

CDM Developments in India & Challenges Ahead

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CDM in India

- India signed Kyoto Protocol in December, 1997 & ratified it in August, 2002
- Established DNA in December 2003
- Effective institutional framework with proactive DNA which issues Host Country Approval in 60 days after the project submission. The DNA has approved more CDM projects than all other host countries combined
- Very active participation of the private sector, both in terms of underlying projects and development of CDM documentation
- India has achieved a leading position among non-Annex-I countries with regards to CDM implementation. It has the highest rating of any CDM host country (Point Carbon)

Annex I Capacity Building Initiatives in India I

- German Technical Cooperation
 - **Detailed description on next slides**
- Canadian High Commission
 - Organised events like National Level Round Table, Manuals for implementing CDM in the country, Sponsored small scale PDD development
 - **Success moderate**
- Institute for Global Environmental Strategies, Japan
 - State Level Capacity Building on CDM Opportunities & Capacity Building for Energy Efficiency and CDM in Cement and Building Materials, SMEs
 - **General awareness improved in states**

Annex I Capacity Building Initiatives in India II

- United Nations Development Program
 - 15 state nodal agencies identified for capacity building exercise involving PCN & PDD preparation with hands on approach- **5 agencies trained, 1 Project Registered**
- Foreign Commonwealth Office, UK
 - Establishment of Center for Excellence for CDM implementation – **Just Started**
- Asian Development Bank
 - Target CDM opportunities available at urban local bodies, municipalities and rural sectors. Mainstream CDM opportunities in the domestic financial sector and help structure a dedicated fund for facilitating widespread implementation of CDM projects in India – **Yet to take off completely**

GTZ CDM - India activities

- Established GTZ CDM - India office in August 2003 in collaboration with Bureau of Energy Efficiency
- Build capacity of project consultants, and developers & other stakeholders (training for 50 consultants)
 - Financial support to to develop 10 PDDs in different sectors
- Several dedicated Capacity Building missions
 - Cement (Cement Manufacturing Association)
 - Power (National Thermal Power Corporation, Rural Electrification)
 - Petrochemical (Reliance India Limited & Indian Oil Company)
 - Pulp & Paper
- Support in development of baseline methodologies and PDDs
 - Renovation & Modernization of thermal power plants
 - Greenfield Supercritical Coal Power Plants
 - Bio-Diesel
- Data collection for power grid operating and build margin

GTZ CDM India/MoEF,GoI Technical Cell

Providing Technical Cooperation support to National CDM Authority, Ministry of Environment and Forest, Govt of India to help reduce transaction costs in early market development process (three-year technical cooperation)

