



**UNCTAD-Earth Council**  
Carbon Market Programme  
[www.unctad.org/ghg](http://www.unctad.org/ghg)



## **A Layperson's Guide to the Clean Development Mechanism: The Rules from Marrakech**

by

Jon Rosales and Gao Pronove

July 2002

This guide is a publication of the United Nations Conference on Trade and Development and the Earth Council Carbon Market Programme.

## **Foreword**

This Guide is part of a series of publications that are aimed to inform the layperson of the various mechanisms used in the Kyoto Protocol to ensure that addressing climate change does not impose undue pressure on the global economy. The other publications that are planned under this series include a Layperson's Guide to Emission Trading, and a Layperson's Guide to Joint Implementation.

The Guides will also be used as a basis for on-line courses featured in the UNCTAD/Earth Council Carbon Market E-Learning Center (CMEC). These courses will be launched in August 2002 as part of the World Summit for Sustainable Development.

The UNCTAD/Earth Carbon Market Programme wishes to thank the United Nations Foundation for International Partnerships for financing the series.

Lucas Assuncao  
Coordinator  
BioTRADE and Climate Change  
UNCTAD

## **Organization of this document**

This document is a compilation of the rules and procedures concerning the Clean Development Mechanism (CDM) as agreed upon at Seventh Session of the Conference of the Parties (COP 7) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Marrakech, Morocco in November of 2001. It summarizes relevant rules and procedures from the Marrakech Accords regarding CDM projects as part of the implementation of the Kyoto Protocol. The objective of this document is to explain in clear and simple terms and, where possible, provide illustrations and examples of how the rules and procedures can be applied.

The official text of the Marrakech Accords is found in Appendix A. The citations that follow refer to this document by section and article or paragraph (e.g. D4 means section D, article or paragraph 4).

This document is organized in 3 parts and contains 4 appendices.

Part I provides an overview of the decisions concerning the CDM in the Marrakech Accords.

Part II addresses questions that may be asked regarding the CDM including summaries of the appropriate sections of the Marrakech Accords.

Part III includes the annexes to this document, which contain further summaries and other reference material.

Appendix A contains the official Marrakech Accords text regarding the CDM.

Appendix B contains Article 12 of the Kyoto Protocol referring to the CDM.

Appendix C contains a Dutch CDM project template.

Appendix D contains a World Bank project template.

## **Disclaimer**

Since there has been very little application and adjudication of these still evolving rules and procedures, it is highly advisable that other opinions and points of view be considered. The authors and commissioning agent for this document are not responsible for any action that may result from the use of this document.

## **Glossary of Terms and Acronyms**

AAU	Assigned amount unit: one metric tonne of carbon dioxide equivalent.
Additionality	GHG reductions above-and-beyond business-as-usual.
Afforestation	The conversion of land that had not been forested to forested land through planting, seeding, and other methods.
Annex B	The 39 developed countries designated in Annex B of the Kyoto Protocol that have GHG reduction commitments.
Annex I	The 36 developed countries designated in Annex I of the UNFCCC that had non-binding GHG reduction commitments to 1990 levels by 2000.
Baseline	A scenario that represents the GHG emissions from all sectors and sources that would occur without the CDM project (see BAU).
BAU	Business-as-usual: project outcomes that would result in the absence of a CDM project.
CDM	Clean Development Mechanism: a policy where industrialized countries receive credits against their emission reduction commitments for investment in greenhouse gas reduction projects in the developing countries.
CER	Certified emission reductions: one metric tonne of carbon dioxide equivalent.
COP/MOP	Conference of Parties and Meeting of the Parties: countries that are signatory Parties to the UNFCCC (see below).
DOE	Designated operational entity: accredited organization that validates, monitors, and certifies CDM projects and emission reductions.
Donor	The Annex I country, organization, or individual that invests in a CDM project to reduce GHGs in a developing country (see investor).
ERU equivalent.	Emission reduction unit: one metric tonne of carbon dioxide equivalent.
Executive Board	Oversees CDM projects for the UNFCCC and are held accountable by the COP/MOP.

GHG	Greenhouse gas: The Kyoto Protocol recognizes the following greenhouse gases and gas classes as eligible for reductions credits: carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF <sub>6</sub> ).
Host	The non-Annex I developing country, organization, or individual that is the recipient of CDM project investment.
Investor	The Annex I country, organization, or individual that invests in a CDM project to reduce GHGs in a developing country.
Kyoto Protocol	The international treaty that sets GHG reduction goals for participating countries and designates CDM projects as one of the mechanisms to achieve these reductions.
Leakage	The net change of anthropogenic emissions by sources of greenhouse gases that occurs outside the project boundary and that is measurable and attributable to the CDM project activity.
Operational validate Entity	A legal entity designated by the Executive Board to oversee and validate CDM projects (same as DOE).
RMU	A removal unit: one metric tonne of carbon dioxide equivalent.
Reforestation	The conversion of previously forested land to forested land through planting, seeding, and other methods.
Stakeholders	Communities, groups, or individuals affected, or likely to be affected, by the CDM project.
UNFCCC	United Nations Framework Convention on Climate Change: an international legal framework established in 1992 at the "Earth Summit" in Rio to address climate change.

## **Part I: Overview of Decisions**

### **Background**

In 1992 over 180 countries at the "Earth Summit" in Rio de Janeiro adopted the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC is a legal framework that enables Parties to the Convention to start the process of stabilizing greenhouse gases (GHG) in the atmosphere. Parties to the UNFCCC have been meeting every year since 1994 to implement and define this framework. At the third meeting of the Parties, COP 3, the Kyoto Protocol was adopted and set legally binding GHG reductions for industrialized countries, or so called Annex I Parties. The Kyoto Protocol enters into force when at least 55 countries ratify the treaty and these countries represent at least 55% of the Annex I countries' 1990 emissions levels.<sup>1</sup> In time for the first compliance period (2008-2012), Annex I Parties will have to encourage or regulate private companies and individuals to reduce GHG emissions. Most of these reductions will occur within the borders of each Annex I country, but the Kyoto Protocol identifies mechanisms by which credit can be received for GHG reduction projects in non-Annex I countries.

The Clean Development Mechanism (CDM) is one of three "flexibility mechanisms" identified in the Kyoto Protocol that participating countries can use to meet their GHG reduction targets.<sup>2</sup> The CDM is the only mechanism under the Kyoto Protocol that involves developing countries, or non-Annex I countries. Article 12 of the Kyoto Protocol allows developed countries and countries with economies in transition (see Table 1 below) to meet their greenhouse gas reduction commitments by engaging in CDM projects that reduce GHG emissions. Developing, or non-Annex I, countries that have ratified the Kyoto Protocol can benefit from these CDM projects to promote sustainable development. Annex I countries, in return, receive certified emission reduction (CERs) credits for investing in CDM projects in non-Annex I countries that can be used against their GHG reduction commitments under the Kyoto Protocol.

### **The CDM**

The purpose of the CDM is to benefit both the investor and host countries by contributing to sustainable development in the host developing countries and by allowing investor countries to meet their GHG reduction targets at the lowest possible cost by taking advantage of the lower marginal cost of reducing GHG emissions in developing countries. It is the sole prerogative of the host country to confirm whether the project contributes to their sustainable development. Annex I countries that have ratified the Kyoto Protocol can engage in projects in developing countries to reduce any combination of six greenhouse gases (Table 1). The CER is then received by the Annex I investor to use to comply with its emission reduction targets.

---

<sup>1</sup> At 2 July 2002, 74 countries have ratified the Kyoto Protocol representing roughly 36% of Annex I emissions. See <http://www.unfccc.int> for an up-to-date accounting.

<sup>2</sup> The other mechanisms are Joint Implementation (JI) where developed countries can receive credit for investing in GHG reductions in other developed countries; and emissions trading where emitters can purchase credits as a market commodity.

As Annex I countries ratify the Kyoto Protocol, they may require companies and sectors of their economies that emit significant amounts of GHGs to choose how they want to reduce their emissions. These companies will turn to the CDM and become investors in GHG reduction projects in developing countries. They will seek certified emission reduction (CER) credits to offset their emissions as their country works to reach their GHG emission reduction commitments under the Kyoto Protocol.

**Table 1: Eligible Donor Countries, Sectors, and Gases**

Investor Countries <sup>a</sup>			Sectors <sup>b</sup>	GHGs & Gas Classes <sup>c</sup>
Australia	Greece	Poland	Energy	CO <sub>2</sub> : carbon dioxide
Austria	Hungary	Portugal	Industrial processes	CH <sub>4</sub> : methane
Belarus	Iceland	Romania		N <sub>2</sub> O: nitrous oxide
Belgium	Ireland	Russian Federation	Solvents and other products	HFCs: hydrofluorocarbons
Bulgaria	Italy			PFCs: perfluorocarbons
Canada	Japan	Slovakia	Waste	SF <sub>6</sub> : sulphur hexafluoride
Croatia	Latvia	Slovenia		
Czech Republic	Liechtenstein	Spain	Land use, land use change, and forestry	
Denmark	Lithuania	Sweden		
EU	Luxembourg	Switzerland		
Estonia	Monaco	Turkey		
Finland	Netherlands	Ukraine		
France	New Zealand	UK		
Germany	Norway	USA		

<sup>a</sup> Annex I countries. These countries need to ratify the Kyoto Protocol in order to use the CDM mechanism. Entities in these countries – whether public or private – constitute the investors in CDM.

<sup>b</sup> For specific activities see Table 4 below.

<sup>c</sup> As specified in the Kyoto Protocol, Annex A.

CERs are standardized GHG reduction credits that are becoming a commodity that can be bought and sold on the global market, and in some cases banked for the future.<sup>3</sup> Most CERs will be used by companies in the Annex I countries to meet their GHG reduction targets, but CERs can also be bought by others to sell on the international market, or retired by investors who want to expire that amount of future emissions (Figure 1).

Individuals and private or public organizations can participate in CDM projects. CDM projects are designed to encourage investment in and transfer of environmentally safe technologies that reduce emissions of greenhouse gases. These projects can only be undertaken in developing, or non-Annex I, countries that have ratified the Kyoto Protocol. Projects that begin after January 1, 2000 may qualify (see details below).

