



CDM Developments in India & Challenges Ahead

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CDM in India

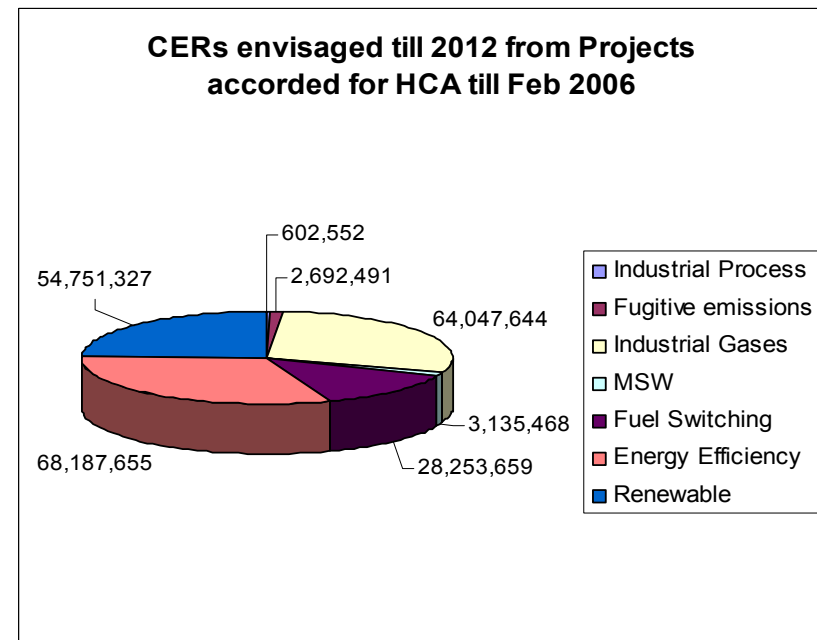
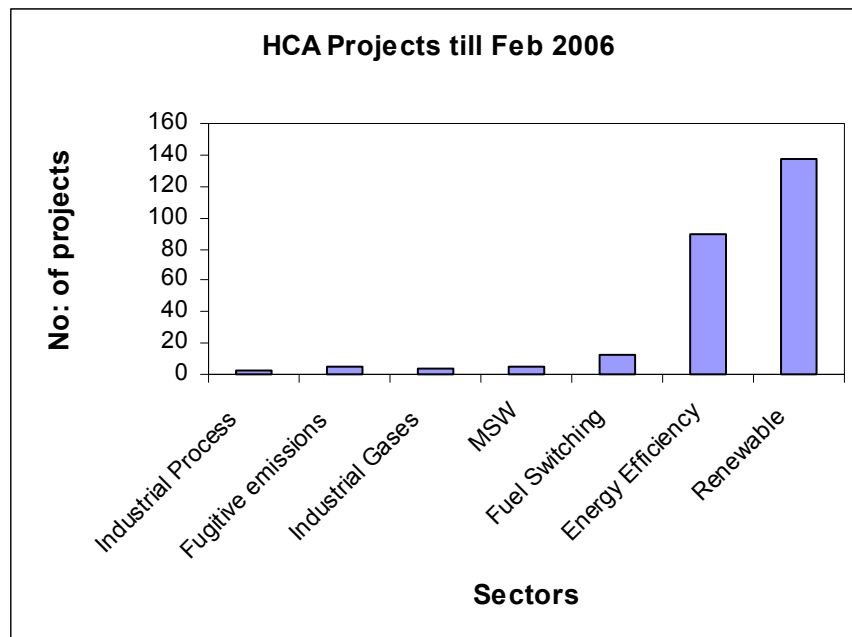
- India signed Kyoto Protocol in December, 1997 & ratified in August, 2002
- Established DNA in December 2003
- Effective institutional framework is established with proactive DNA which issues Host Country Approval in 40 days of the project submission
- Active participation of the private sector
- India has consolidated its position among non Annex-I Countries in CDM implementation



Progress of CDM - India capacity building activities

- MOU with Cement Manufacturing Association for technical cooperation
- Reliance Industries established in-house CDM cell
 - 4 Projects accorded for the host country approval (HCA)
 - 24 Potential Projects identified
 - Business Diversification
 - Management decision to explore CDM opportunities for all new future projects
- National tariff policy guidelines for CDM published
- Ministry of Power/Central Electricity Authority instructed PSUs to examine the CDM potential in all new POWER projects

