



# CDM Country Fact Sheet : India

IGES Market Mechanism Project / Climate Change Area  
Written by Jun Ichihara\*, updated by Nozomi Okubo

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## Current Status of CDM in India

### Basic Information (as of 5 November 2008)

Project Status	Number of Projects
CDM projects registered at CDM executive board	360
CDM projects at or after the validation stage	1,426

Source: IGES CDM Project Database <<http://www.iges.or.jp/jp/cdm/report.html#db>> and UNFCCC <<http://cdm.unfccc.int/index.html>>

### Basic Data on Registered CDM Projects (as of 5 November 2008)

	N. of Projects	Annual Emission Reduction (tCO <sub>2</sub> /y)	Total ERs by 2012 (tCO <sub>2</sub> )	Amount of Issued CERs (tCO <sub>2</sub> )
Biomass	120	4,200,190	29,912,628	4,319,268
Wind power	58	2,163,343	17,868,315	2,120,362
Waste gas/heat utilization	50	4,816,998	31,796,172	6,529,379
Hydro power	43	3,271,569	12,817,102	964,551
Energy efficiency	42	1,005,127	7,529,638	677,261
Cement	17	1,973,310	16,806,437	945,758
Fuel switch	11	4,168,479	21,129,990	794,329
Biogas	9	264,308	1,907,283	292,945
HFC reduction	4	10,174,879	80,751,326	28,814,392
Methane avoidance	3	368,893	1,282,448	0
Methane recovery & utilization	1	64,599	569,990	75,896
Transportation	1	41,160	236,811	0
Other renewable energies	1	562	3,936	0
<b>Total</b>	<b>360</b>	<b>32,513,417</b>	<b>222,612,076</b>	<b>45,534,141</b>

Source: IGES CDM Project Database <<http://www.iges.or.jp/jp/cdm/report.html#db>> and UNFCCC <<http://cdm.unfccc.int/index.html>>



1 Basic Data

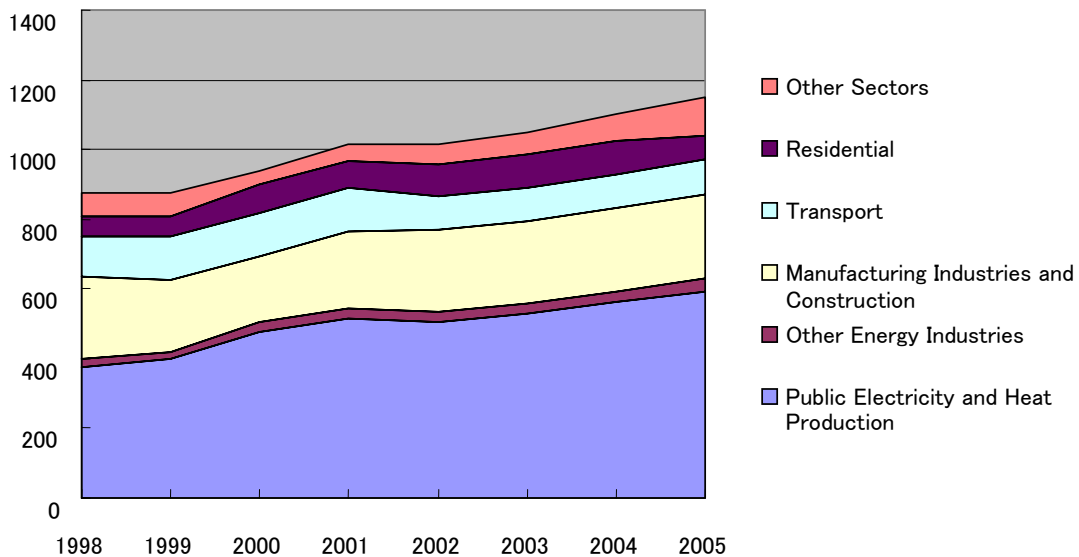
<b>Land area</b>	3.28 million square kilometers
<b>Total Population</b>	1.13 billion (2007, ADB)
<b>GDP</b>	1,100.7 billion US dollar (2007, IMF)
<b>GDP per capita</b>	941.6 US dollar* (2007, IMF)

Source: IMF, World Economic Outlook Database October 2008 <<http://www.imf.org/external/pubs/ft/weo/2008/02/weodata/index.aspx>>. ADB, Key Indicators of Developing Asian and Pacific Countries 2008 <[http://www.adb.org/Documents/Books/Key\\_Indicators/2008/pdf/Key-Indicators-2008.pdf](http://www.adb.org/Documents/Books/Key_Indicators/2008/pdf/Key-Indicators-2008.pdf)> Government of India <<http://india.gov.in/>>

Note: \* IMF estimate

2 Domestic GHG Emission Data

CO<sub>2</sub> Emissions by sector in India (Unit: million ton)



Source: OECD/IEA, CO<sub>2</sub> Emissions from fuel combustion.