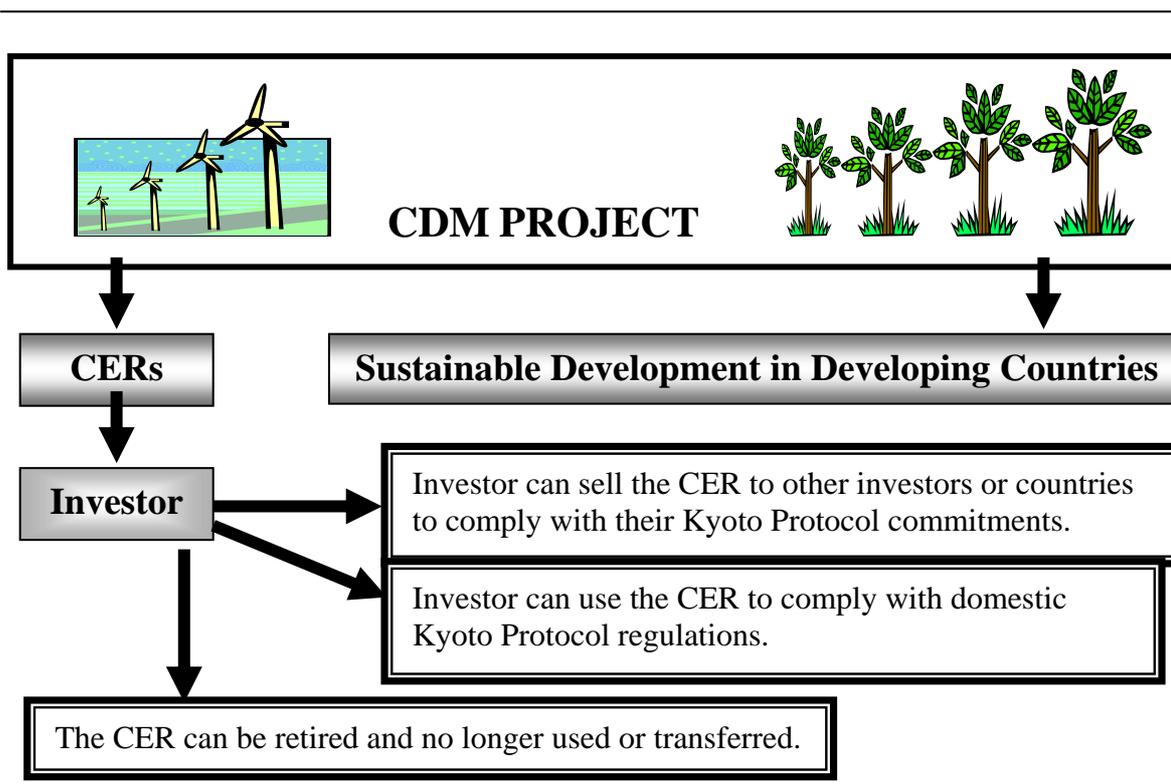
New institutions have been created to facilitate CDM projects. A ten-member Executive Board has been appointed by the UNFCCC to oversee CDM projects. Their efforts continue to refine the rules and procedures of CDM projects. The

<sup>3</sup> Credits received from forestry projects are not eligible for banking.

Executive Board issues the CERs that are entered in the official CDM registry. In addition, so-called Operational Entities will be certified by the Executive Board to validate, monitor, and certify CDM projects.<sup>4</sup>

CERs generated by CDM projects are charged 2% of their value to finance a fund to help the most vulnerable countries adapt to climate change. In addition, administrative costs will also be taken out of the proceeds from CDM projects. The Executive Board is still determining this amount. Small-scale CDM projects in Least Developed Countries are not charged.

**Figure 1: The CDM Dual Products: CERs and Sustainable Development**



The specifics of the CDM are to follow in the next section, but there are some overarching characteristics that can be summed up as follows:

- CDM projects are voluntary, and must have the host country's approval;
- CDM projects must meet the sustainable development goals defined by the host country;
- CDM projects must reduce GHG emissions above-and-beyond business-as-usual;

<sup>4</sup> For operational entity qualification requirements see Annex B. The requirements to qualify as an operational entity are prohibitive and may inhibit entities based in developing countries from being designated operational authorities. As such, the costs for the services of Operational Entities may prove to be too high for small-scale projects.

- CDM projects must account for GHG emissions that occur outside the project boundary that are attributable to the project;
- CDM projects must include the participation of stakeholders;
- CDM projects must not contribute to environmental decline;
- CDM projects are limited to non-nuclear technology and there is a limited amount of forestry credits that are eligible;
- CDM projects must not divert from other development assistance;
- CDM projects are limited to strict physical boundaries within which GHG emissions will be reduced or sequestered;
- CDM projects are limited to those countries that have ratified the Kyoto Protocol.

## **Part II: Frequently Asked Questions**

### **• What are CDM projects?**

Greenhouse gases (GHGs) mix uniformly in the atmosphere which makes it possible to reduce emissions at any point on the planet and have the same effect. This fact enables countries pursuing GHG reductions to do so where they can be reduced at lower costs. CDM projects allow entities in Annex I countries that have ratified the Kyoto Protocol to invest in projects that reduce GHGs in non-Annex I countries while contributing to sustainable development. By investing in non-Annex I countries, investors from Annex I countries can earn certified emissions reductions (CERs) that they can use to meet their GHG reduction commitments under the Kyoto Protocol. Thus, CDM projects help both developed and developing countries work together to achieve sustainable development and decrease GHG emissions.

#### **Definition**

A CDM project provides credit for investing in a GHG emissions-reducing or emissions-avoiding project in the non-Annex I countries (UNFCCC 1999).

#### **Goals**

Article 12 of the Kyoto Protocol set out three goals for the CDM:

- To help mitigate climate change,
- To assist Annex I countries attain their emission reduction commitments,
- To assist non-Annex I countries achieve sustainable development.

#### **Criteria**

CDM projects have three overall criteria:

- Projects must be voluntary,
- Projects must be able to show long-term climate change mitigation benefits,
- Projects must contribute to emissions reductions above-and-beyond business-as-usual (so called "additionality").

#### **GHGs and Gas Classes**

According to the Kyoto Protocol, projects that reduce six GHGs and gas classes may qualify for CDM projects; these come from varied sources of the economy (Table 2).

**Table 2: Anthropogenic Sources of Greenhouse Gases and Gas Classes**

<b>GHG or GHG Class</b>	<b>Sources</b>
CO <sub>2</sub> : carbon dioxide	Fossil fuel combustion; deforestation; agriculture
CH <sub>4</sub> : methane	Agriculture; land use change; biomass burning; landfills
N <sub>2</sub> O: nitrous oxide	Fossil fuel combustion; industrial; agriculture
HFCs: hydrofluorocarbons	Industrial/manufacturing
PFCs: perfluorocarbons	Industrial/manufacturing
SF <sub>6</sub> : sulphur hexafluoride	Electricity transmission; manufacturing

Source: Kyoto Protocol, Annex A; IPCC, "Climate Change 2001: Mitigation," 2001.

### **Sectors**

Investments in various sectors of non-Annex I countries may qualify for CDM credits (Table 3).<sup>5</sup>

**Table 3: Eligible Sectors and Sources (F31)**

Sector	Source Category
Energy	Fuel combustion: energy industries; manufacturing industries and construction; transport; other sectors; other Fugitive emissions from fuels: solid fuels; oil and natural gas; other
Industrial processes	Mineral products; chemical industry; metal production; other production; production and consumption of halocarbons and sulphur hexafluoride; other
Solvent and other product use	Agriculture; enteric fermentation; manure management; rice cultivation; agricultural soils; prescribed burning of savannas; field burning of agricultural residues; other
Waste	Solid waste disposal on land; wastewater handling; waste incineration; other
Land-use, land-use change, and forestry	Afforestation and reforestation; woodlots; plantations; agroforestry

Source: Kyoto Protocol, Annex A.

### **Examples**

The World Bank's Prototype Carbon Fund (PCF) started in 1999 to fund emissions reduction projects that would potentially be eligible for CDM credits. Annex I countries (Canada, Finland, Japan, the Netherlands, Norway, and Sweden) along with over a dozen large corporations contributed \$180 million to the fund to invest in such projects. The PCF has funded hydropower and efficient diesel projects in Uganda and a hydropower plant in Chile (Rosenzweig et al. 2002).

The Pembina Institute (2002) outlines various CDM projects in Asia, including:

- A cogeneration project for vegetable cold storage in Bangladesh,
- Replacing coal-burning stoves with natural gas stoves in brick manufacturing in Bangladesh,
- Combined power generation and fuel switching for an industrial park and wind power projects in China,
- Combined cycle with integrated waste gasification power generation and wind power projects in India,
- Palm oil waste electricity generator and micro-hydro projects in Indonesia.

The Lawson et al. (2001) identified cost effective CDM opportunities in Brazil's industrial sector that included retrofits and energy efficiency opportunities in the iron and steel industries; cogeneration opportunities in the oil refinery industry; and increasing the use of waste fuels opportunities in the cement industry.

---

<sup>5</sup> Reductions from nuclear facilities are not eligible.

Other potential CDM projects may be found in the forestry, energy, industry, household, and transportation sectors (Table 4).

**Table 4: Potential CDM Projects in the Forestry, Energy, and Industry Sectors**

Sector	Project Examples
Forestry	
Conservation	Protection of native forests
Silvicultural management	Selective harvesting; sustainable logging
Silvicultural practices	Pulp; sawlog; charcoal plantations; community woodlots
Afforestation and reforestation	In open areas; plantations; woodlots; agroforestry
Energy	
Power generation	Combined-cycle turbines; distributive networks; clean coal technology
Fuel switching	Natural gas; methane; biomass and biogas; hydrogen
Cogeneration	Sugar cane; bagasse; chemical byproducts
Renewables	Wind; solar; biomass; hydro; geothermal
Efficiency	More efficient equipment, processes, or design
Industry	
Efficiency	Boilers; motors; lighting
Cogeneration	Chemical, paper, and metallurgy; oil refining
Retrofits	Iron and steel sector;
Production process	Efficiency improvements in design and production
Waste fuels recovery	Cement sector; landfills
Household	
Conservation	Education and outreach
Appliances	Solar water heaters; biomass cooking stoves
Lighting	Fluorescent light bulbs; interior design
Transportation	
Fleet vehicles	Alternative fuel vehicles
Mass transit	Expand existing forms; light rail

Source: Auckland et al. 2002; Seroa da Motta et al. 2000; Lawson et al. 2001; Austin and Faeth 1999.

