

Clean Development Mechanism Backgrounder

—April 2009 Status Report—

What is the CDM?

The Clean Development Mechanism (CDM) was established in Article 12 of the **Kyoto Protocol** to the **United Nations Framework Convention on Climate Change** (UNFCCC). It is a means of providing flexibility to developed countries in meeting their greenhouse gas reduction commitments under the Kyoto Protocol. Developed countries may earn credits (known as **Certified Emissions Reductions** or **CERs**) from CDM projects implemented in developing countries. One CER is equal to 1 metric ton of carbon dioxide equivalent.

According to the Kyoto Protocol, the purpose of the CDM is to assist developing countries in “achieving sustainable development.” Emission reductions from CDM projects must result in “real, measurable and long-term benefits” and must be additional.

Important links:

- The Kyoto Protocol (see Article 12):
http://unfccc.int/essential_background/kyoto_protocol/items/1678.php
- CDM Statistics: <http://cdm.unfccc.int/Statistics/>
- CDM Project Activities: <http://cdm.unfccc.int/Projects>
- CDM Project Pipeline: <http://cd4cdm.org/Publications/CDMpipeline.xls>
- CDM Modalities and Procedures:
<http://unfccc.int/resource/docs/2005/cmp1/eng/08a01.pdf#page=6>

How was it created, and who can participate?

The CDM is one of three “flexibility mechanisms” established by the Kyoto Protocol in an attempt to lower the overall cost of achieving emissions targets by allowing for access to cost-effective opportunities for reducing emissions in other countries. (The other mechanisms are emissions trading and joint implementation). The negotiators of the Protocol and the Marrakesh Accords sought to design a system that fulfilled the mechanisms’ promise of cost-effectiveness, while addressing concerns about environmental integrity and equity.

In order for developed countries (Annex I Parties to the UNFCCC)¹ to participate in the flexibility mechanisms, they must have ratified the Kyoto Protocol; they must have calculated their assigned emission reduction amount; they must have a national GHG inventory and a national registry; and they must annually report such information to the UNFCCC Secretariat. For developing countries to participate by hosting CDM projects, they must establish a **Designated National Authority (DNA)** to oversee domestic CDM project activities.²

How does it work?

At the international level, the CDM is supervised by an **Executive Board** charged with approving methodologies for calculating emissions reductions, maintaining a registry of projects, issuing CERs, and accrediting **Designated Operational Entities (DOEs)**. DOEs are either domestic legal entities or international organizations that validate proposed CDM project activities, verify emissions reductions of registered CDM project activities, and request the Executive Board to issue CERs. The CDM is expected to eventually be financially self-supporting, although to date, funding has been pledged by Annex I countries to support the operations of the Executive Board. A 2% levy on CERs will be used to help finance adaptation activities in particularly vulnerable developing countries and cover administrative expenses.

At the country level, each host country's Designated National Authority (DNA) is responsible for approving any proposed projects and ensuring that they contribute to the country's sustainable development. There is currently no limit on the number of projects that can be hosted by a country.

At the project level, each project submitted must include a **project design document (PDD)** that utilizes a **methodology** for calculating potential emissions reductions that has been approved by the CDM Executive Board. Over 120 methodologies have been approved to date for a variety of project types.³ There are separate groupings of methodologies for combined projects, afforestation projects, and small scale projects.

How many projects have created CERs and at what price are they selling?

There are currently over 4200 CDM projects in the pipeline (not yet all approved) which would represent a total of 2.9 billion tons of carbon dioxide equivalent in reductions by 2012.⁴ A total of 1596 CDM projects have been registered (approved) as of April 2009, up from 39 projects a mere four years ago. These projects will represent a total of 1.6 billion CERs by the end of the Kyoto Protocol's first commitment period (2012). To date, however, only 291 million CERs have been issued by the CDM Executive Board. The UNFCCC Secretariat maintains a registry of CERs online: <http://cdm.unfccc.int/Issuance/IssuanceCERs.html>.

¹ Annex I Parties listed here: http://unfccc.int/essential_background/convention/background/items/1346.php

²The Mechanisms under the Kyoto Protocol: The Clean Development Mechanism, Joint Implementation and Emissions Trading. Website of the UNFCCC Secretariat. http://unfccc.int/kyoto_protocol/mechanisms/items/1673.php

