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Kyoto's **Clean Development** Mechanism in Action

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THE KYOTO PROTOCOL is the principal international agreement to reduce global climate change. The Clean Development Mechanism (CDM) helps achieve the Protocol's objectives by allowing developed countries to pay for reductions of greenhouse gases in developing countries.

The developing countries that are most actively involved in the CDM—and that have the greatest potential for future involvement—are India, China and Brazil. The purpose of this article is to describe the CDM, the activities in these three countries under the CDM, and the current and future role of the United States under the CDM.

The United States, as the only major industrialized country (other than Australia) that has not joined the Protocol, does not directly participate in the CDM. However, there are a number of methods for U.S. companies and investors to become involved in it.

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Moreover, there is a good chance that within a few years the United States will fully participate. Though President George W. Bush repudiated the Protocol shortly after taking office in 2001, many observers believe that whoever succeeds him in January 2009, whether a Democrat or a Republican, is likely to reengage the country in the global system of climate regulation.

Global talks are already underway to determine what methods to use to control climate change after the current Protocol obligations expire in 2012, but whatever follows will almost certainly include mechanisms for the transfer of funds from the developed to the developing world, based at least in part on the CDM. At some point after the inauguration of the next president, U.S. climate policy and the negotiations on post-2012 Protocol mechanisms are likely to converge.

If all goes well, the resulting domestic legislation and international agreements will provide for a robust system of U.S. participation in a CDM-like program. Meanwhile, there are opportunities for U.S. companies to get their feet wet.

CDM Background

The fundamental international agreement is the United Nations Framework Convention on Climate Change (Convention). President George H.W. Bush signed it on behalf of the United States in 1992.

The Convention's basic objective is to

achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system." The Convention divides the members into two main groups: Annex I countries (mainly the developed countries) and non-Annex I countries (mainly the developing countries).

The Convention established the Conference of Parties (COP), consisting of the member governments, to convene annually to advance implementation of the Convention. At one such meeting in Kyoto, Japan (the COP-3) in 1997, the Kyoto Protocol was adopted; the Protocol sets binding emissions limitations on developed country members, i.e., Annex I countries, for the period 2008-2012 using a 1990 baseline. The Protocol came into force in 2005 when it was ratified by Russia.

The Protocol established three flexible mechanisms to achieve its objectives. These were Article 17: International Emissions Trading System (IETS), Article 6: Joint Implementation (JI), and Article 12: Clean Development Mechanism.

IETS permits certain members to trade emissions allowances with each other. JI permits Annex I countries to claim credit for emission reductions from investments in emission-reducing projects in other Annex I countries (chiefly the former Soviet states). The CDM permits Annex I countries to claim credit for emission reductions that arise from their investments in emission-reducing projects in non-Annex I countries.

At COP-7 in Marrakech, Morocco in 2001, a comprehensive rulebook, the "Marrakech Accords," was unveiled on how to implement the Protocol, including CDM projects.

The CDM basically provides for project-based emissions trading, whereby Annex I countries (and companies or other persons authorized by them) can purchase certified emissions reductions (CERs) generated by projects in non-Annex I countries. These CERs, expressed in tons of carbon dioxide equivalent, can be used by the Annex I country to offset its greenhouse gas (GHG) emissions and meet its commitment under the Protocol, can be sold to other countries, or can be banked for either use at a subsequent time. The CDM promotes sustainable economic development and the reduction of GHGs in developing countries through investments in emission-reducing projects.

COP-7 established the CDM Executive Board as the CDM's supervisory body. One of its functions is to register and issue CERs.

Before a CDM project reaches the CDM Executive Board, it must be approved by the Designated National Authority in the non-Annex I country. At each stage, various factors are considered, including whether participation in the project was voluntary, whether the project contributes to the sustainable growth of the non-Annex I country, and whether the project actually achieves the projected reductions.

From the total of 762 projects registered with the CDM Executive Board, India accounts for 268 (35.17 percent), China follows with 106 (13.91 percent), and Brazil is right behind with 105 projects (13.78 percent).¹ When measured in terms of the expected average annual CERs from registered projects, China represents 43.37 percent, India has 16.54 percent, and Brazil has 10.46 percent.