Status of approved Indian CDM Projects (Feb 05)





Indian CDM Projects- Summary

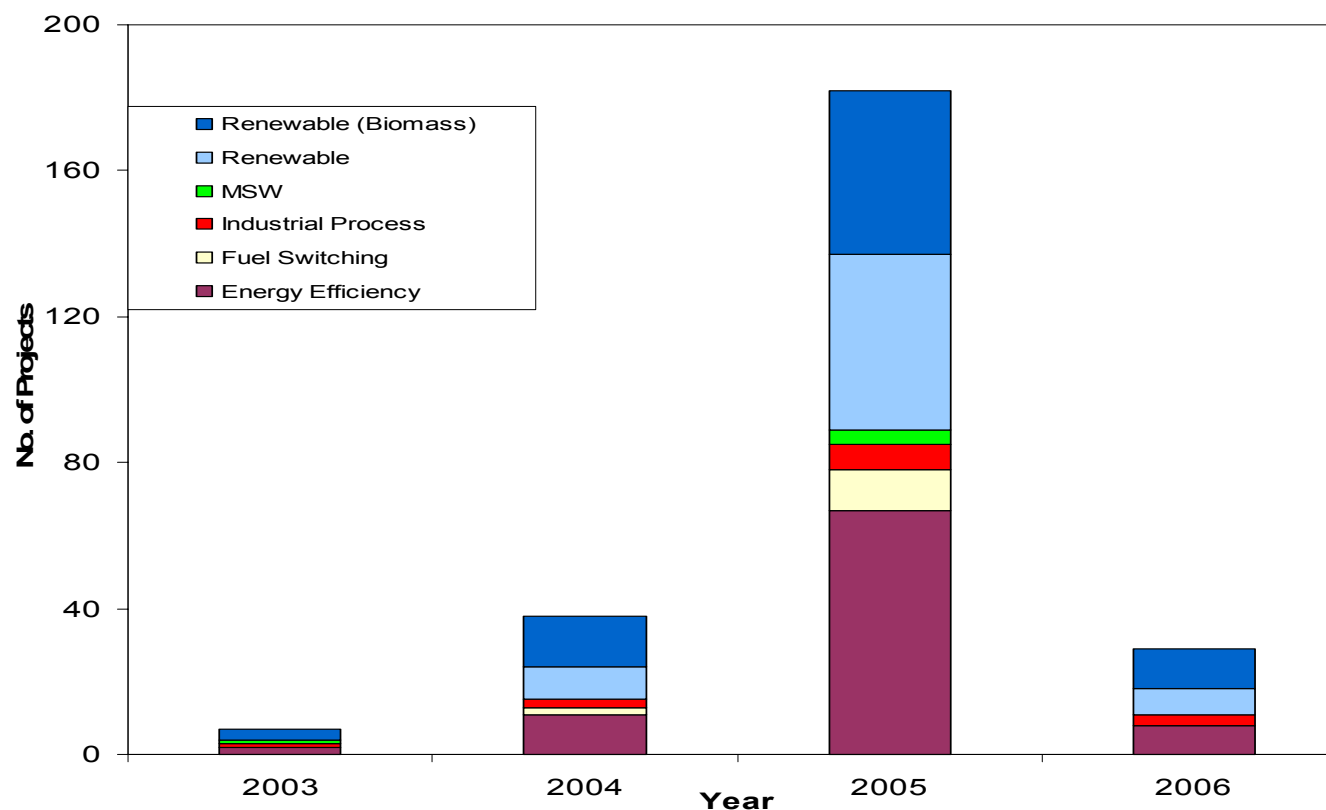
Data is dynamic and will be updated

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

CDM Developments in India – Issue 1

Approved Projects Sectoral Developments

Year wise Sectoral Breakup of Host Approved Projects





CDM Developments in India – Issue 1

New Sectoral Developments

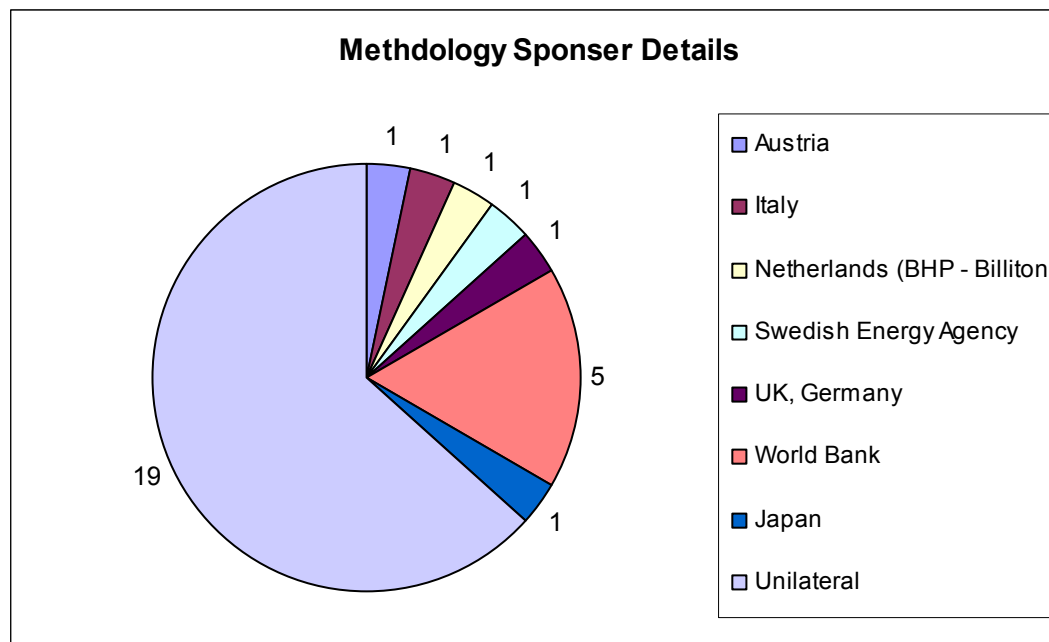
- Gas Flaring projects – 12 Projects
- Fugitive emissions from wastewater treatment plants – 5 Projects
- Projects from Petrochemical Sector - 14 Projects
- Railways – 6 Projects
- Transportation Projects - Fuel switch from Petro-diesel to Bio-fuel
- Forestry – Moving in Big Scale
(1000+ Acres identified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





Challenges

Issue 1 – PDD Development

- Need for better quality, transparent & comprehensive documentation of the projects for CDM approval
- Removal of deficiencies in the existing PDD development scenario to reduce the risk of approval processes at DOE/ EB level