### • Who can enter into CDM projects?

Provided they are legal entities in their country, CDM projects can involve all sectors of society – government, non-profit, business, and private citizens – in cooperation between Annex I and non-Annex I countries.

### Investors and Hosts

The principal and direct actors in CDM projects are the investors and hosts. *Investors* are entities from Annex I Parties (e.g. corporations, NGOs, and government agencies)

that buy in to CDM projects in non-Annex I countries and receive CER credits in exchange. *Hosts* are entities from non-Annex I Parties that accommodate and receive CDM investment in their country.

### **Private Sector**

CDM projects will be implemented through non-profit, public and private partnerships, including the participation of local communities and groups where the projects take place. However the private sector has the greatest opportunity with the CDM mechanism because it is within this sector that emissions cuts will be made and traded. The private sector is also the recipient of increasing investment flows that can be coupled with CDM projects (Kete et al. 2001). Further, the CDM is a market-based mechanism designed precisely with the private sector in mind.

### **Participation Requirements**

Entities from non-Annex I countries that have ratified the Kyoto Protocol can host CDM projects (F30). Entities from Annex I countries that have ratified the Kyoto Protocol can invest in CDM projects and receive credits for projects that reduce various GHGs (Table 5).<sup>6</sup> Investors can receive credits for CDM projects if the country where they are legally recognized has (F31):

- Its commitment quota properly calculated and recorded,
- A national accounting system of GHGs in place,
- Submitted a national greenhouse gas inventory,
- Amounts in accordance with the Kyoto Protocol communication requirements.

**Table 5: Eligible Investor Countries**

<b>Investor Countries<sup>a</sup></b>			
Australia	Estonia	Latvia	Russian Federation
Austria	Finland	Liechtenstein	Slovakia
Belarus	France	Lithuania	Slovenia
Belgium	Germany	Luxembourg	Spain
Bulgaria	Greece	Monaco	Sweden
Canada	Hungary	Netherlands	Switzerland
Croatia	Iceland	New Zealand	Turkey
Czech Republic	Ireland	Norway Poland	Ukraine
Denmark	Italy	Portugal	UK
EU	Japan	Romania	USA

<sup>a</sup> Annex B countries identified in the Kyoto Protocol that have GHG reduction commitments. These countries first need to ratify the Kyoto Protocol in order to use the CDM mechanism. Entities in these countries – whether public or private – constitute the investors in CDM.

If Annex I countries authorize a CDM project they must remain in good standing and remain responsible for the fulfillment of these obligations under the Kyoto Protocol (F33). The Secretariat will keep a list of Parties that are in good standing and will make this list public (F34). This list can be viewed from the UNFCCC website at: <http://unfccc.int/resource/kpstats.pdf>.

<sup>6</sup> Annex I comprises countries that have GHG reduction commitments under the Kyoto Protocol.

### **National Authority**

Governments in developing countries need to designate a national authority for CDM projects. The National Authority takes part in the validation process and has the responsibility of certifying that the project contributes to the sustainable development goals of the host country.

### **Designated Operational Entities (DOE)**

Operational entities are domestic or international legal entities that carry out CDM reporting and mediating functions (see Annex B for standards for accreditation). Operational entities must first become designated by the Executive Board to carry out these functions (see Annex A for Executive Board responsibilities). Different countries may have different DOEs.

The DOE's responsibilities are (E27):

- ❑ To validate CDM project activities,
- ❑ To verify and certify emission reductions,
- ❑ To maintain a public list of CDM projects,
- ❑ To submit an annual report to Executive Board,
- ❑ To make information about CDM projects publicly available (unless deemed proprietary or confidential).

### **Government**

Governments of non-Annex I Parties play a key role in enabling and promoting CDM projects. Auckland et al. (2002) and Lawson et al. (2001) identify key points that governments can initiate to enable CDM projects. These include:

- ❑ Ratifying the Kyoto Protocol,
- ❑ Encouraging other countries to ratify the Kyoto Protocol,
- ❑ Establishing a national authority to oversee CDM projects,
- ❑ Identifying requirements for CDM projects such as sustainable development criteria,
- ❑ Identifying specific projects that meet these criteria,
- ❑ Developing enforceable environmental regulation,
- ❑ Providing incentives that promote the CDM and emissions reduction opportunities,
- ❑ Building national capacity and infrastructure for CDM projects,
- ❑ Setting up integrated national procedures and infrastructure for CDM projects,
- ❑ Promoting CDM projects and participation,
- ❑ Facilitating investment procedures,
- ❑ Coordinate between industries to identify CDM opportunities,
- ❑ Developing a "master plan" for a national CDM strategy.

### **• What are the outcomes of CDM projects?**

With the implementation of the Kyoto Protocol there will be a growing demand for carbon credits as Annex I countries seek lower-cost ways to meet their commitments. This demand will be affected by the still-evolving rules developed for the CDM, the transaction costs involved in CDM projects, and the particular marginal costs of

emissions reductions of the hosts and the investors (Lawson et al. 2001). While taking these factors into account, the outcomes of the various CDM projects will depend on the success in attracting foreign investment and selling credits in this emerging multi-billion dollar a year market (Aukland et al. 2002; Lawson et al. 2001). This market potential will lead to varying outcomes depending on the formation of CDM infrastructure and stakeholder priorities in developing countries.

In general, the outcomes of CDM projects may include:

- ❑ More resources to pursue sustainable development goals,
- ❑ Increased foreign investment to make new projects possible or to remove market barriers,
- ❑ Increasing a company's competitive advantage over their competitors,
- ❑ A potential source for additional income streams.

• **Why would CDM projects take place?**

Entities in developed countries that have undertaken commitments under the Kyoto Protocol will invest in CDM projects because it is cost-effective to invest in emission reduction projects in developing countries. When governments in developed countries undertake commitments to reduce emissions under the Kyoto Protocol, they may put into place various policies and measures (e.g. taxes, regulations, standards, etc.) that may compel entities (private sector companies, government agencies, etc.) to seek cost-effective ways of complying with these policies and measures. These domestic policies and measures may accept CDM credits or CERs from regulated entities thus creating incentives for investment and use of CERs resulting from CDM projects.

In this context, the CDM projects offer many opportunities for various actors (Table 6). Overall, these projects offer a new opportunity to develop and attract foreign investment while providing a cost-effective way of meeting environmental goals.

**Table 6: Potential Actors and Reasons for Participation in CDM Projects**

Actor	Reason for participation
Developing country	Promote sustainable development through investment
Developed country	Meet Kyoto Protocol commitments at low costs
Non-governmental organizations	Promote the environment and development
Corporations	Offset emissions; investment opportunity
Niche company	Commercial opportunity; diffuse technology
Industry associations	New opportunities for members
Brokers	Commercial opportunity
Development banks	Promote sustainable development; create new markets
Institutional investors	Portfolio diversification; socially responsible investing

Source: Baumert et al. 2000: 11.

### **Benefits**

The benefits from participating in a CDM project are inclusive, win-win, for both investor and host.

### **Hosting entity**

Hosting entities stand to gain from additional investments in their enterprise. The benefits will vary with each case, but in general hosting entities will benefit from technology transfer, more efficient design, enhanced project feasibility, and capital investment. These investments can yield decisive competitive advantages. Once CER credits are produced from CDM projects, they can be sold as any other commodity.<sup>7</sup> CERs will be sought after by those entities required to reduce GHGs or CER brokers because they represent a low-cost means of meeting GHG reduction targets.

### **Hosting country**

CDM projects are a potential source for new foreign investment. The CDM concept was first proposed by Brazil and stands as a medium for developing countries to receive foreign investment to achieve their development goals while reducing global climate change. CDM projects can also augment existing development projects. Both are opportunities to further sustainable development goals in the emerging low carbon global economy. Other benefits include biodiversity protection; cleaner air and water; and sources of employment and poverty alleviation (Austin and Faeth 1999).

### **Investing entity**

CDM projects enable private and other entities to comply with domestic GHG reduction regulations and are a mechanism intended to help Annex I countries meet their Kyoto commitments at lower costs. Investing entities may develop and invest in CDM projects depending on financial returns. The return for investment will be CER credits that can be used against their GHG reduction commitments, or they can be sold. Investing may take the form of financial contribution; full or partial equity; loan or lease financing; or a purchasing agreement for CERs (Pembina Institute 2002). CDM projects also provide an opportunity to associate their organization with sustainable development priorities.

### **Investing country**

CDM projects are an option for Annex I countries to receive emission reduction credits at lower costs since the marginal costs of GHG emissions reductions are generally lower in developing countries than in Annex I countries.

### **Benefits for the planet**

The CDM is one of three flexibility mechanisms being used to achieve GHG reductions with the hope of eventually stabilizing global climate. By pursuing emissions reductions where they can be achieved at lower costs, the CDM policy option is not only economically advantageous, but politically expedient as well.

---

<sup>7</sup> The idea of unilateral CDM projects, that is generating CERs without an Annex I investor, has been raised in several venues. At this point it is unknown how the Executive Board will decide to proceed on this matter. However, unilateral CDM projects are not currently prohibited.

- **Where can CDM projects take place?**

CDM projects can take place in non-Annex I countries that will or have ratified the Kyoto Protocol. As with any commercial venture, there can be many reasons why a particular country may be chosen – cost of technological upgrade or retrofit; potential return on investment; tax structure; openness to foreign investment; legal infrastructure; availability of financing; labor availability and costs; stability; momentum or existing business relationships and partnerships; government cooperation; and so on.

