change and Emissions trading

Theory and Concept

Why Climate is Changing

Rapid Industrial Growth



Increased energy consumption



Increased CO₂ and other GHG emissions



Global Warming due to increased Concentration of GHG

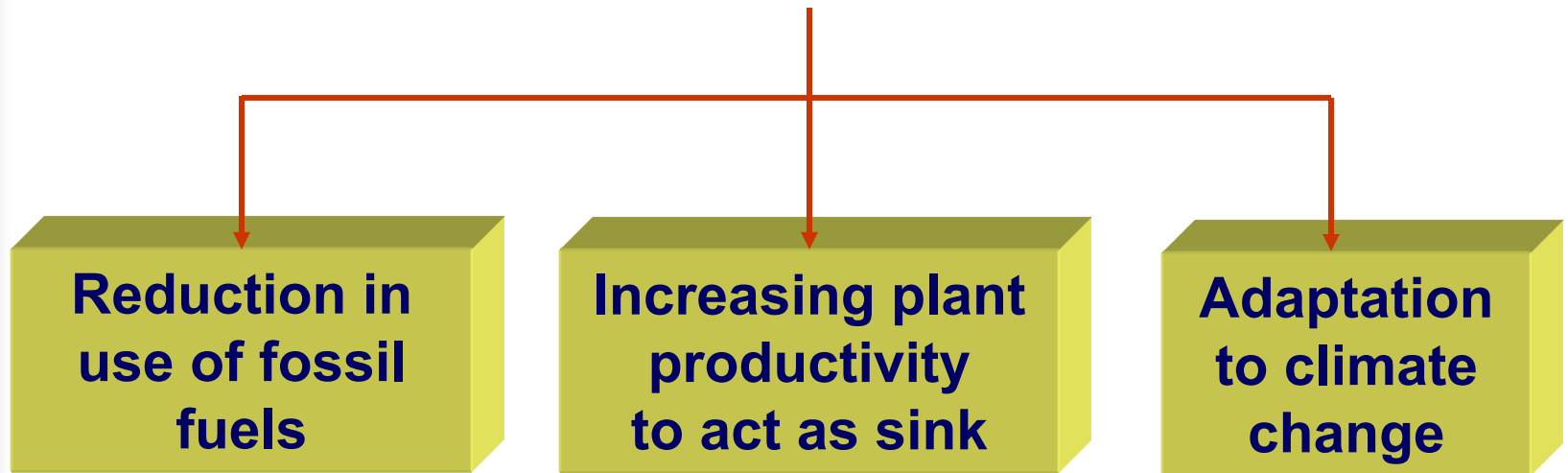


Sea level rise

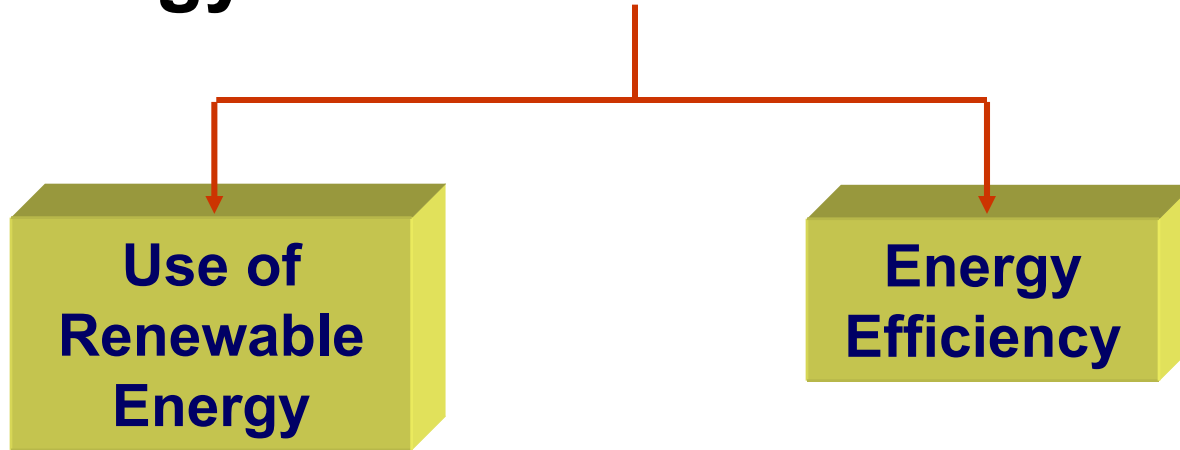
Changes in wind pattern and changes in precipitation

Changes in productivity

Possible Remedial Measures



Strategy for Reduction in Fossil Fuels



Basic Issues

- Capital intensive technologies
- Lack of financing mechanism
- Lack of quality control systems



United Nation Framework Convention on Climate Change



United Nation Framework Convention on Climate Change

- 165 nations signed the 1992 United Nations Framework Convention on Climate Change (UNFCCC) at Rio de Janeiro
- The Convention divides countries into two main groups Annex I , non-Annex I
- Annex I (OECD/ EITs) agreed to reduce their GHGs by 5.2 % below 1990 levels in 1ST commitment period 2008 – 2012

UNFCCC

cont...