- Encourage inhouse capacity building of larger corporates, PSUs, institutions, chamber of commerces, industry associations, Co-ops



Challenges

Issue 2 – Low Awareness Level

- PSU (GAIL, SAIL, IOCL, etc) are yet to take off with CDM business plan, lack of knowledge of CDM Opportunities
- SME and bundling potential yet to be tapped
- Bridging the gap at management and working level
- Programmatic CDM no awareness.



Challenges

Issue 3 – Challenges to integrate CDM Business with main business

- Requirement of in-house capacity building programmes
- Training and development of specialized human resource for CDM for reaching out to all Indian industry sectors
- Organizing biannual, certified CDM managers training programme with support of international assistance
- Integrating CDM into mandatory energy audits under the Energy Conservation Act of GoI



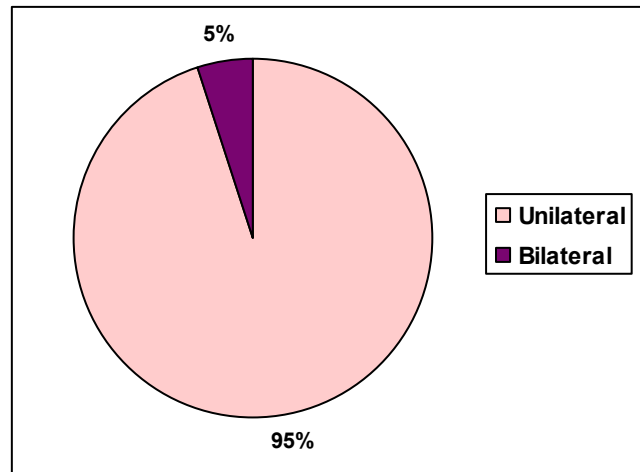
Challenges

Issue 4 – Policy Issue

- Government's role critical as a facilitator with different bilateral /multilateral organizations in organizing Carbon trade fairs or expos
- To bring transparency in buyer/seller market
- To create a equal platform for small, medium and large seller