Key work elements

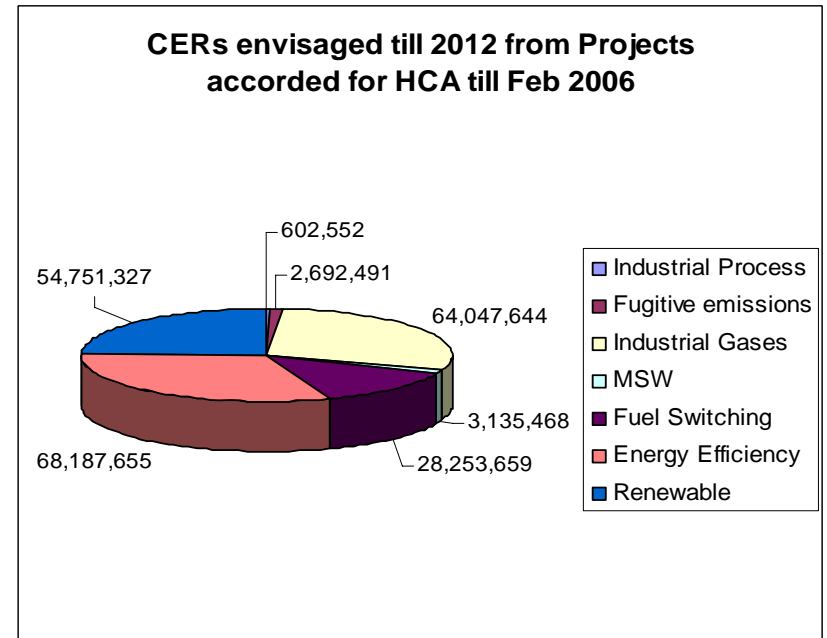
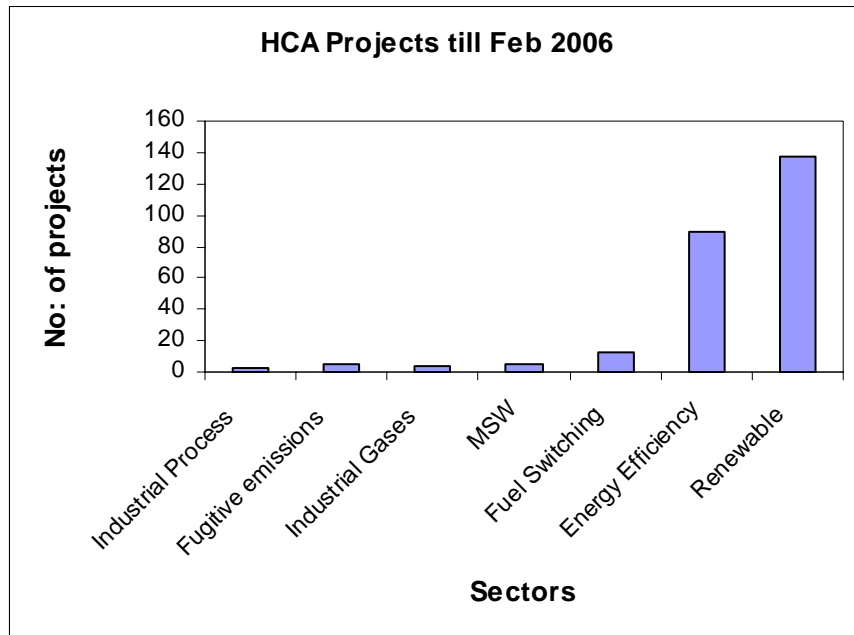
- Providing technical assistance to Indian DNA on its day- to -day activities (2 dedicated technical persons)
- Support in developing and maintaining internet web page of NCDMA
- Collect and process information on Indian pipeline of CDM projects and methodologies
- Promote Indian CDM projects internationally, at trade fairs etc

Success stories of GTZ CDM - India

Capacity Building activities

- Long term MOU with Cement Manufacturing Association for technical cooperation
- Reliance Industries established in-house CDM cell
 - 4 Projects got host country approval
 - 24 Potential Projects identified
 - Business Diversification
 - Management decision to explore CDM opportunities for all new future projects
- Central Electricity Authority instructed public sector electricity companies to examine the CDM potential in all new power projects

Status of approved Indian CDM Projects (Feb 05)