- Convention hinges on three principles
 - Common but differentiated responsibility
 - Precautionary approach
 - Sustainable Economic Growth and Development
- Kyoto Protocol defines how to bring down emissions during COP 3 in 1997

Capital intensive nature of technology

Lack of indigenous financing options

Need to involve developed countries to reduce GHG emissions

Need for an inherent flexibility mechanism

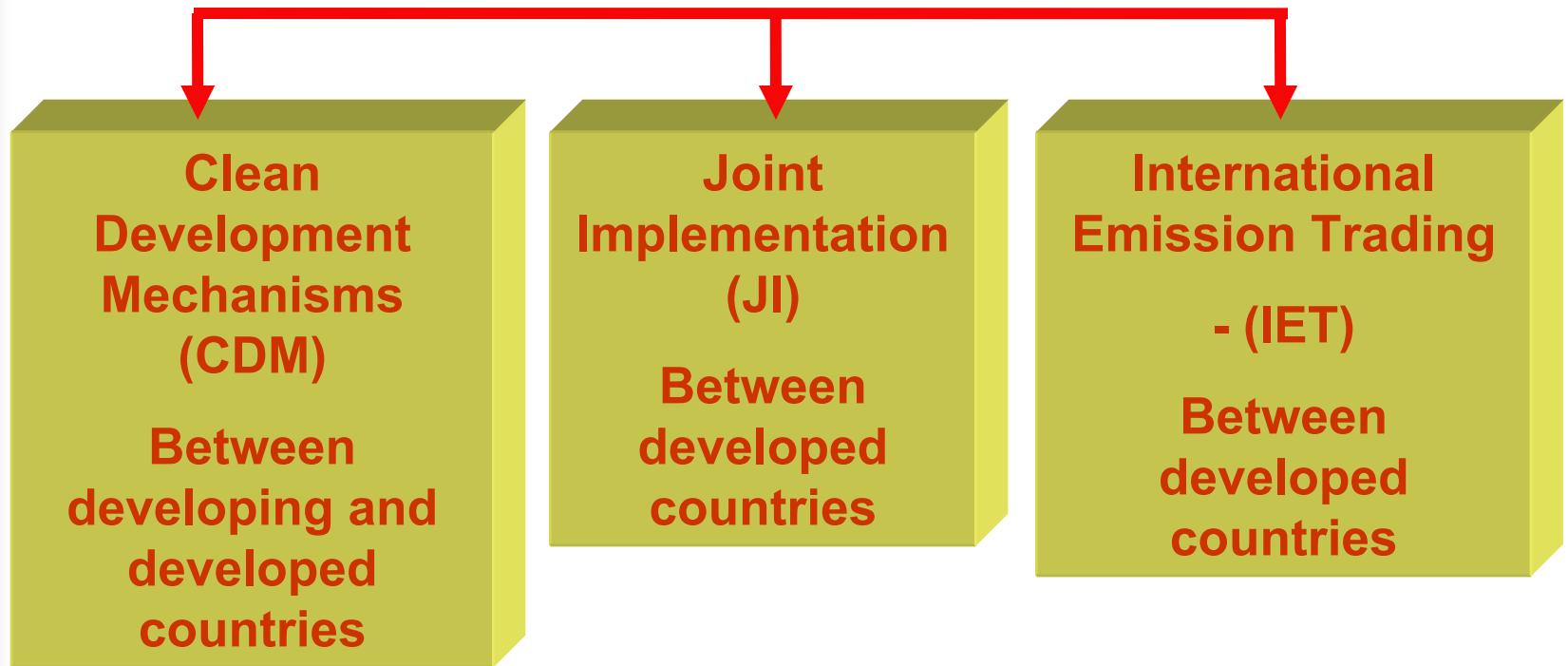
GHG reduction irrespective of place

Need for cost effective methods to reduce GHG emissions

Developed Country/ Region where reduction of GHG emission is very costly as already achieved high energy efficiency