Challenges

Issue 5 – Project Investment Issue



- Number of **Bilateral CDM projects** need to be increased with more foreign investment for project funding



Challenges

Issue 6 – Imbalance in CERs Demand & Supply

- To prevent opportunistic buying of cheap CERs from India
- More dedicated Annex I capacity building funds need to be allocated for creating awareness & disseminate information about CDM opportunities among industry sectors
- Carbon asset financing is not attractive any more as cheap bait for sourcing projects, since the number of informed Indian CDM developers increases fast



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



Thank you for your attention

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Further information



Capacity Building Initiatives in India

- World Bank
- German Technical Cooperation (GTZ)
- Canadian High Commission
- Institute for Global Environmental Strategies (IGES), Japan
- United Nations Development Program (UNDP)
- Foreign Commonwealth Office, UK
- Asian Development Bank (ADB)



GTZ CDM - India activities

- Established GTZ CDM - India office in August 2003 in collaboration with Bureau of Energy Efficiency and DNA
- Build capacity of project consultants, and developers & other stakeholders (training for over 200 consultants)
- Has provided financial support to project developers & training for consultants to develop 10 PDDs different sector
- Three capacity building missions
 - Cement (Cement Manufacturing Association)
 - Power (National Thermal Power Corporation, Rural Electrification)
 - Petrochemical (Reliance India Limited & Indian Oil Company)
 - Pulp & Paper
 - Iron & Steel



GTZ CDM - India activities

- Established Technical Cell in Climate Change Division, Ministry of Environment and Forest, Government of India
- Developed and maintaining the website of Indian National CDM Authority
- Development of sector specific PDD's and baselines
- Provides free advisory services & evaluation of new and innovative CDM project proposals



GTZ CDM India/MoEF, Government of India technical cell, key elements

Providing 3 year technical cooperation support to, National CDM Authority (DNA), Ministry of Environment and Forest, Govt of India to help reduce transaction costs in early market development process

Key work elements

- Providing technical assistance to Indian DNA on its day- to -day activities (3 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



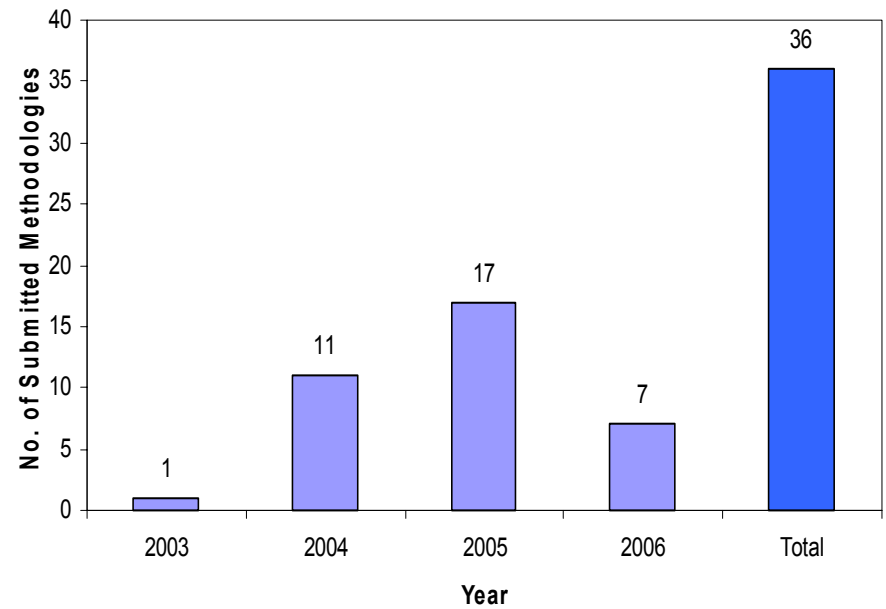
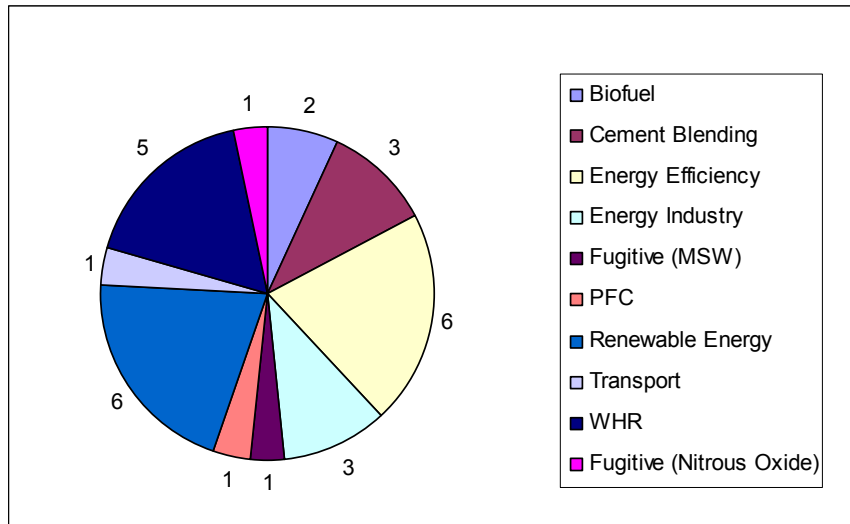
GTZ CDM - India Power Sector Capacity Building activities