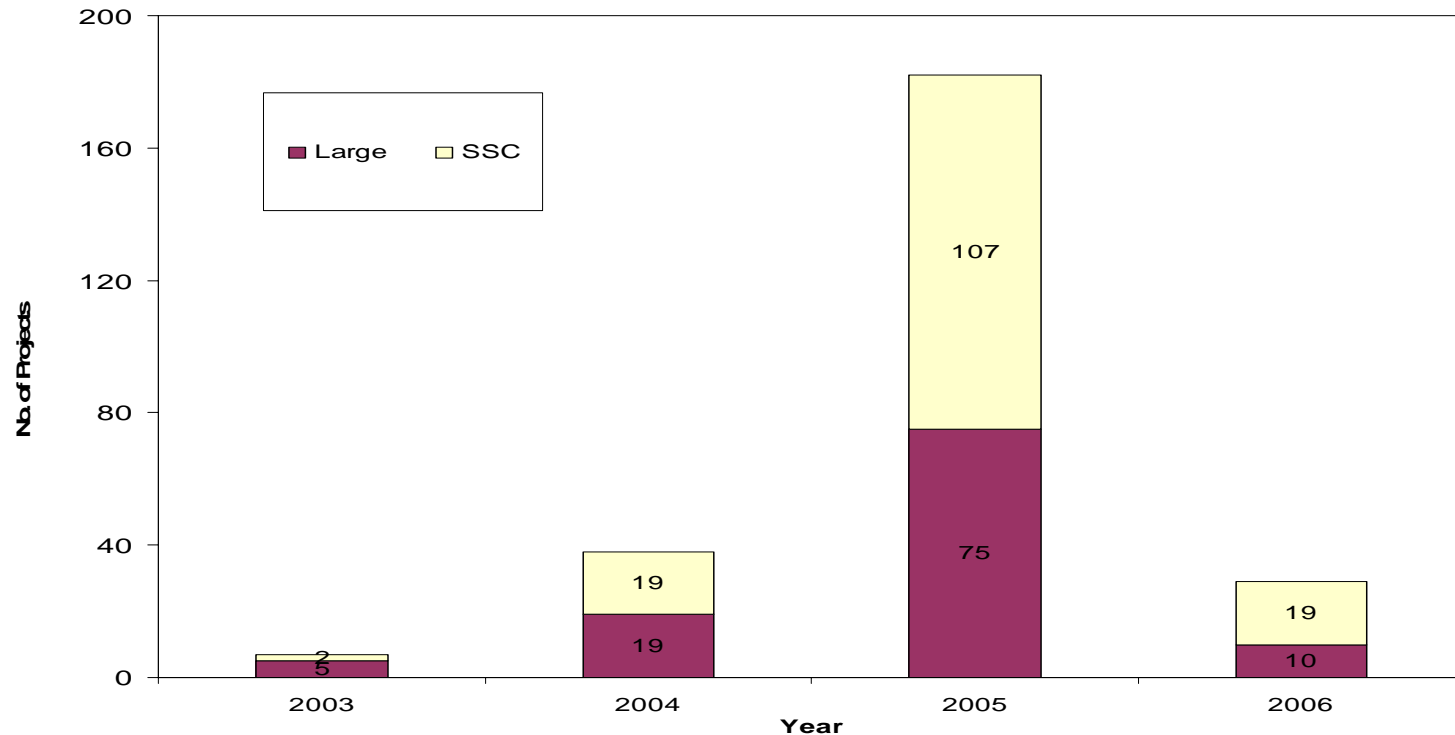


Indian CDM Projects- Summary

No: of Approved Projects	256
No: of Registered Projects	28
No: of Projects Requested for Registered	4
Projects under Validation Stage	200+
CERs Issued from Indian Projects	1,886,508