Note: "Other sectors" include "autoproducers."

**GHG emissions by sector in India** (in 1994, unit: in million ton -CO<sub>2</sub> equivalent)

Sector	Total Emissions	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
1. Energy	743.820	679.470	60.816	3.534
2. Industrial Processes	102.710	99.878	0.042	2.790
3. Agriculture	344.485	0	297.675	46.810
4. Waste	23.233	0	21.063	2.170
5. Emissions or removals by LUCF	14.292	14.142	0.137	0.013
GHG total	1,228.540	793.490	379.733	55.317

Source: India's Initial National Communication to the United Nations Framework Convention on Climate Change UNFCCC. <[http://unfccc.int/national\\_reports/non-annex\\_i\\_natcom/items/2979.php](http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php)>

**3** *Ratification Status*

<b>Date of signature of Climate Change Convention</b>	10 June 1992
<b>Date of ratification of Climate Change Convention</b>	1 November 1993
<b>Date of signature of Kyoto Protocol</b>	—
<b>Date of ratification of Kyoto Protocol</b>	26 August 2002
<b>Establishment of DNA</b>	December 2003

Source: UNFCCC <<http://maindb.unfccc.int/public/country.pl?country=IN>>, IGES CDM Country Guide for India <<http://www.iges.or.jp/en/news/topic/0512cdm.html>>



## 4 DNA Structure

The Indian Designated National Authority is the National Clean Development Mechanism Authority (NCDMA), which consists of 6 ministries and agencies and the Planning Commission. The main role of the NCDMA is to evaluate and approve proposed projects and disseminate information related to all aspects of CDM.

NCDMA consists of:

- Chairperson
  - Secretary, Ministry of Environment and Forests
- Member
  - Foreign Secretary
  - Finance Secretary
  - Secretary, Department of Industrial Policy and Promotion
  - Secretary, Ministry of Non-conventional Energy Sources
  - Secretary, Ministry of Power
  - Secretary, Planning Commission
  - Joint Secretary, Climate Change, Ministry of Environment and Forests
- Member-Secretary
  - Director, Climate Change, Ministry of Environment and Forests

NCDMA has the powers:

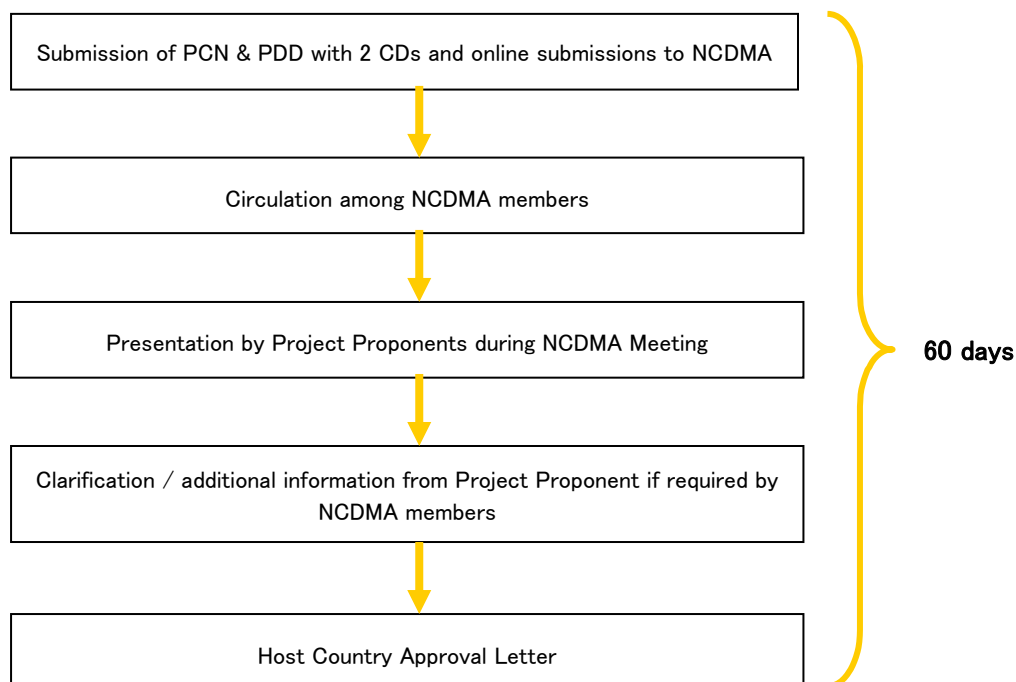
- to invite officials and experts from Government, financial institutions, consultancy organizations, non-governmental organizations, civil society, legal profession, industry and commerce, as it may deem necessary for technical and professional inputs and may co-opt other members depending upon need.
- to interact with concerned authorities, institutions, individual stakeholders for matters relating to CDM.
- to take up any environmental issues pertaining to CDM or Sustainable Development projects as may be referred to it by the Central Government, and
- to recommend guidelines to the Central Government for consideration of projects and principles to be followed for according host country approval.