- Exploring large scale CDM opportunities in
 - Thermal Power net heat rate improvement (NTPC)
 - Hydro Power in Himachal Pradesh, (BBMB)
 - Technical loss reduction in rural electrification
- Developing new CDM baseline & monitoring methodology
 - R&M projects of thermal power plants
 - Super Critical power plants
 - Bio-Diesel and non-edible vegetable oils
- Developing national baseline data of Indian power sector in cooperation with CEA
- Preparation of PDD`s & Methodologies for NTPC
- Awareness created for project developers to request CDM-EB for deviation from approved methodology

Other Capacity Building Programs

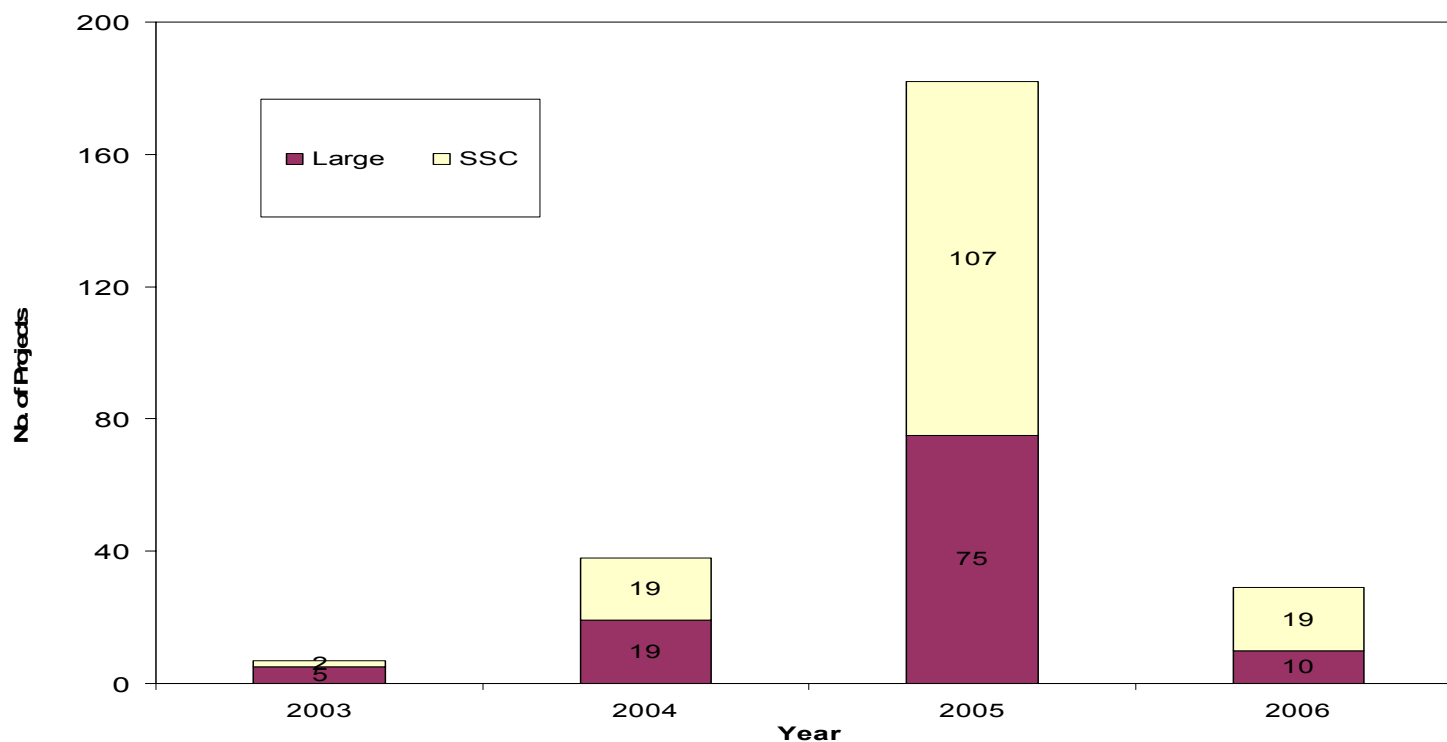
Development Agencies	Objective
CIDA	<ul style="list-style-type: none"> Organised events like National Level Round Table, Manuals for implementing CDM in the country, Sponsored SSC PDD development – Success Moderate
FCO, UK	<ul style="list-style-type: none"> Establishment of Center for Excellence for CDM implementation – Not Started
IGES	<ul style="list-style-type: none"> Fast Tracking CDM in States State Level Capacity Building on CDM Opportunities & Capacity Building for Energy Efficiency and CDM in Cement and Building Materials, SMEs – General Awareness Done in States
UNDP Phase 1	<ul style="list-style-type: none"> Contributing to mobilize and leverage additional CDM resources for rural development and poverty alleviation 5 State nodal agencies have been identified with the Ministry for capacity building exercise involves for PCN & PDD preparation with hands on approach – Minimum Objective Attained