Sokona and Nanasta (2000: 11) suggest that in order to develop an enabling environment that will attract CDM projects to Africa, a comprehensive strategy including stronger institutional capacities for a regulatory and monitoring framework need to be conceived. They also suggest that the "other basic capacities that seem indispensable include":

- An established business environment,
- An appropriate and well-linked administrative and institutional frameworks,
- An adequate and well-maintained infrastructure,
- Capable project developers and business managers,
- Firm links between the private sector, government and NGOs,
- Development of accessible project information databases.

These criteria, and others, will have to be evaluated by the project participants and potential investors on a case-by-case basis to determine promising CDM locations.

- **When can CDM projects start?**

Project activities starting after January 1, 2000, are eligible but must be registered by December 31, 2005. A project can only receive credits for emissions reductions after the initiation of the CDM project (i.e. according to Article 12 of the Kyoto Protocol, no credit will be issued to prior activities that may have reduced GHG emissions). Credits from CDM projects can be used anytime after an investing country has ratified the Kyoto Protocol and the Kyoto Protocol has taken effect.<sup>8</sup>

**Prompt start**

While the rules are still being developed and simplified to facilitate a prompt start for CDM projects, the intent is that if established procedures are followed, small-scale projects can get underway quickly. The rules will be refined at COP 8 in October 2002 where it is expected that CDM projects will become prompt start eligible. The criteria for small-scale prompt start eligibility are:

- Renewable energy projects of less than 15 MW capacity,
- Energy efficiency improvement projects of less than 15 GWh/year,
- Other projects of less than 15 kilotonnes CO<sub>2</sub> equivalent emissions.

Operational entities will be provisionally designated and accredited for these projects.

---

<sup>8</sup> It is expected that the Kyoto Protocol will enter force in late 2002.

• **How are CDM projects implemented?**

The project-specific rules for CDM projects as described in the Marrakech Accords decided at COP 7 in November 2001, are summarized below. The official text of the Marrakech Accords pertaining to CDM can be found in Appendix A. Where appropriate, checklists for project participants are provided below. All costs for the steps enumerated below are borne by the project subject to the agreement between the project proponents.

The CDM project process consists of five steps (Table 7).

**Table 7: CDM Activity Cycle under the Marrakech Accords**

<b>Step</b>	<b>Definition</b>	<b>Responsible Entity</b>
<b>1. Project Design</b> (Appendix B)	A document with the information needed about the proposed CDM project.	Project participants
<b>2. Validation and Registration</b> (G35-52)	Validation is the process of independent evaluation of a CDM project.  Registration is the formal acceptance of a validated project.	Operational entity  Executive Board
<b>3. Monitoring</b> (H53-60)	The collection and archiving of all relevant data necessary for establishing GHG emissions by sources occurring within the project boundary during the crediting period.	Project participants
<b>4. Verification and certification</b> (I61-63)	Verification is the periodic independent review and determination that GHG reductions have occurred as a result of a registered CDM project activity during the verification period.  Certification is the written assurance that a project activity achieved the GHG reductions stated during the specified time period.	Operational entity  Operational entity
<b>5. Issuance</b> (J64-66)	Certified emission reductions (CERs) are issued to the Parties' account.	Executive Board

The **project design** originates from the host country, and can be in cooperation with some other entity. Feasibility studies based on the project's potential and local conditions should be assessed as well as receiving approval from the host

government. **Validation** by the operational entity takes place where the operational entity resides. Operational entities can be located anywhere as long as they qualify (see Annex B). The operational entity passes the validation report on to the Executive Board for **registration**. The project participants monitor the project according to an approved **monitoring** plan (see below). The operational entity reviews and audits CDM projects, including on-site visits, to **verify** the GHG reductions. The operational entity then delivers a report to the Executive Board **certifying** the reduction. Based on the certification report, the Executive Board **issues** the CERs.

These five steps are now more fully developed and taken in order.

**Step #1: Project Design**

In its entirety, the project design should define the GHG boundaries of the project; calculate the baseline emissions amounts and the reductions incurred due to the project; state the crediting period; and adjust for leakages (Auckland et al. 2002).

The following checklist is derived from the Marrakech Accords for potential CDM project proposals. For a more complete template see Appendix C.

**Form 1: Project Design Checklist** (Appendix B of the Marrakech Accords)

<b>Project description</b> should include:	
	The project's purpose
	A technical explanation of the project
	If technology will be transferred, an explanation of how this transfer will occur
	A description and justification of the project's boundary
	A statement of how long the project will last
	Identify the crediting period that is being applied for:
	a maximum of seven years, that can be renewed twice; <sup>9</sup> or,
	a maximum of 10 years with no renewal
	A description of how this project reduces GHGs above-and-beyond business-as-usual
	Documentation and references to impacts that are considered significant to the host Party, including a transboundary, social, and/or environmental impact assessment
	Information on any source of public funding for the project and how this funding is not distracted from official development assistance, and is not part of the financial obligations of the Parties
	A summary of stakeholder comments, including a description of the stakeholder process, and how these comments were considered in the project <sup>10</sup>

<sup>9</sup> Provided the original baseline is still valid or has been updated.

<sup>10</sup> A CDM project must be held up for stakeholder comment for 30 days.

**Form 1 continued: Project Design Checklist**

<b>Monitoring Plan</b> (see Step #3 for more detail)	
<input type="checkbox"/>	Identify data needs and data quality. Is it accurate? Comparable? Complete? Valid?
<input type="checkbox"/>	State what methodologies will be used to collect the data and monitor the project and how the quality of these activities be controlled.
<input type="checkbox"/>	If a new monitoring methodology is being proposed:
<input type="checkbox"/>	Describe the new methodology
<input type="checkbox"/>	Assess its strengths and weaknesses
<input type="checkbox"/>	State whether the methodology has been applied successfully elsewhere
<b>Baseline Methodology</b> <sup>11</sup>	
<input type="checkbox"/>	If using an approved methodology provide (see below):
<input type="checkbox"/>	A statement of which methodology was chosen (see explanations below)
<input type="checkbox"/>	Status Quo Emissions
<input type="checkbox"/>	Market Conditions
<input type="checkbox"/>	Best Available Technology
<input type="checkbox"/>	A statement of how this methodology will be used
<input type="checkbox"/>	If using a new methodology provide:
<input type="checkbox"/>	A statement on how the baseline was established in a transparent and conservative manner <sup>12</sup>
<input type="checkbox"/>	A description and justification of this new baseline methodology
<input type="checkbox"/>	An assessment of its strengths and weaknesses
<input type="checkbox"/>	Description of key parameters, data sources, and assumptions
<input type="checkbox"/>	An assessment of uncertainties
<input type="checkbox"/>	Baseline emissions projections
<input type="checkbox"/>	How this methodology will address "leakage"
<input type="checkbox"/>	How this baseline considers national or sectoral circumstances

**Approved Baseline Methodologies**

Three baseline methodologies are acceptable as laid out in the Marrakech Accords (G48).

- **Status Quo Emissions:** Assumes a baseline from a projection of historic and current trends, or business-as-usual, where emission factors are based on this trend and reductions are calculated from this trend.
- **Market Conditions:** Assumes a baseline from current market conditions where emission factors are based on the technology used in the market and reductions are calculated by applying this technology.

<sup>11</sup> A baseline is a scenario that represents the GHG emissions from all sectors and sources that would occur without the CDM project, or that represents business-as-usual.

<sup>12</sup> Standardized methodologies should be conservative so as to not overestimate emissions reductions.

- **Best Available Technology:** Assumes a baseline from the most efficient technological processes (the top 20% of their category under similar circumstances) available where emission factors are based on commercial availability of this technology and reductions are calculated by applying this technology (Pembina Institute 2002).

**Form 1 continued: Project Design Checklist**

<b>Calculations<sup>13</sup></b>	
	A. Describe and calculate baseline GHG emissions by sources
	B. Describe and calculate leakage
	Sum A and B to determine the CDM project emissions
	C. Describe and calculate or estimate GHG emissions by source within the project boundary
	D. Describe and calculate project leakage
	Sum C and D to calculate baseline emissions
	Subtract CDM project emissions from baseline emissions to calculate the emission reductions of the CDM project $((A+B) - (C+D))$

Note: all calculations should be converted into carbon dioxide equivalent (CO<sub>2</sub>e) totals. For a CO<sub>2</sub>e calculation worksheet see Annex D.

**Step #2: Validation and Registration**

Based on the project design, the operational entity will evaluate and validate the proposed CDM project (G35).

The operational entity will check to make sure the following is included and addressed in the project design (G35-G52):

- The project is voluntary and is approved by the host country,
- The project complies with the rules,
- It is shown that GHG emissions decreases are above-and-beyond business-as-usual,
- It includes stakeholder comments,
- It includes an environmental impact analysis,
- That the project boundary comprises all GHG sources under the control of the project participants and that are attributable to the CDM project (so called leakage), if not, these amounts must be adjusted,
- That the baseline methodology complies with previously approved methods:
  - New baseline methodologies need to be submitted to the Executive Board for approval;

<sup>13</sup> Include references, if any, to support your calculations and formulas.

- Baseline calculations must be transparent, conservative, and account for uncertainty;
  - Calculations are per project and reflect the relevant national and sectoral circumstances and may include a future scenario based on national circumstances,
  - Calculations were made by an approved baseline methodology (see above),
- Baselines must not reflect factors outside of project boundaries, including unseen forces or natural disasters,
- That a crediting period was chosen.

The operational entity needs confirmation from the host Party (government) that the project assists in achieving sustainable development and that participation is voluntary. This confirmation will be made public and will be open for comment (G40). The designated National Authority for CDM in non-Annex I Parties is expected to fulfill this role.

### **Registration**

The Executive Board will formally accept the project based on the operational entity's validation report. This process is called registration, and it becomes final eight weeks after the report is received by the Executive Board (G41). If the Executive Board requires a review, the review will consider the validation requirements and communicate the decision to the participants and the public (G41). A rejected project can be reconsidered after it is revised in accordance with all procedures above (G42). Registration is necessary to continue with the verification, certification, and issuance of CERs (G36).

- CDM projects can be eligible for validation and registration if registered before 31 December 2005.

### **Step #3: Monitoring**

A monitoring plan must be included with the project design (H53). The monitoring methodologies must comply with previously approved methods or with a new approved methodology (G38), or a new methodology must be shown to be successfully applied elsewhere (H54).