Need to reduce GHG emission as their National targets under Kyoto protocol

Flexibility Mechanisms



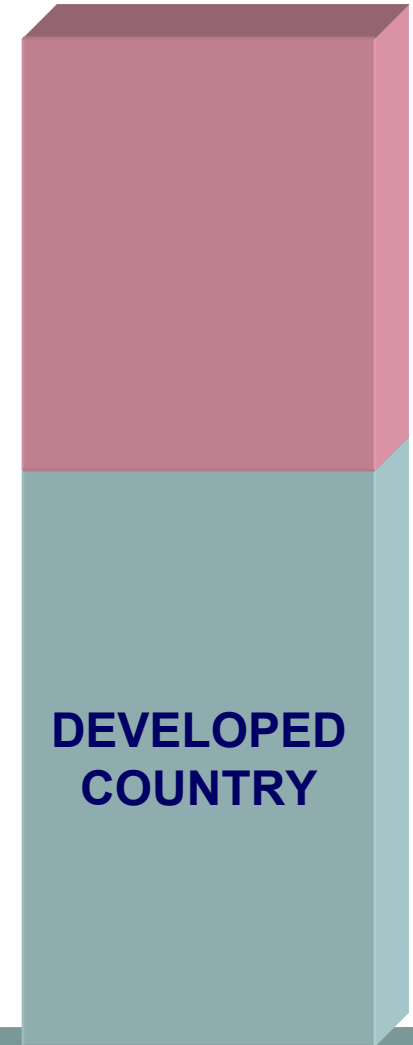
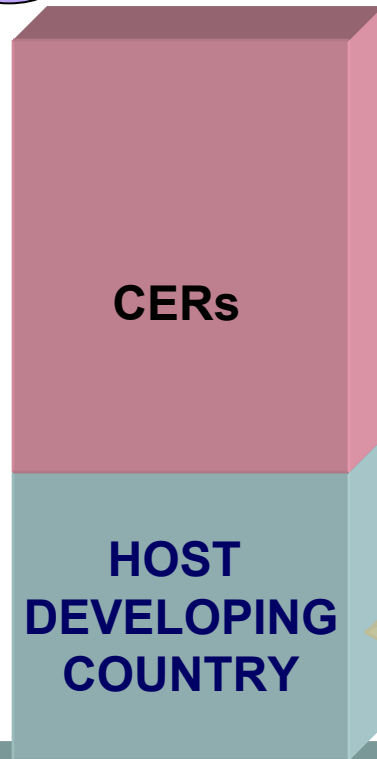


Clean Development Mechanism

Clean Development Mechanism

The system by which developed countries can reduce GHG emissions in developing countries instead of doing so domestically.

Total Reduction through CDM



**Technology transfer and Know-how,
Project Financing**

**Developed
Countries**

**Clean
Development
Mechanism**

**Developing
Countries**

Carbon Credits



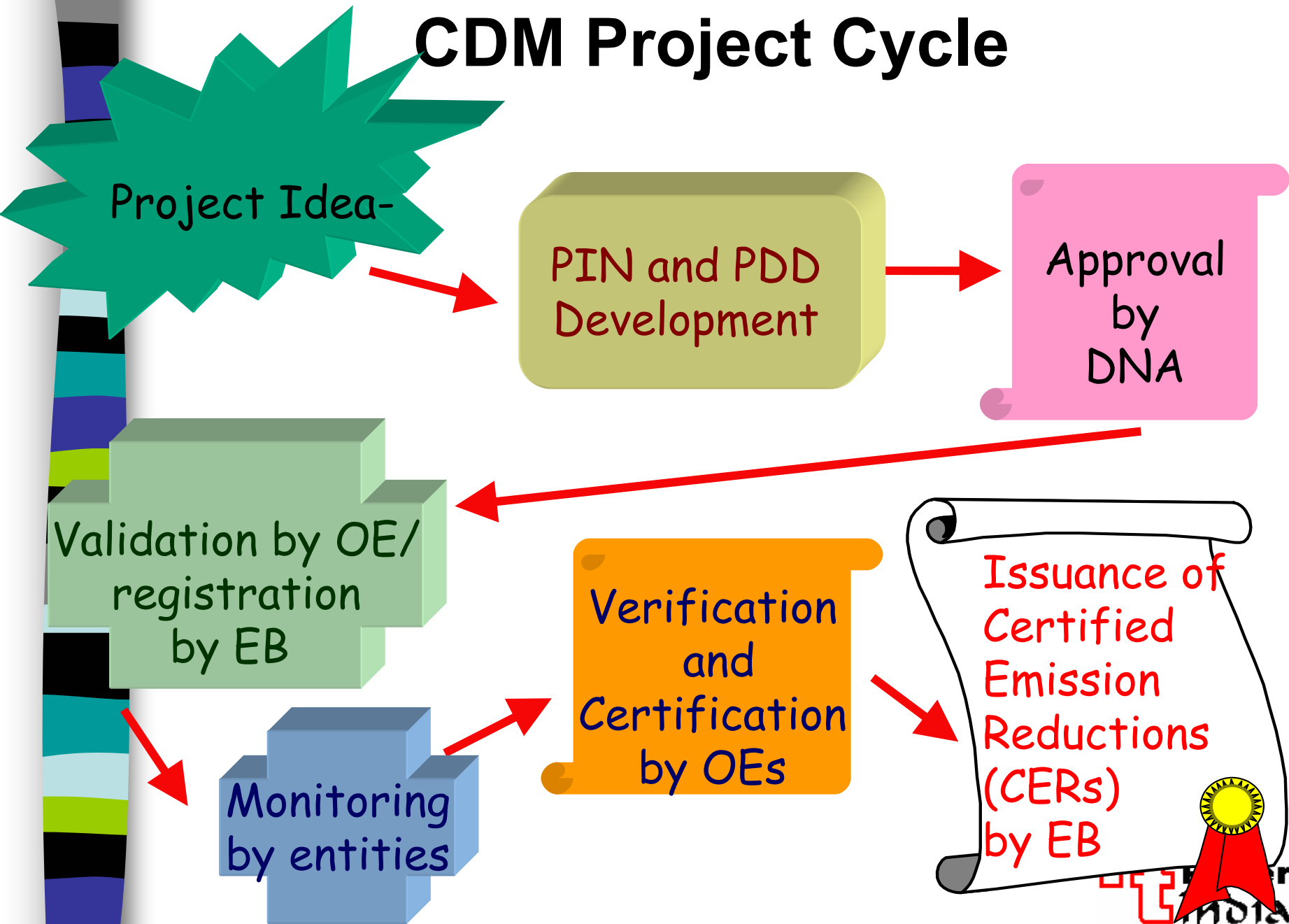
Types of projects which can be undertaken under CDM