³ Registry of CDM Methodologies: <http://cdm.unfccc.int/methodologies>

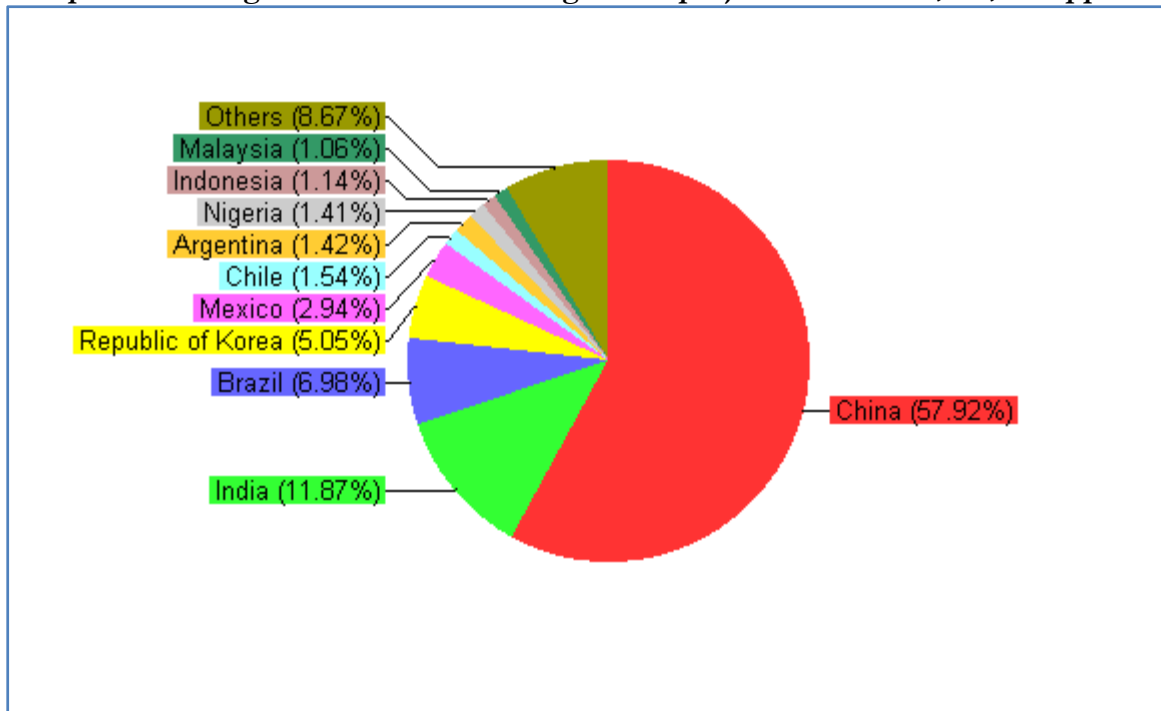
⁴ There is some uncertainty surrounding the number of CERs that will actually be available through 2012 due to project risks.

Current prices for primary CERs from CDM projects vary, but are in the range of €6-10 per ton CO₂e. Secondary CERS are selling for prices currently in the neighborhood of €8- 13 per ton with current price at about €11 per ton. To put this in perspective, according to Point Carbon the price of allowances in the EU Emissions Trading System is higher with the price on April 28, 2009 around €13.

Which countries are hosting CDM projects? Why?

The majority of CDM projects are being developed in Asia and Pacific (80% of CERs) followed by the Latin American and Caribbean countries (14% of CERs). China alone represents 58% of total CERs, followed by India with 12%, and Brazil with 7% (figure below). Very few projects are being developed in Africa, Central Asia or the Middle East.

Expected Average Annual CER from registered projects. Total: 292,000,000 approx



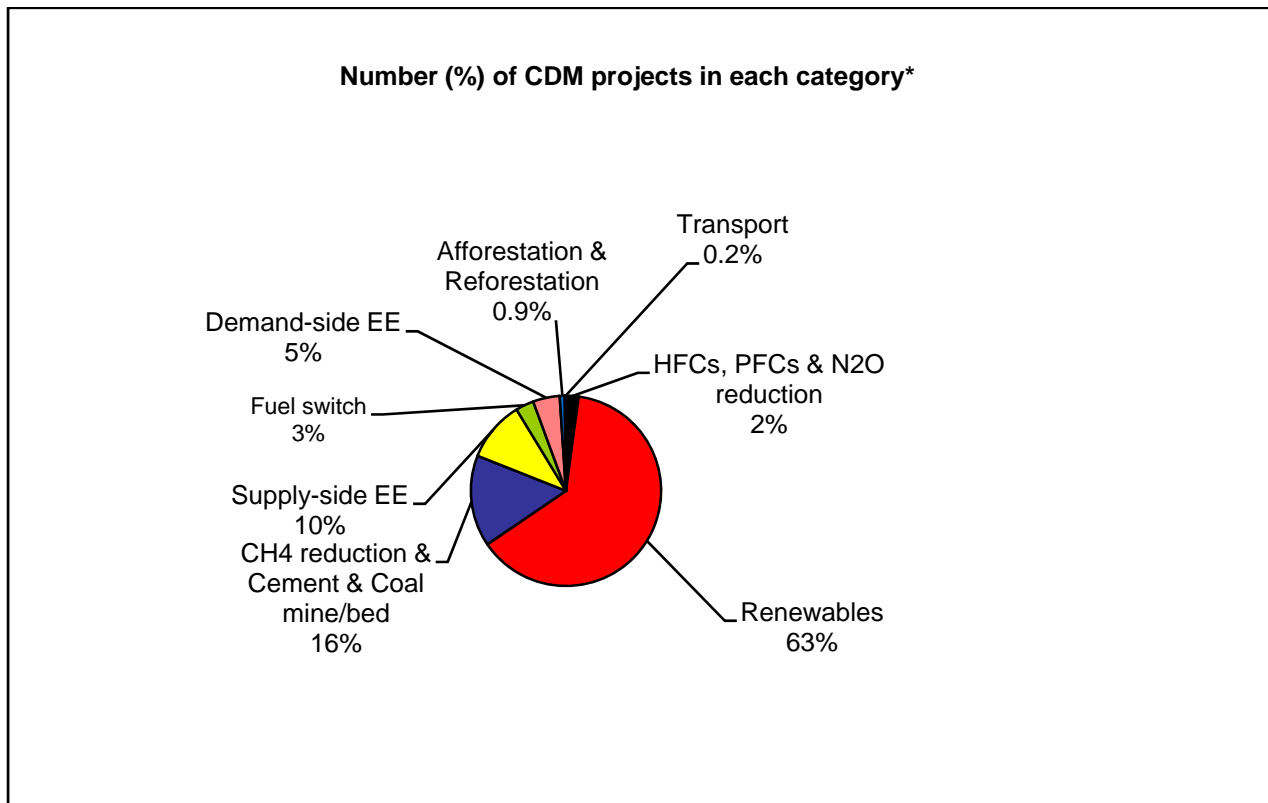
Source: <http://cdm.unfccc.int/Statistics/Registration/AmountOfReductRegisteredProjPieChart.html>