Only nations that have ratified the Protocol will be able to receive CERs. Further, member nations can limit participation within their countries (as permitted under the Marrakech Accords) through national policies that exclude nations that have not ratified the Protocol. This is of particular importance to companies domiciled in the United States that wish to invest, earn and trade in CERs from CDM projects.

Some countries that are members of the Protocol, such as the Netherlands, have indicated they will allow companies from non-member nations to invest in CDM projects. In other cases, it has been suggested that companies domiciled in the United States could structure CDM investments through

their foreign subsidiaries (located in Annex I countries), thereby resulting in the CERs being earned by the foreign subsidiary.

However, since the Marrakech Accords give party nations a fair degree of flexibility in formulating their national CDM policies, an Annex I country could refuse to permit foreign subsidiaries of U.S. companies to earn or trade in CERs generated in its territory. Canada has said that it will allow Canadian subsidiaries of companies from non-member nations to hold accounts in Canada to trade in CERs.

Another practical approach is a "unilateral CDM project" where the company domiciled in a non-member nation, e.g. the United States, will enter into a contract to assign all rights to the CERs to the host country, i.e., the non-Annex I country, to be later transferred to the company's investors.

The untapped potential
for projects in India, China and
Brazil is enormous. If the United
States ratifies the Protocol, or
whatever succeeds it,
U.S. companies
are likely to become
major participants
in these global efforts.

India

India signed the Convention in June 1992 and acceded to the Protocol in August 2002. The National Clean Development Mechanism Authority (NCDMA) was established with the Ministry of Environment and Forests (MoEF), Government of India, in December 2003, to act as the Designated National Authority.

The NCDMA is chaired by the Secretary of the MoEF and managed by the Member Secretary of the MoEF. Its members are from six ministries and the Planning Commission.

The NCDMA provides a single window clearance for all CDM projects in India. The NCDMA receives, evaluates and approves projects in accordance with its own guidelines, the relevant rules and modalities pertaining to the CDM, and those issued by the CDM Executive Board and COP from time to time. Currently, as there is no legislation in place that specifically integrates the CDM into

Indian law, the same legal provisions that apply to foreign direct investment in India apply to investments in CDM projects.

The process begins when the project proponent(s) submits a Project Concept Note and a Project Design Document (PDD) to the NCDMA. The NCDMA examines the submissions and may issue preliminary queries to the project proponent(s), which are normally given an opportunity to make a presentation regarding their proposal, at which time members of the NCDMA can seek further clarification and request additional information.

Once the members of the NCDMA are satisfied, the Member Secretary issues approval. The NCDMA strives to provide approval within 60 days from the date it receives complete documentation.

The NCDMA examines and evaluates each proposal based on various factors that include emission additionality, financial additionality, potential for sustainable development, and an assessment of the probability of the project's successful implementation.

The first CDM project from India was registered with the CDM Executive Board on March 8, 2005. It was a project for GHG emission reduction by thermal oxidation of a GHG called HFC 23 in Gujarat, India with Japan, Netherlands, Italy and the United Kingdom as the other parties. Since then the NCDMA has approved some 595 projects. Many of them involve renewable energy and energy efficiency.

In addition, the Government of India has entered into various capacity building initiatives. GTZ CDM-India was established in August 2003, through an agreement between the German Technical Cooperation and the Bureau of Energy Efficiency, Ministry of Power, Government of India, as the capacity building facility that can help reduce transaction costs in the early market development process to foster CDM projects.

The Asian Development Bank supports India's climate change initiatives by assisting CDM projects in selected sectors, through a technical assistance grant of U.S. \$700,000. The United Nations Development Programme has been working closely with the Government of India as well.

China

China signed the Convention in 1992 and ratified the Protocol in August 2002, making it eligible for CDM participation.

The Measures for Operation and

Management of CDM Projects (Measures), the ruling regulation jointly promulgated by the National Development and Reform Commission (NDRC), China's Designated National Authority, and the Ministry of Science and Technology (MOST), and vice chaired by the Ministry of Foreign Affairs (MOFA) and the Ministry of Finance (MOF) for all CDM projects in China, entered into force on Oct. 12, 2005. It replaced the Interim Measures for Operation and Management of CDM Projects of 2004.

The Measures have designated the National Coordination Committee on Climate Change (NCCCC), an interagency committee under the State Council of China, to take the responsibility for policy making and coordinating CDM related issues. Accordingly, an ad hoc CDM Review Committee (Review Committee) has been established under the NCCCC, which is co-chaired by the NDRC and the MOST, and vice chaired by the MOFA.