CDM Developments in India – Issue 1

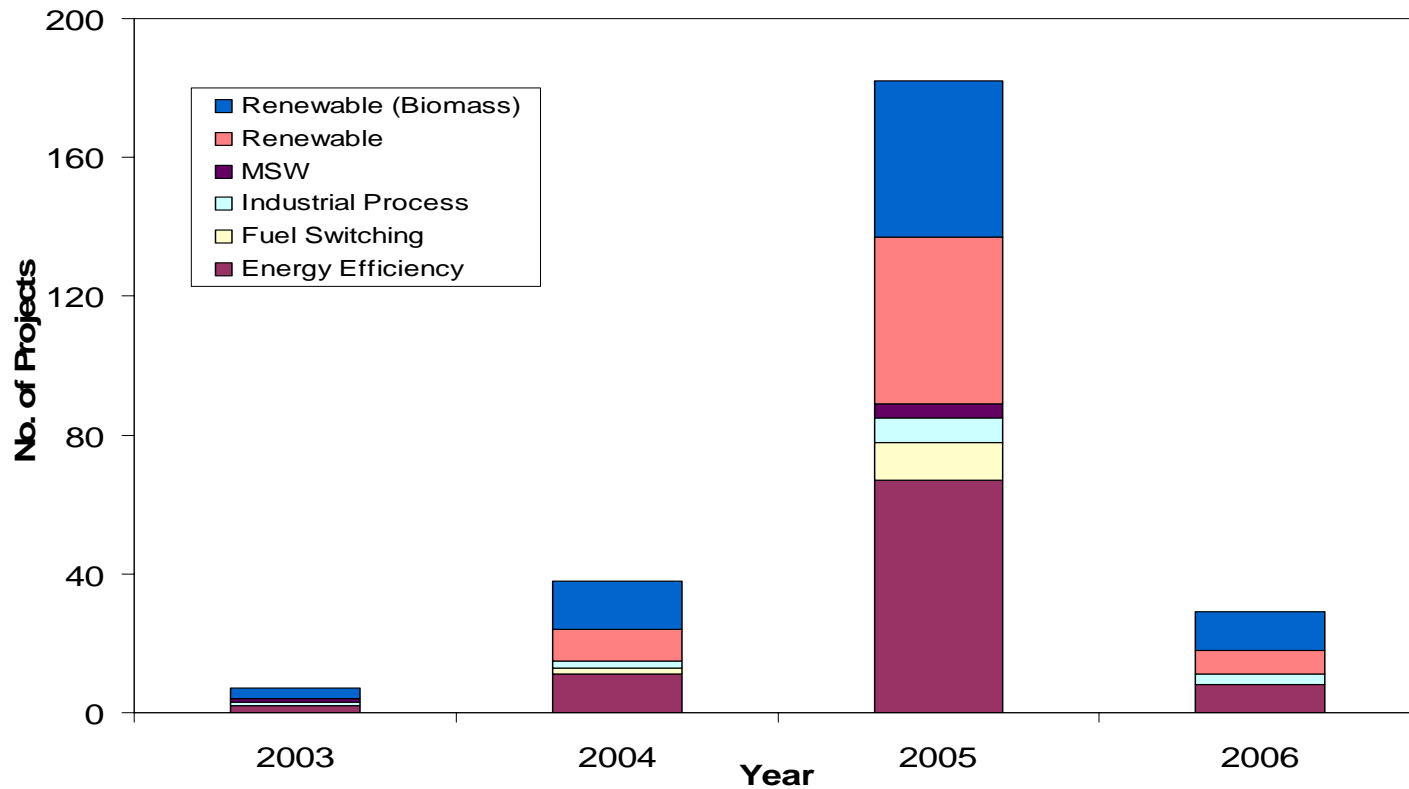
Projects growth year wise



CDM Developments in India – Issue 1

Projects Sectoral Developments

Year wise Sectoral Breakup of Host Approved Projects



CDM Developments in India – Issue 1

New Sectoral Developments

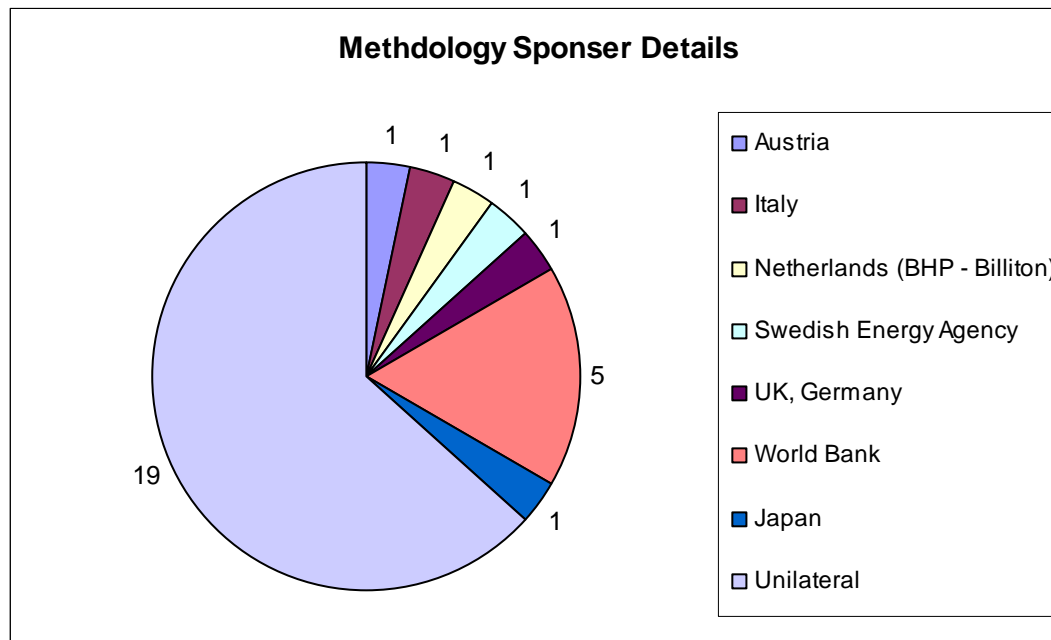
- Gas Flaring projects – 12 Projects
- Fugitive emissions from wastewater treatment plants – 5 Projects
- Projects from Petrochemical Sector - 14 Projects
- Railways – 6 Projects
- Transportation Projects - Fuel switch from Petro-diesel to Bio-fuel
- Forestry – Moving in Big Scale
(1000+ Acres identified for plantation)