- The project participants are to implement the monitoring plan (H56).
- Any revisions to the monitoring plan must be justified and submitted again for validation (H57).

The implementation of the registered monitoring plan is a condition for verification, certification, and issuance of CERs (H58), and must be submitted to the operational entity in order to move ahead to Step #4, verification and certification (H60).

In addition to the requirements listed in Form 1, the Marrakech Accords requires that specific GHG data, calculations, and quality assurance measures are listed in the project design (Form 2).

**Form 2: Monitoring Plan Checklist**

<b>The Monitoring Plan (H53, H59)</b>	
<input type="checkbox"/>	Include the emission data necessary for estimating or measuring GHG emissions within the project boundaries and crediting period.
<input type="checkbox"/>	Include data on that identifies all potential sources of GHG from outside the project area.
<input type="checkbox"/>	Include assurance on data quality and control procedures.
<input type="checkbox"/>	Include procedures for the periodic calculations of GHG reductions by sources and "leakages."
<input type="checkbox"/>	Emission reductions must be calculated by the registered methodology, subtracting actual emissions by sources from the baseline emissions, and adjusted for leakage.
<input type="checkbox"/>	Provide supporting documentation of all these steps.

Note: small-scale CDM projects may use the simplified modalities and procedures being developed by the Executive Board (H55).

**Step #4: Verification and Certification**

The operational entity will then review the monitored emissions reductions that have occurred as a result of the CDM project and provide written assurance, or certification, that the project achieved the stated reductions in the specified period (I61). Written certification will be based on this verification report and is considered final fifteen days after being received by the Executive Board. This certification ensures that GHG emission reductions above-and-beyond business-as-usual did in fact occur. The written certification is delivered to the Parties, Executive Board, and the public (unless deemed proprietary or confidential) (I63).

The operational entity will do the following (I63):

- Verify the methodologies used,
- Make sure the documentation is complete, and if necessary, recommend changes,
- Determine emission reductions,
- Inform project participants of any concerns,
- Provide a verification report to the project participants.

The operational entity will also (I62):

- Make on-site inspections,
- Interview stakeholders,
- Collect measurements,
- Observe practices,
- Test the accuracy of monitoring equipment.

**Step #5: Issuance of CERs**

The written certification report will include a request that the Executive Board issue a CER equal to the amount of GHG emission reductions realized by the CDM project (J64). The issuance is final 15 days after receiving the request for issuance, unless there is reason to believe the operational entity engaged in fraud, malfeasance, or is incompetent. In such cases the Executive Board makes its review within 30 days following the decision to review the operational entity's certification to the Executive Board. These decisions are made public (J65).

The CDM registry administrator (part of the Executive Board) deposits the CERs in the registry accounts of the Parties and project participants, minus administrative expense (J66).

## **Part III: Annexes**

### **Annex A: The Executive Board** (section D of the Marrakech Accords)

CDM projects are overseen by a ten-member Executive Board, which is appointed and held accountable by the Parties to the UNFCCC, or Conference of Parties (COP), and countries that have ratified the Kyoto Protocol (MOP).

The Executive Board's (C5, C6, D20, D21) responsibilities are to:

- ❑ Oversee CDM projects,
- ❑ Report, maintain, develop, and recommend CDM rules, modalities, and procedures,
- ❑ Accredite operational entities, with occasional spot checks,
- ❑ Suspend accredited status if necessary,
- ❑ Report on the equitable distribution of CDM projects,
- ❑ Make CDM activities and opportunities public (except when proprietary or confidential),
- ❑ Manage the CDM registry.

On baseline and monitoring methodologies (Appendix Ca), the Executive Board shall give general guidance and:

- ❑ Elaborate on the provisions relating to baseline and monitoring methodologies,
- ❑ Promote consistency, transparency, and predictability,
- ❑ Ensure real, measurable reductions in emissions that reflect what actually happened within the CDM project boundary,
- ❑ Ensure a good geographic coverage of CDM projects,
- ❑ Address additionality.

On baseline and monitoring methodologies (Appendix Cb), the Executive Board shall give specific guidance on:

- ❑ The definition of project categories that have common characteristics for baseline setting and monitoring, including guidance on the multiple project aggregation within common geographic regions,
- ❑ The standardization of methodologies for reasonable BAU estimations,
- ❑ Monitoring methodologies that accurately measure the actual reductions as a result of the project activity,
- ❑ Other methodological tools that help in choosing the most appropriate methodology given the project's circumstances,
- ❑ Data availability,
- ❑ The need for consistency and cost-effectiveness,
- ❑ Determining project boundaries and "leakage,"
- ❑ How to account for national or regional political, economic circumstances,
- ❑ How to compare factors such as different fuels and technologies.

The Executive Board shall also consider (Appendix Cd):

- ❑ Host country or regional practices, and trends,
- ❑ Least cost technology options for the CDM projects.

**Annex B: Standards for the accreditation of operational entities** (Appendix A of the Marrakech Accords)

The potential operational entity has to be a domestic or international legal entity with the administrative and management capacity and financial stability necessary to carry all functions required under the CDM.

The entity must also have:

- Expertise or have access to the expertise needed to carry out the various CDM functions,
- A good understanding of the modalities, procedures, guidelines, decisions, and issues of the CDM process, and the COP/MOP and Executive Board decisions,
- Expertise in environmental issues,
- Expertise in setting baselines and monitoring emissions,
- Expertise in environmental auditing and accounting methodologies, including emissions by sources,
- Expertise in regional and sectoral circumstances.

The prospective operational entity should be able to work in a credible, independent, non-discriminatory, and transparent manner, complying with applicable national law, and have documented safeguards of impartiality; there should be no conflict of interests between the operational entity and the CDM project.

The potential operational entity must also make the following available to the Executive Board for accreditation:

- The names of the relevant personnel,
- An organizational administrative chart,
- Its quality assurance policies and procedures,
- Its administrative procedures, including document control,
- Its policies and procedures for recruiting qualified personnel,
- Its complaints, appeals, and dispute procedures.

The potential operational entity must have no malpractice, fraud, or any other incompatible legal circumstances pending.

If the operational entity will also be identifying, developing, or financing CDM projects, they must:

- Make a declaration about their current and future CDM activities,
- Clearly show no conflict of interest with other parts of the organization or other functions it may have,
- Show how it manages to minimize any risk to impartiality,
- Show no commercial or financial interests that may influence their impartiality and independence,
- Have the capacity to safeguard the confidentiality of the information it gathers from project participants.

**Annex C: CDM Registry Requirements** (Appendix D of the Marrakech Accords)

The CDM registry will be established and maintained by an Executive Board administrator.

The CDM registry will be a standardized electronic database containing data on the issuance, holding, transfer, and acquisition of certified emissions reductions (CERs). Data storage will conform to COP/MOP technical standards to ensure accuracy, transparency, and efficient data exchange between national registries.

The following accounts will be included in the CDM registry:

- ❑ An Executive Board pending account where CERs are issued before being transferred to other accounts,
- ❑ A holding account(s) for each non-Annex I Party hosting a CDM project or Party that requests an account,
- ❑ An account(s) for the purpose of holding canceled ERUs, CERs, AAUs, and RMUs when accreditation has been withdrawn or suspended for some project,
- ❑ An account(s) for proceeds from certified projects to cover administrative expenses and to assist particularly vulnerable developing Parties adapt to climate change.

CERs can only be held in one account at any given time – there can be no double counting.

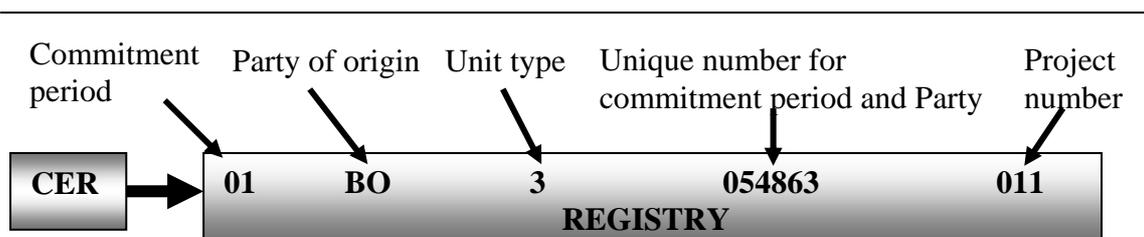
Each account within the CDM registry will have a unique account number with the Party/organization identifier number and a unique number for the account of the Party or organization.

When instructed by the Executive Board to issue CERs for a CDM project, the registry administrator shall:

- ❑ Issue the pending quantity into the Executive Board's pending account,
- ❑ Take the share of CERs needed to cover administrative costs and adaptation assistance and put them into the appropriate proceeds accounts,
- ❑ Put the remaining CERs into the registry accounts of the project participants and Parties involved.

Each CER shall have its own unique serial number (Figure 2).

**Figure 2: CER Registry Serial Numbers**



Source: Howard 2001.

When accreditation has been suspended, the ERUs, CERs, AAUs, and/or RMUs equal to the excess CERs issued shall be transferred to the cancellation account and cannot be used again for GHG reduction compliance.

Non-confidential information will be made public via the Internet. This information must include:

- Up-to-date information on each account in the registry by:
  - Account name,
  - Representative identifier,
  - Representative name and contact information,
- CDM project information for each project that has received CERs:
  - Project name,
  - Location,
  - Year(s) of CER issuance,
  - Operational entity,
  - Public reports,
- Holding and transaction information by serial number for each year:
  - Total quantity of CERs in each account,
  - Total quantity of CERs issued,
  - Total number of CERs transferred with the identity of the accounts,
  - Total quantity of ERUs, CERs, AAUs, and RMUs cancelled
  - Current CER holdings in each account.

**Annex D: CO<sub>2</sub> Equivalent Calculation Worksheet**

All units should be converted to metric tonnes before inserted into this worksheet.