The reason why only a handful of countries are the site of the majority of CDM projects have to do with the cost perceived by a project developer of doing a CDM project. This cost is affected by several factors, including the delivery risk associated with the host country (including project financial and operational risks), the availability of expertise within the host country (for example DOEs), and risks associated with the wider social impact of the project. To some extent, the more experience a country has with hosting CDM projects, the easier it is for the next developer to do business there.

What types of projects are being developed?

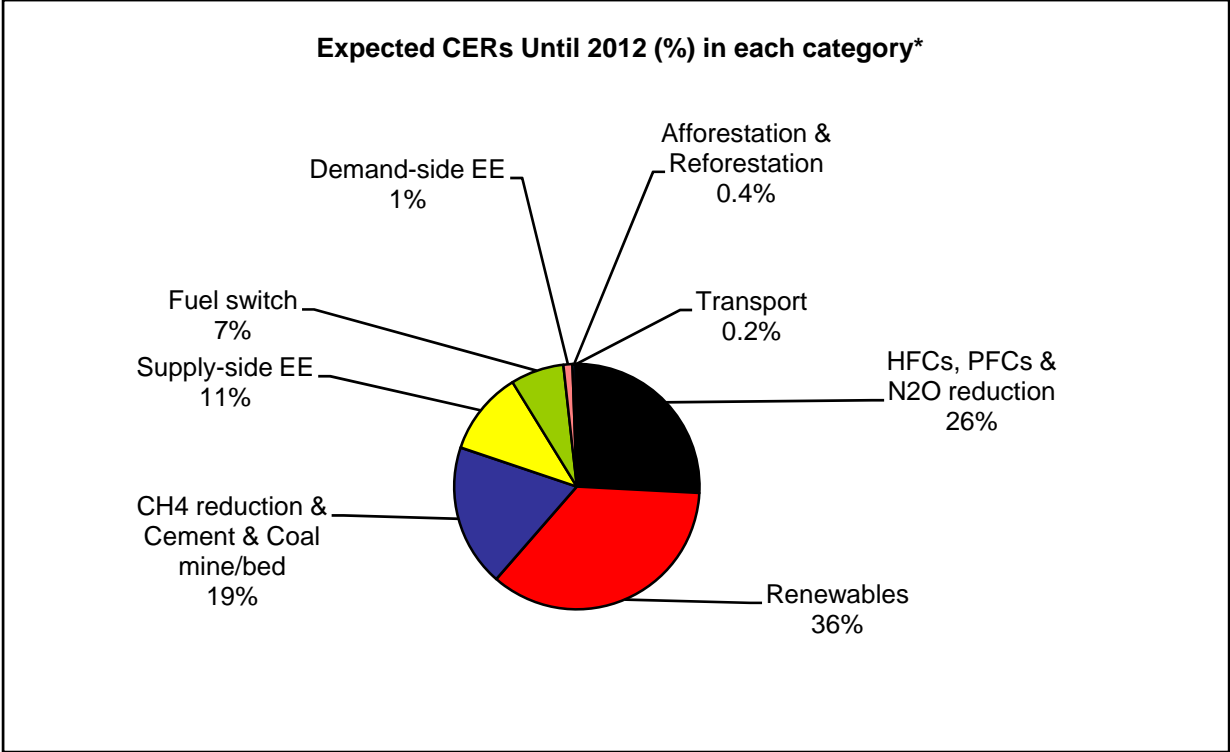
The project type that is contributing to the largest amount of GHG reductions and number of projects is renewables (in 2006 HFC gas destruction projects amounted to the largest GHG reductions).

Although there are many renewable energy and energy efficiency projects, these projects generate less overall reductions than gas capture (because of the relative lower climate impact associated with these other greenhouse gases in comparison to CO₂). However, the overall sustainable development benefits of these projects are arguably much higher.



*Data as of April 2009

Source: www.cd4cdmpipeline.org



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