CDM Developments in India – Issue 2

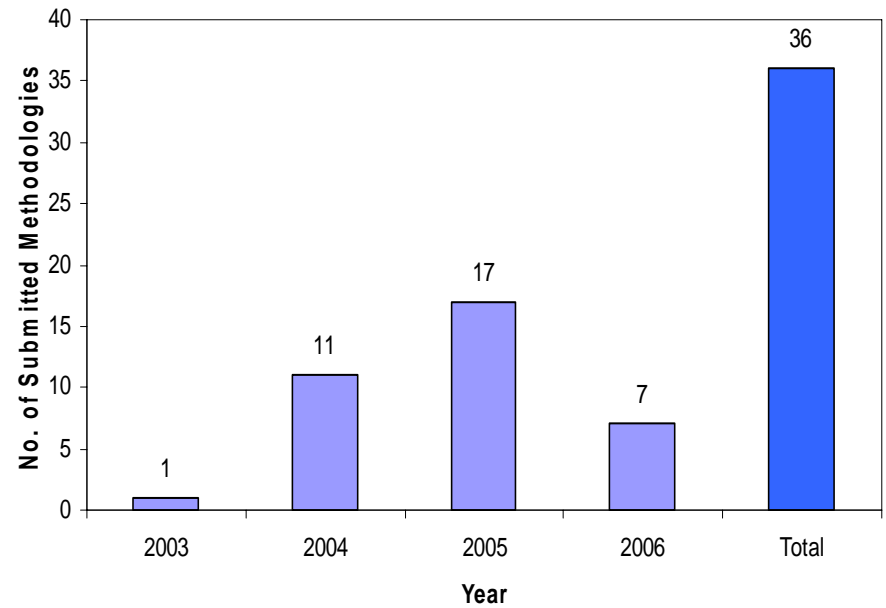
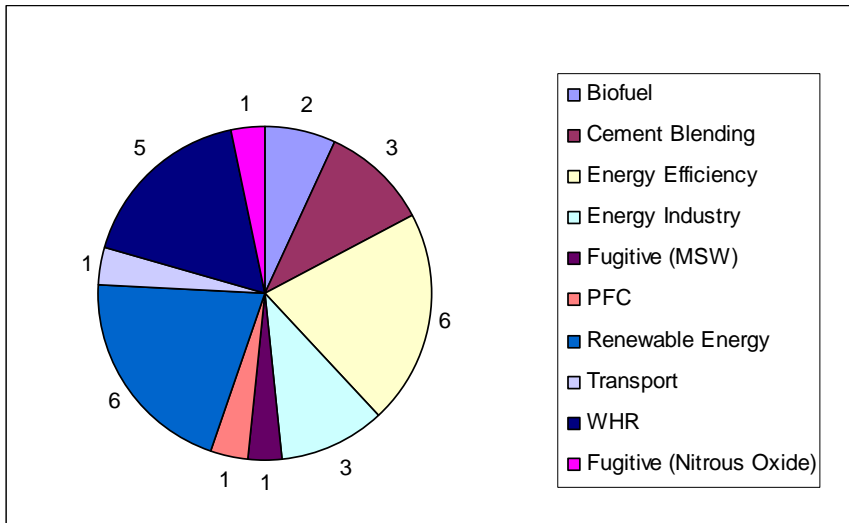
Technical Capacity Development

Methodologies

- No: of Methodologies submitted till date – 36
- Approved Methodologies – 3 + 2
- Made consolidated Methodologies – 2