<b>GHG</b>	<b>Baseline Emissions</b>		<b>CDM Project Emissions</b>		<b>Net Reduction</b>		<b>GWP<sup>a</sup></b>		<b>CO<sub>2</sub>e<sup>b</sup></b>
CO <sub>2</sub>		-		=		x	1	=	
CH <sub>4</sub>		-		=		x	21	=	
N <sub>2</sub> O		-		=		x	310	=	
HFC-23		-		=		x	11,700	=	
HFC-125		-		=		x	2,800	=	
HFC-134a		-		=		x	1,300	=	
HFC-152a		-		=		x	140	=	
CF <sub>4</sub>		-		=		x	6,500	=	
C <sub>2</sub> F <sub>6</sub>		-		=		x	9,200	=	
SF <sub>6</sub>		-		=		x	23,900	=	
Totals		-		=					
<b>Grand Total</b>									

Source: Pembina Institute (2002: 60-1).

<sup>a</sup>Global warming potential as related to CO<sub>2</sub>.

<sup>b</sup>Carbon dioxide equivalent.

## **Appendix A: The Marrakech Accords: CDM Modalities and Procedures**

### **Marrakech Accords: Rules for Articles 6, 12 and 17**

Decision 15/CP.7

#### **Principles, nature and scope of the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol**

The Conference of the Parties,

Recalling its decision 1/CP.3, in particular paragraphs 5(b), (c) and (e),

Further recalling its decisions 7/CP.4, 8/CP.4, 9/CP.4, 14/CP.5, and 5/CP.6 containing the Bonn Agreements on the implementation of the Buenos Aires Plan of Action, as appropriate,

Recalling also the preamble to the Convention,

Recognizing that, in using the mechanisms, Parties shall be guided by the objective and principles contained in Articles 2 and 3 and by Article 4, paragraph 7, of the Convention,

Further recognizing that the Kyoto Protocol has not created or bestowed any right, title or entitlement to emissions of any kind on Parties included in Annex I,

Emphasizing that the Parties included in Annex I shall implement domestic action in accordance with national circumstances and with a view to reducing emissions in a manner conducive to narrowing per capita differences between developed and developing country Parties while working towards achievement of the ultimate objective of the Convention,

Affirming that the use of the mechanisms shall be supplemental to domestic action and that domestic action shall thus constitute a significant element of the effort made by each Party included in Annex I to meet its quantified emission limitation and reduction commitments under Article 3, paragraph 1,

Further emphasizing that environmental integrity is to be achieved through sound modalities, rules and guidelines for the mechanisms, sound and strong principles and rules governing land use, land use change and forestry activities and a strong compliance regime,

Aware of its decisions 11/CP.7, 16/CP.7, 17/CP.7, 18/CP.7, 19/CP.7, 20/CP.7, 21/CP.7, 22/CP.7, 23/CP.7 and 24/CP.7,

Recommends that the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, at its first session, adopt the draft decision below.

8th plenary meeting  
10 November 2001

### **Decision 17/CP.7**

#### **Modalities and procedures for a clean development mechanism as defined in Article 12 of the Kyoto Protocol**

The Conference of the Parties,

Recalling Article 12 of the Kyoto Protocol which provides that the purpose of the clean

development mechanism shall be to assist Parties not included in Annex I to the Convention in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3 of the Kyoto Protocol,

Recalling also its decision 5/CP.6 containing the Bonn Agreements on the implementation of the Buenos Aires Plan of Action,

Aware of its decisions 2/CP.7, 11/CP.7, 15/CP.7, 16/CP.7, 18/CP.7, 19/CP.7, 20/CP.7, 21/CP.7, 22/CP.7, 23/CP.7, 24/CP.7 and 38/CP.7,

Affirming that it is the host Party's prerogative to confirm whether a clean development mechanism project activity assists it in achieving sustainable development,

Recognizing that Parties included in Annex I are to refrain from using certified emission reductions generated from nuclear facilities to meet their commitments under Article 3, paragraph 1,

Bearing in mind the need to promote equitable geographic distribution of clean development mechanism project activities at regional and subregional levels,

Emphasizing that public funding for clean development mechanism projects from Parties in Annex I is not to result in the diversion of official development assistance and is to be separate from and not counted towards the financial obligations of Parties included in Annex I,

Further emphasizing that clean development mechanism project activities should lead to the transfer of environmentally safe and sound technology and know-how in addition to that required under Article 4, paragraph 5, of the Convention and Article 10 of the Kyoto Protocol,

Recognizing the need for guidance for project participants and designated operational entities, in particular for establishing reliable, transparent and conservative baselines, to assess whether clean development mechanism project activities are in accordance with the additionality criterion in Article 12, paragraph 5(c), of the Kyoto Protocol,

1. Decides to facilitate a prompt start for a clean development mechanism by adopting the modalities and procedures contained in the annex below;
2. Decides that, for the purposes of the present decision, the Conference of the Parties shall assume the responsibilities of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol as set out in the annex below on modalities and procedures;
3. Invites nominations for membership in the executive board:
  - (a) For facilitating the prompt start of the clean development mechanism, from Parties to the Convention to be submitted to the President of the Conference of the Parties at its present session, with a view to the Conference of the Parties electing the members of the executive board at that session;
  - (b) Upon the entry into force of the Kyoto Protocol, to replace any member of the executive board of the clean development mechanism whose country has not ratified or acceded to the Protocol. Such new members shall be nominated by the same constituencies and elected at the first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol;
4. Decides that, prior to the first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, the executive board and any designated operational entities shall operate in the same manner as the executive board and designated operational entities of the clean development mechanism as set out in the annex below;

5. Decides that the executive board shall convene its first meeting immediately upon the election of its members;

6. Decides that the executive board shall include in its work plan until the eighth session of the Conference of the Parties, inter alia, the following tasks:

(a) To develop and agree on its rules of procedure and recommend them to the Conference of the Parties for adoption, applying draft rules until then;

(b) To accredit operational entities and designate them, on a provisional basis, pending the designation by the Conference of the Parties at its eighth session;

(c) To develop and recommend to the Conference of the Parties, at its eighth session, simplified modalities and procedures for the following small-scale clean development mechanism project activities:

(i) Renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent);

(ii) Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt/hours per year;

(iii) Other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnes of carbon dioxide equivalent annually;

(d) To prepare recommendations on any relevant matter, including on Appendix C to the annex below, for consideration by the Conference of the Parties at its eighth session;

(e) To identify modalities for seeking collaboration with the Subsidiary Body for Scientific and Technological Advice on methodological and scientific issues;

7. Decides:

(a) That the eligibility of land use, land-use change and forestry project activities under the clean development mechanism is limited to afforestation and reforestation;

(b) That for the first commitment period, the total of additions to a Party's assigned amount resulting from eligible land use, land-use change and forestry project activities under the clean development mechanism shall not exceed one per cent of base year emissions of that Party, times five;

(c) That the treatment of land use, land-use change and forestry project activities under the clean development mechanism in future commitment periods shall be decided as part of the negotiations on the second commitment period;

8. Requests the secretariat to organize a workshop before the sixteenth session of the Subsidiary Body for Scientific and Technological Advice with the aim of recommending terms of reference and an agenda for the work to be conducted under paragraph 10(b) below on the basis of, inter alia, submissions by Parties referred to in paragraph 9 below;

9. Invites Parties to provide submissions to the secretariat by 1 February 2002 on the organization of the workshop referred to in paragraph 8 above, and to express their views on the terms of reference and the agenda for the work to be conducted under paragraph 10(b) below;

10. Requests the Subsidiary Body for Scientific and Technological Advice:

(a) To develop at its sixteenth session terms of reference and an agenda for the work to be

conducted under subparagraph (b) below, taking into consideration, inter alia, the outcome of the workshop mentioned in paragraph 8 above;

(b) To develop definitions and modalities for including afforestation and reforestation project activities under the clean development mechanism in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to decision -/CMP.1 (Land use, land-use change and forestry) and the terms of reference referred to in subparagraph (a) above, with the aim of adopting a decision on these definitions and modalities at the ninth session of the Conference of the Parties, to be forwarded to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session;

11. Decides that the decision by the Conference of the Parties at its ninth session, on definitions and modalities for inclusion of afforestation and reforestation project activities under the clean development mechanism, for the first commitment period, referred to in paragraph 10 (b) above, shall be in the form of an annex on modalities and procedures for afforestation and reforestation project activities for a clean development mechanism reflecting, mutatis mutandis, the annex to the present decision on modalities and procedures for a clean development mechanism;

12. Decides that certified emission reductions shall only be issued for a crediting period starting after the date of registration of a clean development mechanism project activity;

13. Further decides that a project activity starting as of the year 2000, and prior to the adoption of this decision, shall be eligible for validation and registration as a clean development mechanism project activity if submitted for registration before 31 December 2005. If registered, the crediting period for such project activities may start prior to the date of its registration but not earlier than 1 January 2000;

14. Requests Parties included in Annex I to start implementing measures to assist Parties not included in Annex I, in particular the least developed and small island developing States among them, with building capacity in order to facilitate their participation in the clean development mechanism, taking into account relevant decisions by the Conference of the Parties on capacity-building and on the financial mechanism of the Convention;

15. Decides:

(a) That the share of proceeds to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation, as referred to in Article 12, paragraph 8, of the Kyoto Protocol, shall be two per cent of the certified emission reductions issued for a clean development mechanism project activity;

(b) That clean development mechanism project activities in least developed country Parties shall be exempt from the share of proceeds to assist with the costs of adaptation;

16. Decides that the level of the share of proceeds to cover administrative expenses of the clean development mechanism shall be determined by the Conference of the Parties upon the recommendation of the executive board;

17. Invites Parties to finance the administrative expenses for operating the clean development mechanism by making contributions to the UNFCCC Trust Fund for Supplementary Activities. Such contributions shall be reimbursed, if requested, in accordance with procedures and a timetable to be determined by the Conference of the Parties upon the recommendation of the executive board. Until the Conference of the Parties determines a percentage for the share of proceeds for the administrative expenses, the executive board shall charge a fee to recover any project related expenses;

18. Requests the secretariat to perform any functions assigned to it in the present decision and in the annex below;

19. Decides to assess progress made regarding the clean development mechanism and to take appropriate action, as necessary. Any revision of the decision shall not affect clean development mechanism project activities already registered;

20. Recommends that the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, at its first session, adopt the draft decision below.