- **Renewable energy**
- **Energy Efficiency**
 - **Waste Management**
 - **Industrial Processes**
 - **Switching to Alternate Fuels**
 - **Oil and gas**

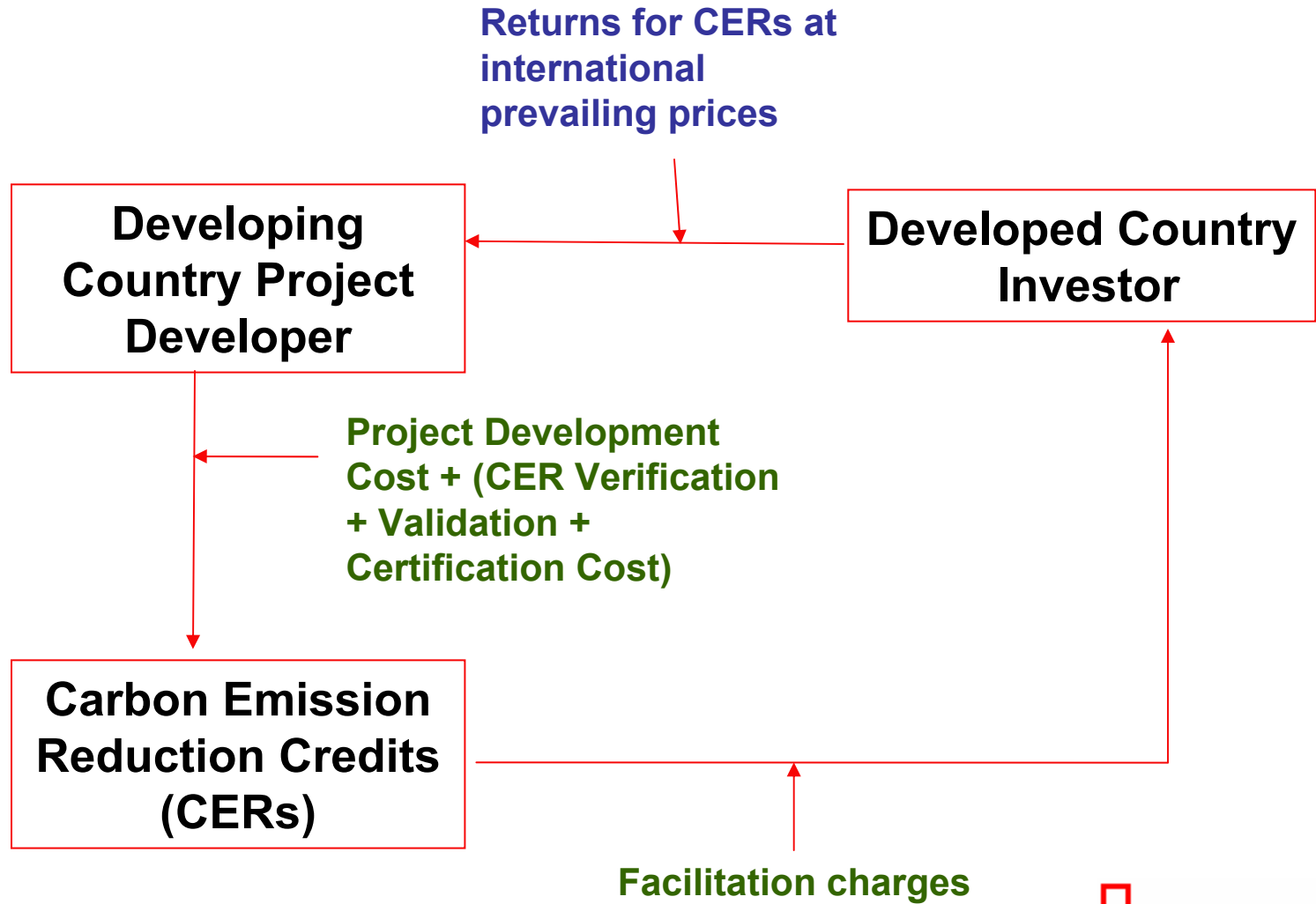
Institutional Framework for CDM

- ❑ Developing country- **Project Developer**
- ❑ Annex-1 country- **Buyer, Investor**
- ❑ Approval of project – **Designated National Authority**
- ❑ An institution which verifies the essential prerequisites for CDM projects- **Operational Entity (OE)**
- ❑ An Institution which certifies the emission reduction- **Operational Entity (OE)**
- ❑ An institution which issue CERs- **Executive Board (EB)**