Technical Capacity Development - Methodologies



CDM Human Resources

- No: of PDD Consultants – 20
(1 Multi National, 2 Franchisee & 17 Indian)
- Total Man power – 100+
- Full Fledged Established DOEs – 6 (All subsidiaries of companies based in Annex I)
- In House CDM Cell established in
 - Oil and Natural Gas Company
 - Reliance Industries Limited
 - Indian Railways

CDM Developments in India – Issue 3

Institutional developments

State	Policy Initiatives	State Level Cells	Year of Establishment
Andhra Pradesh	Nil	<i>Environment Protection Training and Research Institute (EPTRI)</i>	2003
West Bengal	Nil	<i>West Bengal Renewable Energy Development Agency (WBREDA)</i>	2003
Karnataka	Taxation of CERs	<i>EMPRI</i>	2003
Madhya Pradesh	Nil	<i>Madhya Pradesh Pollution Control Board (MPPCB)</i>	2003
Maharashtra	Nil	MEDA	2003
Punjab	Nil	PEDA	2004
Rajasthan	Nil	REDA	2004
Chattisgarh	Nil	CREDA	2005
Gujarat	Nil	Forest & Environment Department, Govt of Gujarat	2005
Himachal Pradesh	Nil	S & T Council	2005
<i>Meghalaya</i>		<i>SPCB / S&T</i>	<i>2005</i>
Orissa	Nil	OREDA	2005
Tamil Nadu	Nil	TEDA	2005
Utarranchal	Nil	Forest Training Academy	2005
Uttar Pradesh	Nil	ITRC	2006

Challenges and responses

Issue 1 – PDD Development

- **Problem:** Deficiencies in the Indian PDD development business leading to high risk of non-approval at DOE/ EB level
- **Response:** Inhouse capacity building of the private sector, public sectors, industry associations, co-operatives etc to lessen dependence on consultants
- Organizing Biannual, Certified CDM managers training programme with international assistance.

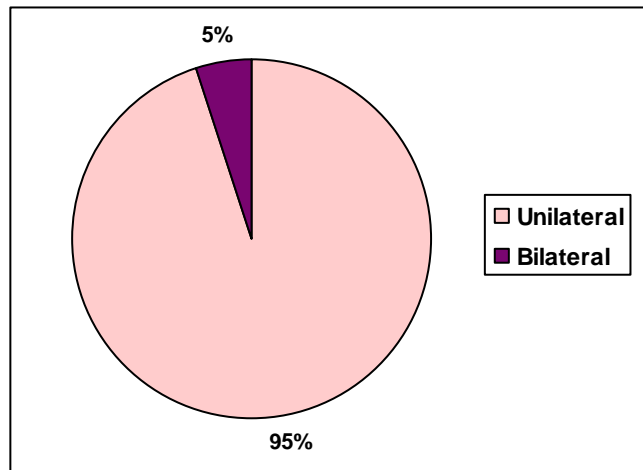
Issue 2 – Low Awareness Level

- **Problem:** Large public companies (GAIL, SAIL, IOCL, etc) are yet to take off with CDM business, due to lack of knowledge of CDM opportunities
- Potential in small and medium enterprises yet to be tapped
- **Response:** Disseminating high-level awareness to the management and working level

Issue 3 – Market facilitation

- **Problem:** Lack of transparency in CDM market
- Limited bilateral investment for project funding
- Lack of ERPAs (compared to China and Brazil)

- **Response:** Government's role critical as a facilitator with different Bilateral /multilateral organizations in organizing Carbon trade fairs or Expos
- To create a equal platform for small, medium and large sellers



Towards 2012 and beyond

- Continue to mobilize private sector participation in the CDM, **willing to respond positively to CDM criteria**
- Encourage CDM participation of large public sector emitters (e.g. power & transport sector) **possibly in sector CDM arrangements**
- Information infrastructure to support a functioning market – e.g. baselines for major sectors like Power, Cement, Iron and Steel
- Explore opportunities for sector trading schemes **(Sectoral & Programmatic CDM)**
- Integration of **GHG emissions reduction activities** in development assistance and national development programmes

Way Ahead

- Overall objective is to Link to United Nation's Millennium Development Goal -7 “Ensure Environmental Sustainability”
Integrate the principles of sustainable development into country policies and programmes

Target : Reverse loss of environmental resources

Thank you for your attention

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