UNDP Phase 2	<ul style="list-style-type: none"> 10 - State nodal agencies have been identified with the Ministry for capacity building exercise involves for PCN & PDD preparation with hands on approach – Improved Response
ADB	<ul style="list-style-type: none"> 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 Takeoff Completely

Technical Capacity Development - Methodologies



CDM Developments in India – Issue 1

Projects growth year wise



CDM Developments in India – Issue 4

Institutional developments: State focal points

State	Policy Initiatives	Name of Institution	Year of Establishment
Andhra Pradesh	Nil	<i>Environment Protection Training and Research Institute</i>	2003
West Bengal	Nil	<i>West Bengal Renewable Energy Development Agency</i>	2003
Karnataka	Taxation of CERs	<i>EMPRI</i>	2003
Madhya Pradesh	Nil	<i>Madhya Pradesh Pollution Control Board</i>	2003
Maharashtra	Nil	Maharashtra Energy Development Agency	2003
Punjab	Nil	Punjab Energy Development Agency	2004
Rajasthan	Nil	Rajasthan Energy Development Agency	2004
Chhattisgarh	Nil	Chhattisgarh Renewable Energy Development Agency	2005
Gujarat	Nil	Forest & Environment Department, Govt of Gujarat	2005
Himachal Pradesh	Nil	Science & Technology Council	2005
Meghalaya		State Pollution Control Board	2005
Orissa	Nil	Orissa Renewable Energy Development Agency	2005
Tamil Nadu	Nil	Tamil Nadu Energy Development Agency	2005
Utarranchal	Nil	Forest Training Academy	2005
Uttar Pradesh	Nil	Indian Toxicology Research Centre	2006



Way Ahead

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

UN target : Reverse loss of environmental resources