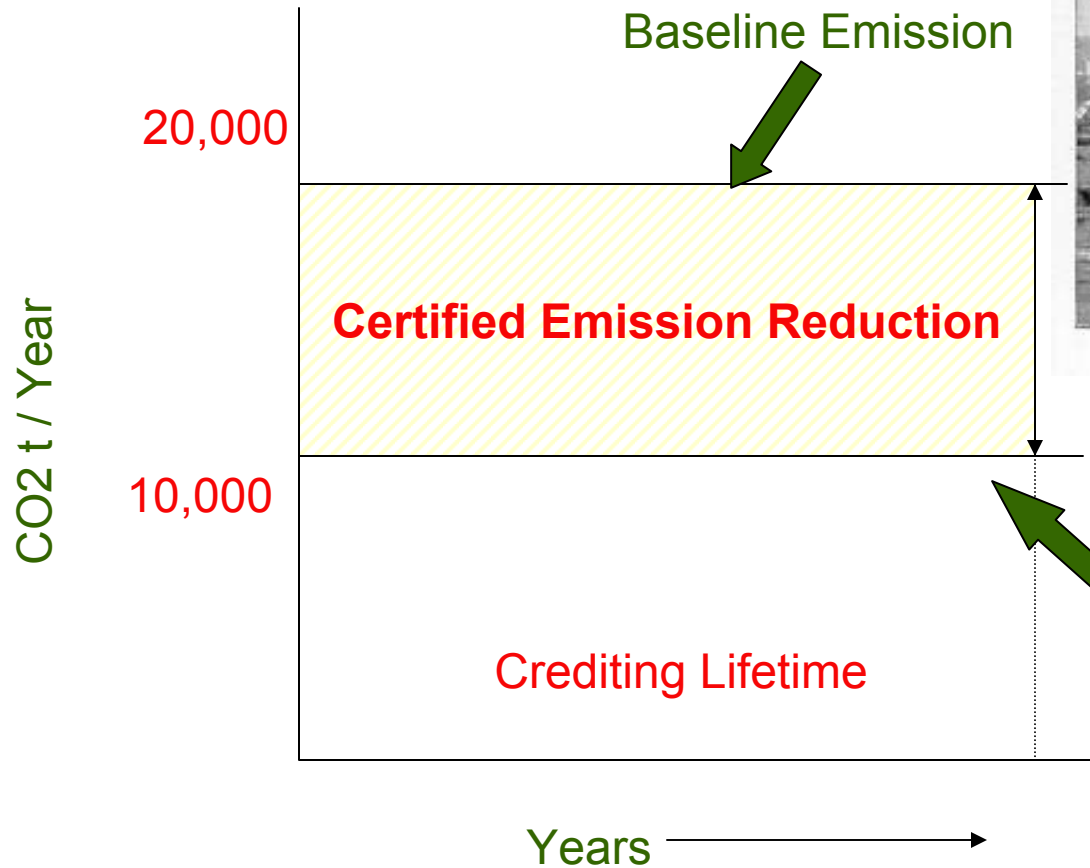
CDM Project Cycle



Cost Implication



Baseline / Issues in CDM



BOILER TANK CARS



Project Emissions

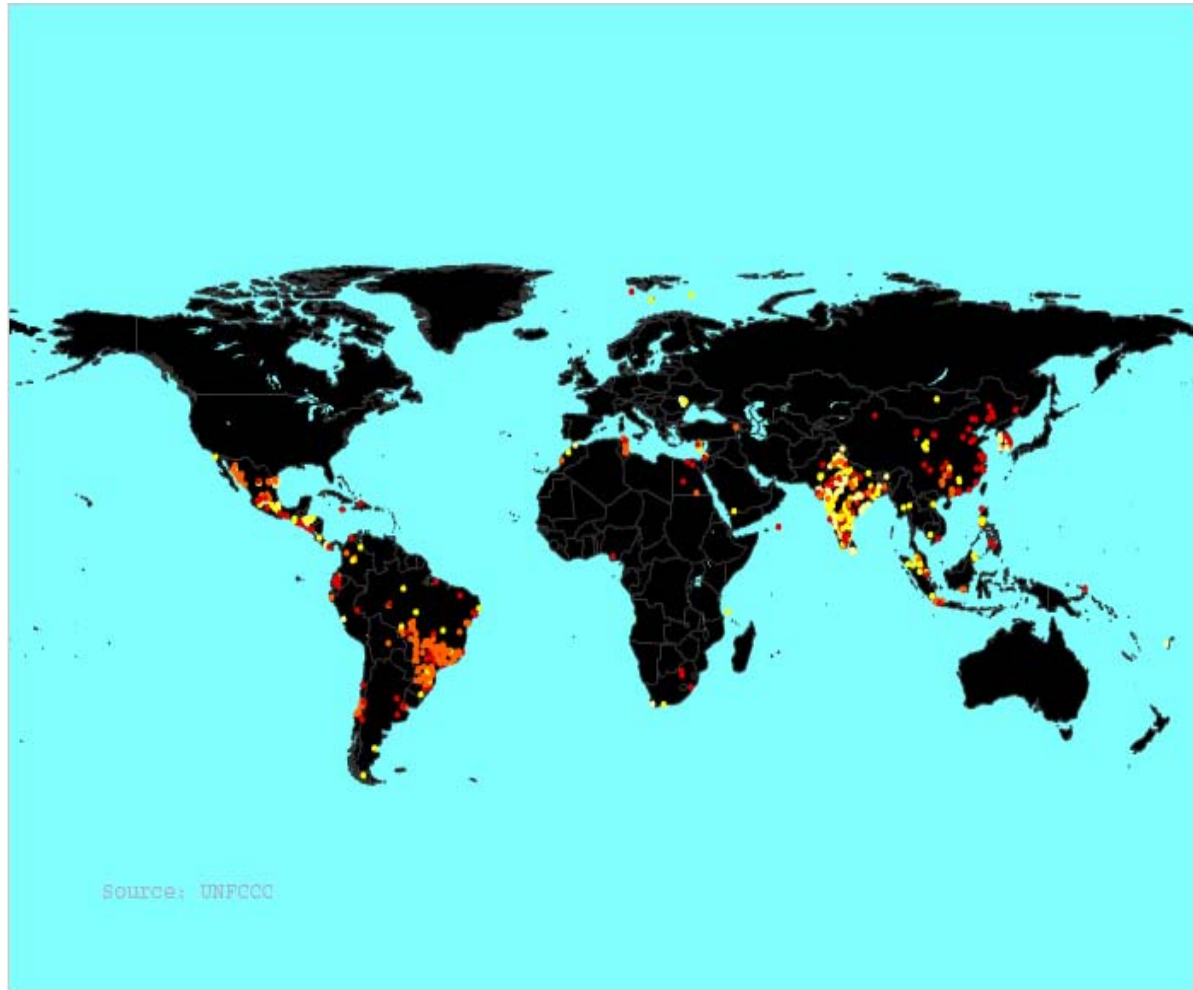
Additionality

- **Additionality - Refers to Project will not happen in absence of CDM.**