## 5 DNA Approval Procedure

Approval procedures in India are straightforward and project developers could get host country approval letters within 60 days unless proposed projects have questions from NCDMA. An NCDMA meeting for project approval is held every month.

1. Project proponent is required to submit the following for application:
  - ❑ Cover letter signed by the project sponsors
  - ❑ Project Concept Note (PCN) (one submitted through online form and 20 hard copies)
  - ❑ Project Design Document (PDD) (one submitted through online form and 20 hard copies)
  - ❑ Two CDs containing PCN and PDD
  
2. Approval procedures in DNA are as follows
  - ❑ Application documents submitted by project proponent are circulated among NCDMA members.
  - ❑ If NCDMA members have any preliminary queries the same is asked from the project proponents.
  - ❑ The project proponent and his consultants are normally given 10-15 days notice to come to the Authority meeting and give a brief power point presentation regarding their CDM project proposals. NCDMA members mainly evaluate if the project meets the national sustainable development priorities and seek clarifications during the presentation.
  - ❑ In cases when it is requested by NCDMA members, the project proponent should prepare and submit some additional clarifications or information.
  - ❑ Once the members of the Authority are satisfied, the Host Country Approval is issued.

### Approval Procedures



Source: CDM India <[http://cdmindia.nic.in/host\\_approval\\_process.htm](http://cdmindia.nic.in/host_approval_process.htm)>



## 6 DNA Approval Criteria

### 1. Sustainable Development Indicators

- ❑ Social well being: The CDM project activity should lead to alleviation of poverty by generating additional employment, removal of social disparities and contribution to provision of basic amenities to people leading to improvement in quality of life of people.
- ❑ Economic well being: The CDM project activity should bring in additional investment consistent with the needs of the people.
- ❑ Environmental well being: This should include a discussion of impact of the project activity on resource sustainability and resource degradation, if any, due to proposed activity; bio-diversity friendliness; impact on human health; reduction of levels of pollution in general;
- ❑ Technological well being: The CDM project activity should lead to transfer of environmentally safe and sound technologies that are comparable to best practices in order to assist in upgradation of the technological base. The transfer of technology can be within the country as well from other developing countries also.

### 2. Eligibility (Additionality)

- ❑ Emission Additionality: The project should lead to real, measurable and long term GHG mitigation. The additional GHG reductions are to be calculated with reference to a baseline.
- ❑ Financial Additionality: The procurement of Certified Emission Reduction (CERs) should not be from Official Development Assistance (ODA)

### 3. Baselines

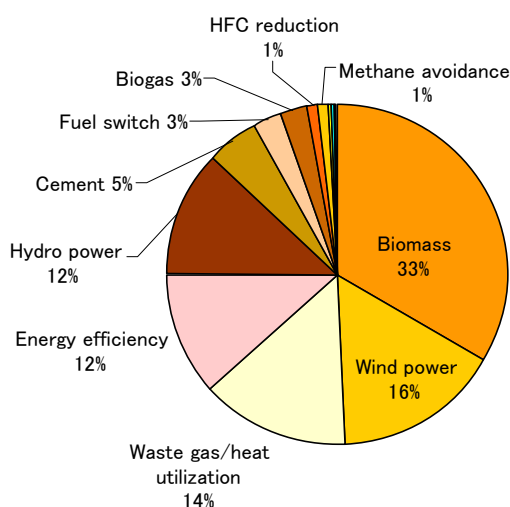
- ❑ Baselines should be precise, transparent, comparable and workable;
- ❑ Baselines should avoid overestimation;
- ❑ The methodology for the determination of baselines should be homogeneous and reliable;
- ❑ Potential errors should be indicated;
- ❑ System boundaries of baselines should be established;
- ❑ Interval between updates of baselines should be clearly described;
- ❑ Role of externalities should be brought out (social, economic and environmental);
- ❑ Baselines should include historic emission data-sets wherever available;
- ❑ Lifetime of project cycle should be clearly mentioned;

