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CLEAN DEVELOPMENT MECHANISM:

CDM AND THE UNFCCC

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CDM and the UNFCCC

The first part of this guide introduces the Clean Development Mechanism and the United Nations Framework Convention on Climate Change. It outlines how the CDM can lead to projects and activities implemented in and by developing countries that aim to reduce carbon emissions.

The Clean Development Mechanism (the "CDM") is a tool of the Kyoto Protocol under the United Nations Framework Convention on Climate Change (the "UNFCCC" or the "Convention") which establishes a system permitting developed countries to engage in or sponsor projects in developing countries that reduce greenhouse gas emissions. In so doing, these sponsoring entities earn carbon credits which are used in one of two ways:

(a) To meet their own emissions obligations; or

(b) To sell to other entities in developed countries enabling them to meet their emissions obligations.

Consequently, whilst allowing these developed countries, known as "Annex B Countries" under the Kyoto Protocol, to contribute towards compliance with their emissions targets, it also enables developing nations to gain access to clean technologies and work towards achieving sustainable development.

United Nations Framework

The UNFCCC was signed in 1992 and came into force in 1994. It establishes a general policy goal of stabilising greenhouse gas emissions in order to temper the impact of climate change.

Central to the Convention is the notion that different countries have different responsibilities in achieving this goal (the "common but differentiated responsibility concept"). In particular, it acknowledges that developed countries and economies-in-transition ("EITs") have a particular responsibility to limit their emissions, which are higher on a per capita basis than those of developing countries. Annex 1 of the Convention lists each of these developed countries and EITs which include the United States, Canada, Japan, the European Union member states (with the exception of Cyprus and Malta), Australia and Russia.

The Kyoto Protocol (the "Protocol"), which was signed in 1997 and came into force in 2005, falls under the umbrella of the Convention. The Protocol requires Annex B Countries that ratify the Protocol to limit their emissions of six specific greenhouse gases to certain levels in the five-year period from 2008-2012 inclusive . It was decided at the 2011 Climate Change Conference held in Durban that a second commitment period under the Protocol shall begin on 1 January 2013 and will last for either five or eight years, ending on either 31 December 2017 or 2020 . At the time of writing, all but one of the Annex 1 Parties,

being the United States, have ratified the Protocol although Canada has recently withdrawn and there are doubts over whether some of the existing Annex B Countries (e.g. Japan and Russia) will actually participate in the second commitment period.

The six greenhouse gases which are currently limited under the Protocol are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Emissions of each gas are measured by their global warming potential in terms of their equivalence in tonnes of carbon dioxide ("Carbon Dioxide Equivalent" or "CO2e") as set out below (all figures approximate):

One tonne of methane = 21-23 tonnes of CO2e;
One tonne of nitrous oxide = 270-310 tonnes of CO2e;
One tonne of hydrofluorocarbons = 11,700 tonnes of CO2e;
One tonne of perfluorocarbons = 6,500 tonnes of CO2e; and
One tonne of sulphur hexafluoride = 23,900 tonnes of CO2e.

The size of each country's annual limit in the 2008-2012 period is expressed as a percentage of its emissions level as measured in 1990 (i.e. the baseline year, although some EITs have a different baseline year). Annex B of the Protocol sets out the limit for each Annex B Country. For example, the EU has a collective limit of 92%, Japan has a limit of 94%, Australia has a limit of 108% and Russia and New Zealand have a limit of 100%. The amount that each Annex B Country or EIT is permitted to emit (measured in tonnes of CO2e) is known as its "assigned amount".

The Flexible Mechanisms of the Protocol

Inherent in the Protocol is the belief that, from a climate change perspective, the key policy goal is the limitation of emissions at a global level. Provided that this global limit is achieved, the specific emissions of individual countries are not the key factor. To this end, the Protocol introduces three flexible mechanisms that allow Annex B Countries to manage their assigned amounts: emissions trading, Joint Implementation and the CDM.

Emissions trading

Emissions trading, established under Article 17 of the Protocol, allows one Annex B Country to increase its assigned amount by acquiring part of another Annex B Country's assigned amount that it is willing to sell (e.g. because its total emissions are expected to be lower over time than its assigned amount for the same period of time). Private entities, where authorised by their Annex B Country governments, may also engage in emissions trading of various types of credits issued under the Kyoto Protocol.

Joint Implementation

The Joint Implementation mechanism ("JI"), established under Article 6 of the Protocol, allows Annex B Countries and entities authorised by Annex B Countries, to sponsor projects that reduce greenhouse gas emissions which are hosted in the participating Annex B Countries. If the project is successful in reducing emissions in the host country, then:

(a) The assigned amount of the host country will be reduced by a quantity equal to the emissions reduced by the project;

(b) The host country will issue credits known as emission reduction units ("ERUs") in a number equal to the emissions reduced by the project, measured in tonnes of CO2e; and

(c) These ERUs will be distributed amongst the entities that are participating in the project.

JI projects must lead to emission reductions or removals by sinks in addition to any that would have occurred without the implementation of such a project.

CDM

Finally, the CDM, established under Article 12 of the Protocol, allows an entity authorised by a non-Annex B Country (i.e. a developing country) to host activities that lead to the reduction of emissions. If this activity or project is successful in reducing said emissions in the host country, then:

(a) The United Nations (through the Executive Board of the CDM) will issue credits known as certified emission reductions ("CERs") in a quantity equal to the emissions reduced by the project;

(b) These CERs will be distributed to the entities that are participating in the project; and

(c) Any Annex B Country or any private entity authorised by that Annex B Country to participate in the project may acquire or receive those CERs.

Both JI and CDM projects result in the creation of emissions credits in the form of ERUs and CERs respectively. These credits are regularly traded and different entities have different reasons for buying and selling them. For example, Annex B Countries may buy them in order to increase their assigned amounts given that each ERU or CER entitles them to emit one more tonne of CO2e, whilst major emitters that are required by certain Annex B Countries to meet domestic or regional compliance targets (most notably under the EU emission trading scheme), or organisations that trade in ERUs or CERs for profit, may also buy them.

JI and CDM are, therefore, largely seen as ways for Annex B Countries (or private entities within them) to avoid penalties for exceeding their emission limits by using ERUs and CERs in order to meet their compliance obligations. The ability of entities to use CERs or ERUs to meet their compliance obligations are often limited by national legislation (either as a percentage of their overall cap and/or by limiting their compliance use to certain types of project credits.)