- **Environmental, technological, financial and investment additionality.**
- **Financial and investment additionality is the most controversial**



Market for CDM

Worldwide CDM Projects



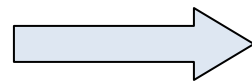
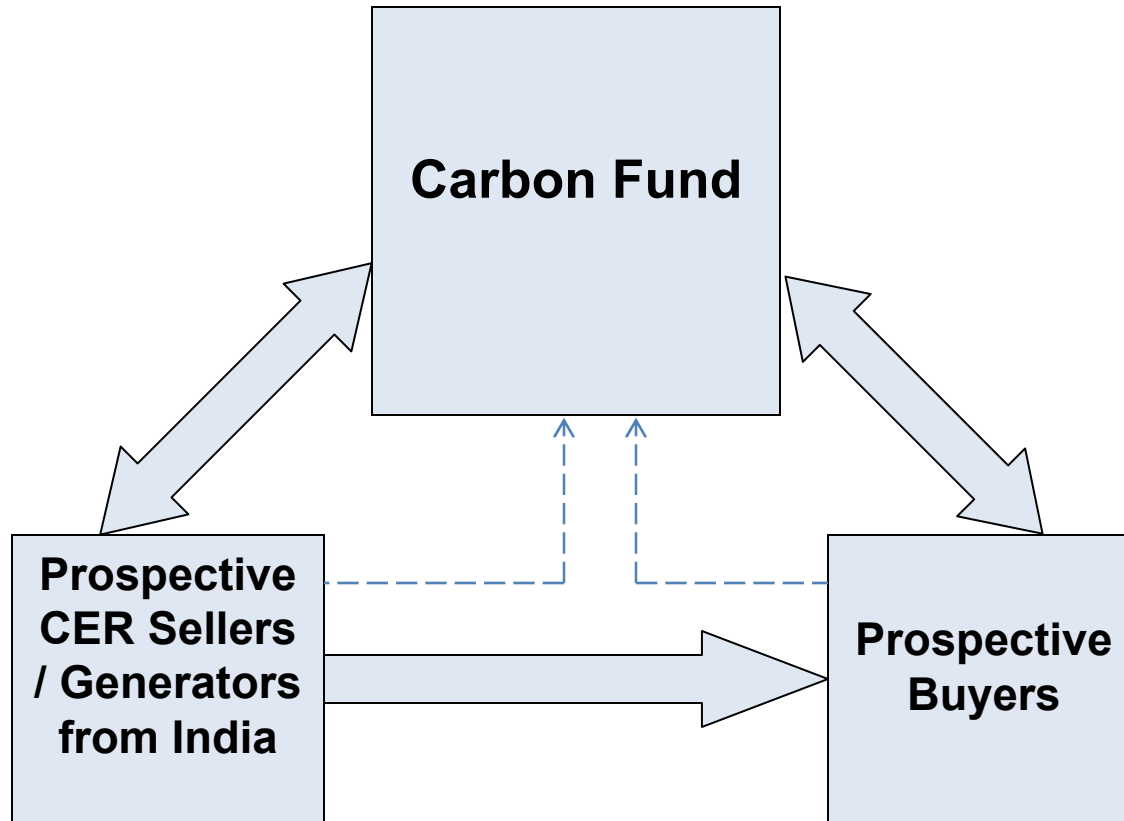
Status of India