Other governmental agencies on board include the State Environmental Protection Administration, the China Meteorological Administration, the MOF and the Ministry of Agriculture. The Review Committee is in charge of reviewing and assessing applications for CDM projects in China.

According to the Measures, the Chinese government has the jurisdiction to oversee all the CDM activities in China, and only wholly Chinese-owned enterprises and Chinese domestic-controlled enterprises are eligible for CDM project applications.

Before a Chinese CDM project requests registration with the CDM Executive Board, the Measures require that:

(1) the project proponent, with its foreign partner(s), file an application and all required documents with the NDRC;

(2) the NDRC conducts an expert review (maximum of 30 days) of the application, and submits a "qualified" application to the Review Committee for further review; and

(3) based on the recommendations from the Review Committee, the NDRC, jointly with the MOST and the MOFA, issue a certificate of approval.

The Measures have identified three priority areas for which the Chinese government indicates strong support: energy efficiency improvement, development and utilization of new and renewable energy, and methane recovery and utilization. In these priority areas, as well as afforestation and reforestation projects, the Chinese government levies only 2 percent revenue on each project, while the

percentages the Chinese government levies on HFC projects, PFC (Per-fluorocarbon) projects and N₂O (Nitrous Oxide) projects are 65 percent, 65 percent and 30 percent respectively.

The Huitengxili wind farm project was the first CDM project in China, with Netherlands as the other party. It was registered with the CDM Executive Board on July 26, 2005.

The Annex 1 countries that have participated in Chinese CDM projects include Netherlands, Italy, Spain, Japan, UK, Canada, Denmark, Finland, Ireland, Norway, Austria, Switzerland, Sweden and Germany. So far 101 CDM projects have been registered, with several more in process.

Brazil

Brazil was the first country to sign the Convention in 1992. It ratified the Protocol in 2002. In 2004 Brazil became the first country to register a CDM project with the CDM Executive Board, the Nova Gerar landfill project. It originated from a partnership between a British consulting company, EcoSecurities, and a Brazilian waste management company, SA Paulista.

Despite the pioneering position, Brazil's own regulation on CDM is still incipient. The federal government has not yet promulgated specific legislation relating to the issue, although some legislative bills have been presented. Therefore, the basic rules applying to CDM projects in Brazil are the Convention rules, the Protocol, and resolutions enacted by the Interministerial Committee for Global Climate Change (ICGCC), which is Brazil's Designated National Authority.

The ICGCC is composed of members from 11 ministries. It is chaired by the Ministry of Science and Technology (MCT) and vice-chaired by the Ministry of the Environment. The committee is responsible for evaluating and approving all CDM projects. It also establishes additional eligibility criteria other than those contained in the Protocol.

In Brazil, as in other countries, the first step of a CDM project is the preparation of the PDD. Once ready, the PDD is evaluated by the Designated Operational Entity. If approved, participants must submit the PDD to the MCT (along with other forms required by the MCT). The documents will be evaluated according to five eligibility criteria: income distribution, local environmental maintainability, improvement of working conditions and employment

creation, technological development and regional integration and articulation with other sectors.

ICGCC must issue a final decision on the approval of the PDD within 60 days after the first ordinary meeting held after the filing. (The committee meets every two months.) Once approved, the project is sent to the CDM Executive Board for registration.

The ICGCC has approved 158 projects, and about two dozen more are in process.

Brazilian CDM projects are currently divided among the following sectors: electric generation (61 percent), pig farming (16 percent) and landfills (11 percent). The remaining 12 percent are divided among the manufacturing industry, energy efficiency, waste management, N₂O, chemical industry and metal production.

Conclusion

India, China and Brazil have all embraced the CDM. These countries are all working to expand their capacity to develop CDM projects, and their Designated National Authorities are all approving large numbers of projects and registering them with the CDM Executive Board so that countries around the world can help fund them and gain emissions credits.

The untapped potential for projects in all three countries is enormous. If the United States ratifies the Protocol, or whatever succeeds it, U.S. companies are likely to become major participants in these global efforts. Meanwhile, they can participate as investors, traders and service providers, but for the most part they are watching from the sidelines.

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1. Statistics cited from the Convention's Web site (cdm.unfccc.int) as of Aug. 20, 2007.