8th plenary meeting  
10 November 2001

**Draft decision -/CMP.1 (Article 12)**

**Modalities and procedures for a clean development mechanism as defined in Article 12 of the Kyoto Protocol**

The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol,

Recalling the provisions of Articles 3 and 12 of the Kyoto Protocol,

Bearing in mind that, in accordance with Article 12, the purpose of the clean development mechanism is to assist Parties not included in Annex I to the Convention in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3 of the Kyoto Protocol,

Aware of its decisions -/CMP.1 (Mechanisms), -/CMP.1 (Article 6), -/CMP.1 (Article 17), -/CMP.1 (Land use, land-use change and forestry), -/CMP.1 (Modalities for the accounting of assigned amounts), -/CMP.1 (Article 5.1), -/CMP.1 (Article 5.2), -/CMP.1 (Article 7) and -/CMP.1 (Article 8), and decisions 2/CP.7 and 24/CP.7,

Cognizant of decision 17/CP.7 on modalities and procedures for a clean development mechanism as defined in Article 12 of the Kyoto Protocol,

1. Decides to confirm, and give full effect to any actions taken pursuant to, decision 17/CP.7 and to any other relevant decisions by the Conference of the Parties, as appropriate;
2. Adopts the modalities and procedures for a clean development mechanism contained in the annex below;
3. Invites the executive board to review the simplified modalities, procedures and the definitions of small-scale project activities referred to in paragraph 6(c) of decision 17/CP.7 and, if necessary, make appropriate recommendations to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol;
4. Decides further that any future revision of the modalities and procedures for a clean development mechanism shall be decided in accordance with the rules of procedure of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, as applied. The first review shall be carried out no later than one year after the end of the first commitment period, based on recommendations by the executive board and by the Subsidiary Body for Implementation drawing on technical advice from the Subsidiary Body for Scientific and Technological Advice, as needed. Further reviews shall be carried out periodically thereafter. Any revision of the decision shall not affect clean development mechanism project activities already registered.

## **ANNEX**

### **Modalities and procedures for a clean development mechanism**

#### **A. Definitions**

1. For the purposes of the present annex the definitions contained in Article 11 and the provisions of Article 14 shall apply. Furthermore:

(a) An "emission reduction unit" or "ERU" is a unit issued pursuant to the relevant provisions in the annex to decision -/CMP.1 (Modalities for the accounting of assigned amounts) and is equal to one metric tonne of carbon dioxide equivalent, calculated using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5;

(b) A "certified emission reduction" or "CER" is a unit issued pursuant to Article 12 and requirements thereunder, as well as the relevant provisions in these modalities and procedures, and is equal to one metric tonne of carbon dioxide equivalent, calculated using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5;

(c) An "assigned amount unit" or "AAU" is a unit issued pursuant to the relevant provisions in the annex to decision -/CMP.1 (Modalities for the accounting of assigned amounts) and is equal to one metric tonne of carbon dioxide equivalent, calculated using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5;

(d) A "removal unit" or "RMU" is a unit issued pursuant to the relevant provisions in the annex to decision -/CMP.1 (Modalities for the accounting of assigned amounts) and is equal to one metric tonne of carbon dioxide equivalent, calculated using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5;

(e) "Stakeholders" means the public, including individuals, groups or communities affected, or likely to be affected, by the proposed clean development mechanism project activity.

#### **B. Role of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol**

2. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) shall have authority over and provide guidance to the clean development mechanism (CDM).

3. The COP/MOP shall provide guidance to the executive board by taking decisions on:

(a) The recommendations made by the executive board on its rules of procedure;

(b) The recommendations made by the executive board, in accordance with provisions of decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(c) The designation of operational entities accredited by the executive board in accordance with Article 12, paragraph 5, and accreditation standards contained in Appendix A below.

4. The COP/MOP shall further:

(a) Review annual reports of the executive board;

(b) Review the regional and subregional distribution of designated operational entities and take appropriate decisions to promote accreditation of such entities from developing country Parties<sup>2</sup>.

(c) Review the regional and subregional distribution of CDM project activities with a view to identifying systematic or systemic barriers to their equitable distribution and take appropriate decisions, based, inter alia, on a report by the executive board;

(d) Assist in arranging funding of CDM project activities, as necessary.

### **C. Executive board**

5. The executive board shall supervise the CDM, under the authority and guidance of the COP/MOP, and be fully accountable to the COP/MOP. In this context, the executive board shall:

(a) Make recommendations to the COP/MOP on further modalities and procedures for the CDM, as appropriate;

(b) Make recommendations to the COP/MOP on any amendments or additions to rules of procedure for the executive board contained in the present annex, as appropriate;

(c) Report on its activities to each session of the COP/MOP;

(d) Approve new methodologies related to, inter alia, baselines, monitoring plans and project boundaries in accordance with the provisions of Appendix C below;

(e) Review provisions with regard to simplified modalities, procedures and the definitions of small scale project activities and make recommendations to the COP/MOP;

(f) Be responsible for the accreditation of operational entities, in accordance with accreditation standards contained in Appendix A below, and make recommendations to the COP/MOP for the designation of operational entities, in accordance with Article 12, paragraph 5. This responsibility includes:

(i) Decisions on re-accreditation, suspension and withdrawal of accreditation;

(ii) Operationalization of accreditation procedures and standards;

(g) Review the accreditation standards in Appendix A below and make recommendations to the COP/MOP for consideration, as appropriate;

(h) Report to the COP/MOP on the regional and subregional distribution of CDM project activities with a view to identifying systematic or systemic barriers to their equitable distribution;

(i) Make publicly available relevant information, submitted to it for this purpose, on proposed CDM project activities in need of funding and on investors seeking opportunities, in order to assist in arranging funding of CDM project activities, as necessary;

(j) Make any technical reports commissioned available to the public and provide a period of at least eight weeks for public comments on draft methodologies and guidance before documents are finalized and any recommendations are submitted to the COP/MOP for their consideration;

(k) Develop, maintain and make publicly available a repository of approved rules, procedures, methodologies and standards;

(l) Develop and maintain the CDM registry as defined in Appendix D below;

(m) Develop and maintain a publicly available database of CDM project activities containing information on registered project design documents, comments received, verification reports, its decisions as well as information on all CERs issued;

- (n) Address issues relating to observance of modalities and procedures for the CDM by project participants and/or operational entities, and report on them to the COP/MOP;
- (o) Elaborate and recommend to the COP/MOP for adoption at its next session procedures for conducting the reviews referred to in paragraphs 41 and 65 below including, inter alia, procedures to facilitate consideration of information from Parties, stakeholders and UNFCCC accredited observers. Until their adoption by the COP/MOP, the procedures shall be applied provisionally;
- (p) Carry out any other functions ascribed to it in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP.

6. Information obtained from CDM project participants marked as proprietary or confidential shall not be disclosed without the written consent of the provider of the information, except as required by national law. Information used to determine additionality as defined in paragraph 43 below, to describe the baseline methodology and its application, and to support an environmental impact assessment referred to in paragraph 37(c) below, shall not be considered as proprietary or confidential.

7. The executive board shall comprise ten members from Parties to the Kyoto Protocol, as follows: one member from each of the five United Nations regional groups; two other members from the Parties included in Annex I; two other members from the Parties not included in Annex I; and one representative of the small island developing States, taking into account the current practice in the Bureau of the Conference of the Parties.

8. Members, including alternate members, of the executive board shall:

- (a) Be nominated by the relevant constituencies referred to in paragraph 7 above and be elected by the COP/MOP. Vacancies shall be filled in the same way;
- (b) Be elected for a period of two years and be eligible to serve a maximum of two consecutive terms. Terms as alternate members do not count. Five members and five alternate members shall be elected initially for a term of three years and five members and five alternate members for a term of two years. Thereafter, the COP/MOP shall elect, every year, five new members, and five new alternate members, for a term of two years. Appointment pursuant to paragraph 11 below shall count as one term. The members, and alternate members, shall remain in office until their successors are elected;
- (c) Possess appropriate technical and/or policy expertise and shall act in their personal capacity. The cost of participation of members, and of alternate members, from developing country Parties and other Parties eligible under UNFCCC practice shall be covered by the budget for the executive board;
- (d) Be bound by the rules of procedure of the executive board;
- (e) Take a written oath of service witnessed by the Executive Secretary of the UNFCCC or his/her authorized representative before assuming his or her duties;
- (f) Have no pecuniary or financial interest in any aspect of a CDM project activity or any designated operational entity;
- (g) Subject to their responsibilities to the executive board, not disclose any confidential or proprietary information coming to their knowledge by reason of their duties for the executive board. The duty of the member, including alternate member, not to disclose confidential information constitutes an obligation in respect of that member, and alternate member, and shall remain an obligation after the expiration or termination of that member's function for the executive board.

9. The COP/MOP shall elect an alternate for each member of the executive board based on the criteria in paragraphs 7 and 8 above. The nomination by a constituency of a candidate member shall be accompanied by a nomination for a candidate alternate member from the same constituency.

10. The executive board may suspend and recommend to the COP/MOP the termination of the membership of a particular member, including an alternate member, for cause including, inter alia, breach of the conflict of interest provisions, breach of the confidentiality provisions, or failure to attend two consecutive meetings of the executive board without proper justification.

11. If a member, or an alternate member, of the executive board resigns or is otherwise unable to complete the assigned term of office or to perform the functions of that office, the executive board may decide, bearing in mind the proximity of the next session of the COP/MOP, to appoint another member, or an alternate member, from the same constituency to replace the said member for the remainder of that member's mandate.

12. The executive board shall elect its own chairperson and vice-chairperson, with one being a member from a Party included in Annex I and the other being from a Party not included in Annex I. The positions of chairperson and vice-chairperson shall alternate annually between a member from a Party included in Annex I and a member from a Party not included in Annex I.

13. The executive board shall meet as necessary but no less than three times a year, bearing in mind the provisions of paragraph 41 below. All documentation for executive board meetings shall be made available to alternate members.

14. At least two thirds of the members of the executive board, representing a majority of members from Parties included in Annex I and a majority of members from Parties not included in Annex I, must be present to constitute a quorum.