- **The GoI is a signatory to the UNFCCC and ratified the Convention in November 1993**
- **The MoEF (Ministry of Environment and Forests) is the nodal ministry for coordinating the climate change policy**
- **GOI established Designated National Authority (DNA) known as National CDM Authority**

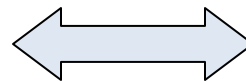


Role for Financial Institutions

Broker Model



Flow of CER's

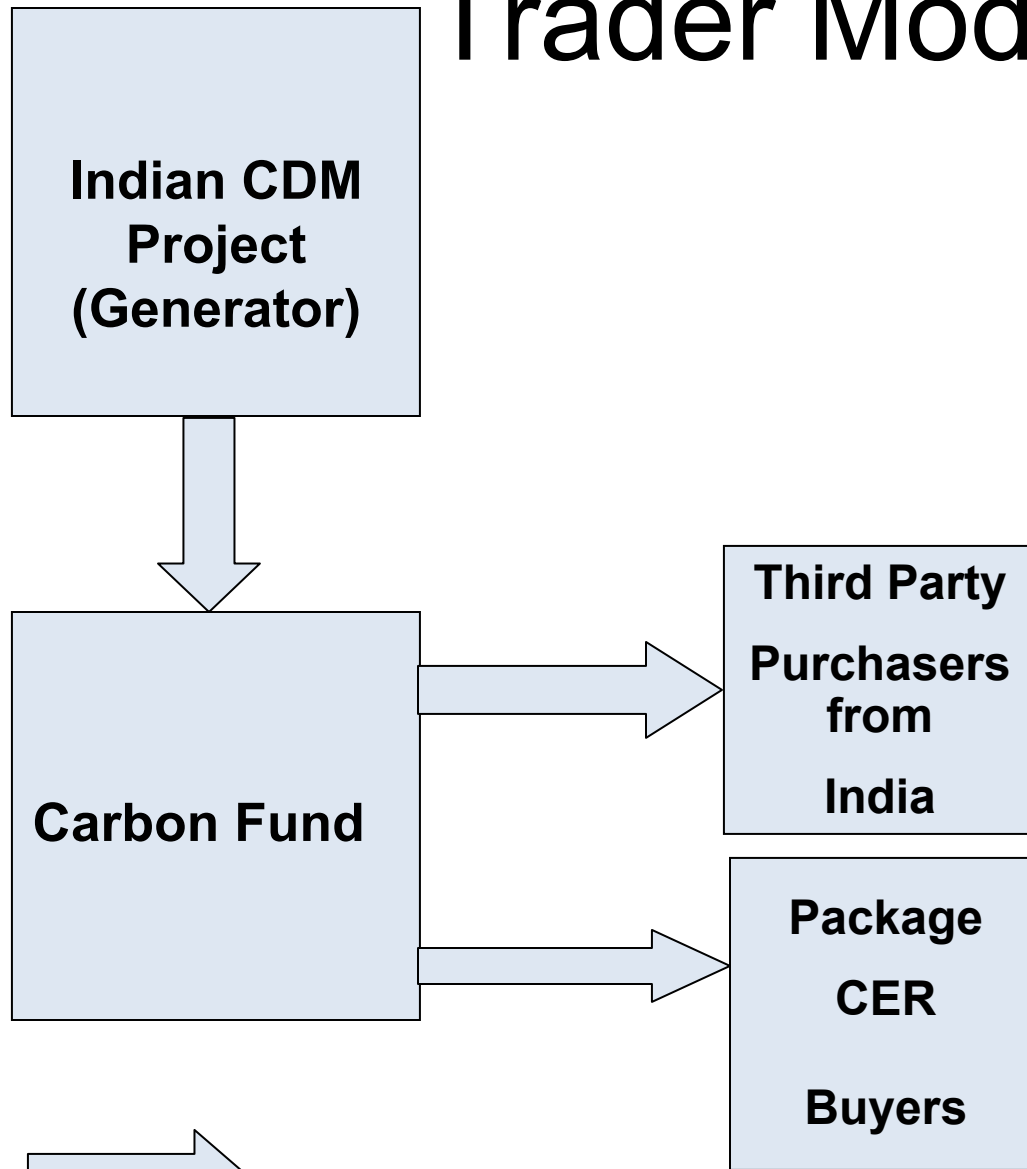


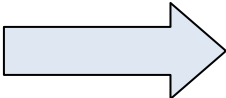
Flow of
Information



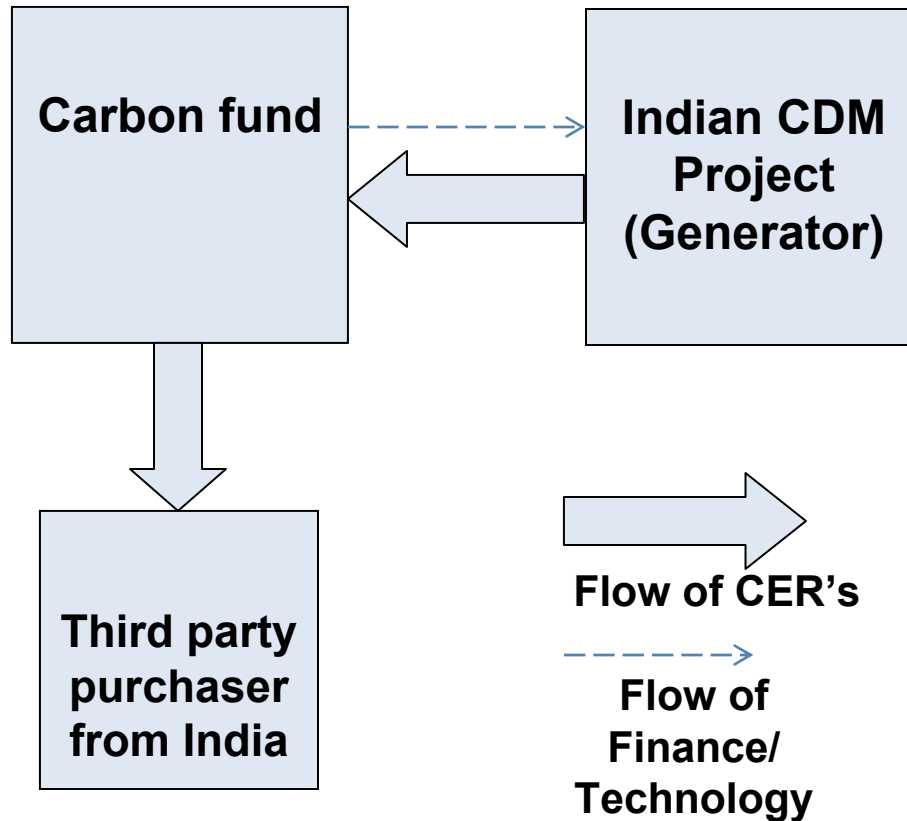