Source: CDM India <[http://cdmindia.nic.in/host\\_approval\\_criteria.htm/](http://cdmindia.nic.in/host_approval_criteria.htm/)>

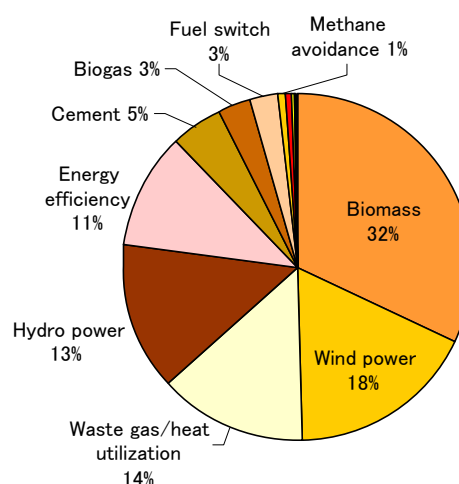
## 7 CDM Project Information

1. The number of CDM projects registered at the CDM executive board as of 5 November 2008: **360** projects
2. Type of registered CDM projects in India (Below graph)
3. The number of registered unilateral CDM projects as of 5 November 2008: **298** projects
4. The number of registered multilateral CDM projects as of 5 November 2008: **62** projects
5. Type of registered unilateral CDM projects in India (Below graph)

**Type of registered CDM projects in India**  
(as of 5 November 2008)



**Type of registered unilateral CDM projects in India**  
(as of 5 November 2008)



Source: IGES CDM Project Database <<http://www.iges.or.jp/jp/cdm/report.html#db>>, UNFCCC <<http://cdm.unfccc.int/index.html>>

## 8 Relevant Information

### India's Regional Grid Emissions Factors 2007-08

Regional Grid	Covered Region	OM* (t-CO <sub>2</sub> /MWh)	BM* (t-CO <sub>2</sub> /MWh)
Integrated Northern, Eastern, Western, and North-Eastern regional grid (NEWNE)	Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Orissa, West Bengal, Sikkim, Andaman-Nicobar, Chhattisgarh, Gujarat, Daman & Diu, Dadar & Nagar Haveli, Madhya Pradesh, Maharashtra, Goa, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura	1.00	0.60
Southern grid	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Pondicherry, Lakshadweep	0.99	0.71

\*OM: Operating Margin, BM: Build Margin. Figures include inter-regional and cross-border electricity transfers.  
Source: The Central Electricity Authority. <<http://www.cea.nic.in/>>



## References

- CDM India (Designated National Authority in India)  
<http://cdmindia.nic.in/>
- Market Mechanism Project / Climate Change Area, Institute for Global Environmental Strategies  
<http://www.iges.or.jp/jp/cdm/index.html>

### Current Status of CDM in India

Since the establishment of the Indian DNA (Designated National Authority) in 2003, it has approved a significant number of projects. 360 projects have been registered by the CDM executive board and the number of registered projects is the largest (around 1/3) in the world (as of 5 November 2008).

In the initial stage of CDM development in India, biomass utilisation projects, waste gas/heat utilisation projects, and renewable energy (wind, hydro) projects were mainly being implemented. Other than those projects, India has varieties of registered CDM projects that include energy efficiency projects (cement, steel and etc.), fuel switch projects, HFC reduction projects and transportation projects.

CDM promotion cells have been established at a state level. They conduct supportive activities such as information dissemination on CDM and coordination between local and national governments.

One of the features of CDM in India is its large share of unilateral CDM projects, CDM project developed by Indian stakeholders without the involvement (finance, technology) of Annex I countries. Indian project developers implement the project by bearing transaction costs of CDM and taking on the risks of the projects. Therefore, the price of credits issued by unilateral CDM projects tends to be higher than bilateral or multilateral CDM projects.

### CDM Country Fact Sheets

Institute for Global Environmental Strategies (IGES)  
Market Mechanism Project / Climate Change Area  
2108-11 Kamiyamaguchi, Hayama, Kanagawa 240-0115 JAPAN  
Phone: +81-46-855-3826  
Facsimile: +81-46-855-3809  
E-mail: [cdm-info@iges.or.jp](mailto:cdm-info@iges.or.jp)  
<http://www.iges.or.jp/en/cdm/>

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