Flow of
Commis
sion

Trader Model



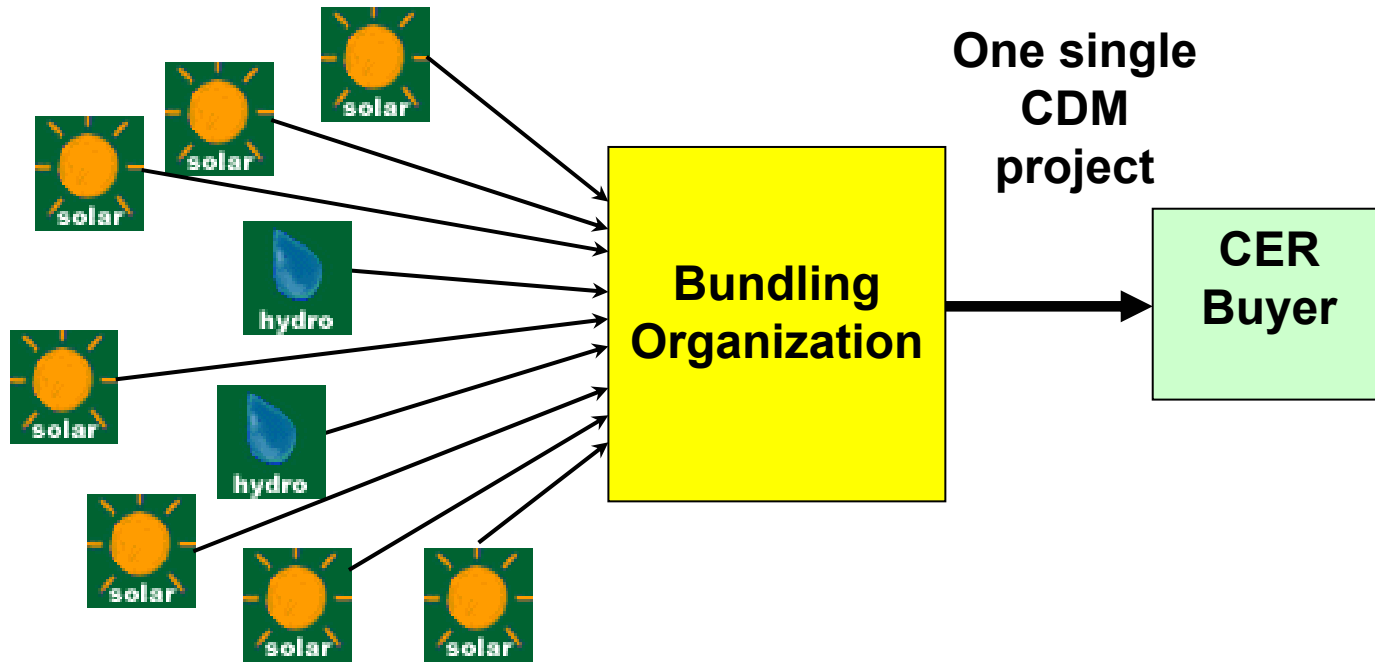

Flow of CER's

Primary Owner Model



Bundling Model

Multiple
greenhouse gas
reducing
projects



CDM Finance Project

- **Mainstreaming CDM opportunities in the Indian Finance and Insurance sector**
- **Address capacity Building Needs of FIs and Insurance Sector Organisation**
- **Development of Guidance Tools, Pre-feasibility models and Products for Indian CDM market**

Supported by

Global Opportunity Fund

Visit: www.cdmfinance.org



Thank You