15. Decisions by the executive board shall be taken by consensus, whenever possible. If all efforts at reaching a consensus have been exhausted and no agreement has been reached, decisions shall be taken by a three-fourths majority of the members present and voting at the meeting. Members abstaining from voting shall be considered as not voting.

16. Meetings of the executive board shall be open to attendance, as observers, by all Parties and by all UNFCCC accredited observers and stakeholders, except where otherwise decided by the executive board.

17. The full text of all decisions of the executive board shall be made publicly available. The working language of the executive board shall be English. Decisions shall be made available in all six official languages of the United Nations.

18. The executive board may establish committees, panels or working groups to assist it in the performance of its functions. The executive board shall draw on the expertise necessary to perform its functions, including from the UNFCCC roster of experts. In this context, it shall take fully into account the consideration of regional balance.

19. The secretariat shall service the executive board.

#### **D. Accreditation and designation of operational entities**

20. The executive board shall:

(a) Accredite operational entities which meet the accreditation standards contained in Appendix A below;

(b) Recommend the designation of operational entities to the COP/MOP;

(c) Maintain a publicly available list of all designated operational entities;

(d) Review whether each designated operational entity continues to comply with the accreditation standards contained in Appendix A below and on this basis confirm whether to reaccredit each operational entity every three years;

(e) Conduct spot-checking at any time and, on the basis of the results, decide to conduct the above-mentioned review, if warranted.

21. The executive board may recommend to the COP/MOP to suspend or withdraw the designation of a designated operational entity if it has carried out a review and found that the entity no longer meets the accreditation standards or applicable provisions in decisions of the COP/MOP. The executive board may recommend the suspension or withdrawal of designation only after the designated operational entity has had the possibility of a hearing. The suspension or withdrawal is with immediate effect, on a provisional basis, once the executive board has made a recommendation, and remains in effect pending a final decision by the COP/MOP. The affected entity shall be notified, immediately and in writing, once the executive board has recommended its suspension or withdrawal. The recommendation by the executive board and the decision by the COP/MOP on such a case shall be made public.

22. Registered project activities shall not be affected by the suspension or withdrawal of designation of a designated operational entity unless significant deficiencies are identified in the relevant validation, verification or certification report for which the entity was responsible. In this case, the executive board shall decide whether a different designated operational entity shall be appointed to review, and where appropriate correct, such deficiencies. If such a review reveals that excess CERs were issued, the designated operational entity whose accreditation has been withdrawn or suspended shall acquire and transfer, within 30 days of the end of review, an amount of reduced tonnes of carbon dioxide equivalent equal to the excess CERs issued, as determined by the executive board, to a cancellation account maintained in the CDM registry by the executive board.

23. Any suspension or withdrawal of a designated operational entity that adversely affects registered project activities shall be recommended by the executive board only after the affected project participants have had the possibility of a hearing.

24. Any costs related to the review referred to in paragraph 22 above shall be borne by the designated operational entity whose designation has been withdrawn or suspended.

25. The executive board may seek assistance in performing the functions in paragraph 20 above, in accordance with the provisions of paragraph 18 above.

#### **E. Designated operational entities**

26. Designated operational entities shall be accountable to the COP/MOP through the executive board and shall comply with the modalities and procedures in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP and the executive board.

27. A designated operational entity shall:

(a) Validate proposed CDM project activities;

(b) Verify and certify reductions in anthropogenic emissions by sources of greenhouse gases;

(c) Comply with applicable laws of the Parties hosting CDM project activities when carrying out its functions referred to in subparagraph (e) below;

(d) Demonstrate that it, and its subcontractors, have no real or potential conflict of interest with the participants in the CDM project activities for which it has been selected to carry out validation or verification and certification functions;

(e) Perform one of the following functions related to a given CDM project activity: validation or verification and certification. Upon request, the executive board may, however, allow a single designated operational entity to perform all these functions within a single CDM project activity;

(f) Maintain a publicly available list of all CDM project activities for which it has carried out validation, verification and certification;

(g) Submit an annual activity report to the executive board;

(h) Make information obtained from CDM project participants publicly available, as required by the executive board. Information marked as proprietary or confidential shall not be disclosed without the written consent of the provider of the information, except as required by national law. Information used to determine additionality as defined in paragraph 43 below, to describe the baseline methodology and its application, and to support an environmental impact assessment referred to in paragraph 37(c) below, shall not be considered as proprietary or confidential.

## **F. Participation requirements**

28. Participation in a CDM project activity is voluntary.

29. Parties participating in the CDM shall designate a national authority for the CDM.

30. A Party not included in Annex I may participate in a CDM project activity if it is a Party to the Kyoto Protocol.

31. Subject to the provisions of paragraph 32 below, a Party included in Annex I with a commitment inscribed in Annex B is eligible to use CERs, issued in accordance with the relevant provisions, to contribute to compliance with part of its commitment under Article 3, paragraph 1, if it is in compliance with the following eligibility requirements:

(a) It is a Party to the Kyoto Protocol;

(b) Its assigned amount pursuant to Article 3, paragraphs 7 and 8, has been calculated and recorded in accordance with decision -/CMP.1 (Modalities for the accounting of assigned amounts);

(c) It has in place a national system for the estimation of anthropogenic emissions by sources and anthropogenic removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, in accordance with Article 5, paragraph 1, and the requirements in the guidelines decided thereunder;

(d) It has in place a national registry in accordance with Article 7, paragraph 4, and the requirements in the guidelines decided thereunder;

(e) It has submitted annually the most recent required inventory, in accordance with Article 5, paragraph 2, and Article 7, paragraph 1, and the requirements in the guidelines decided thereunder, including the national inventory report and the common reporting format. For the first commitment period, the quality assessment needed for the purpose of determining eligibility to use the mechanisms shall be limited to the parts of the inventory pertaining to emissions of greenhouse gases from sources/sector categories from Annex A to the Kyoto Protocol and the submission of the annual inventory on sinks;

(f) It submits the supplementary information on assigned amount in accordance with Article 7, paragraph 1, and the requirements in the guidelines decided thereunder and makes any additions to, and subtractions from, assigned amount pursuant to Article 3, paragraphs 7 and 8, including for the activities under Article 3, paragraphs 3 and 4, in accordance with Article 7, paragraph 4, and the requirements in the guidelines decided thereunder.

32. A Party included in Annex I with a commitment inscribed in Annex B shall be considered:

(a) To meet the eligibility requirements referred to in paragraph 31 above after 16 months have elapsed since the submission of its report to facilitate the calculation of its assigned amount pursuant to Article 3, paragraphs 7 and 8, and to demonstrate its capacity to account for its emissions and assigned amount, in accordance with the modalities adopted for the accounting of assigned amount under Article 7, paragraph 4, unless the enforcement branch of the compliance committee finds in accordance with decision 24/CP.7 that the Party does not meet these requirements, or, at an earlier date, if the enforcement branch of the compliance committee has decided that it is not proceeding with any questions of implementation relating to these requirements indicated in reports of the expert review teams under Article 8 of the Kyoto Protocol, and has transmitted this information to the secretariat;

(b) To continue to meet the eligibility requirements referred to in paragraph 31 above unless and until the enforcement branch of the compliance committee decides that the Party does not meet one or more of the eligibility requirements, has suspended the Party's eligibility, and has transmitted this information to the secretariat.

33. A Party that authorizes private and/or public entities to participate in Article 12 project activities shall remain responsible for the fulfilment of its obligations under the Kyoto Protocol and shall ensure that such participation is consistent with the present annex. Private and/or public entities may only transfer and acquire CERs if the authorizing Party is eligible to do so at that time.

34. The secretariat shall maintain publicly accessible lists of:

(a) Parties not included in Annex I which are Parties to the Kyoto Protocol;

(b) Parties included in Annex I that do not meet the requirements in paragraph 31 above or have been suspended.

#### **G. Validation and registration**

35. Validation is the process of independent evaluation of a project activity by a designated operational entity against the requirements of the CDM as set out in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP, on the basis of the project design document, as outlined in Appendix B below.

36. Registration is the formal acceptance by the executive board of a validated project as a CDM project activity. Registration is the prerequisite for the verification, certification and issuance of CERs related to that project activity.

37. The designated operational entity selected by project participants to validate a project activity, being under a contractual arrangement with them, shall review the project design document and any supporting documentation to confirm that the following requirements have been met:

(a) The participation requirements as set out in paragraphs 28 to 30 above are satisfied;

(b) Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received;

(c) Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts and, if those impacts are considered significant by the project participants or the host Party, have undertaken an environmental impact assessment in accordance with procedures as required by the host Party;

(d) The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity, in accordance with paragraphs 43 to 52 below;

(e) The baseline and monitoring methodologies comply with requirements pertaining to:

(i) Methodologies previously approved by the executive board; or

(ii) Modalities and procedures for establishing a new methodology, as set out in paragraph 38 below;

(f) Provisions for monitoring, verification and reporting are in accordance with decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(g) The project activity conforms to all other requirements for CDM project activities in decision 17/CP.7, the present annex and relevant decisions by the COP/MOP and the executive board.

38. If the designated operational entity determines that the project activity intends to use a new baseline or monitoring methodology, as referred to in paragraph 37(e) (ii) above, it shall, prior to a submission for registration of this project activity, forward the proposed methodology together with the draft project design document, including a description of the project and identification of the project participants to the executive board for review. The executive board shall expeditiously, if possible at its next meeting but not later than four months, review the proposed new methodology in accordance with the modalities and procedures of the present annex. Once approved by the executive board it shall make the approved methodology publicly available along with any relevant guidance and the designated operational entity may proceed with the validation of the project activity and submit the project design document for registration. In the event that the COP/MOP requests the revision of an approved methodology, no CDM project activity may use this methodology. The project participants shall revise the methodology, as appropriate, taking into consideration any guidance received.

39. A revision of a methodology shall be carried out in accordance with the modalities and procedures for establishing new methodologies as set out in paragraph 38 above. Any revision to an approved methodology shall only be applicable to project activities registered subsequent to the date of revision and shall not affect existing registered project activities during their crediting periods.

40. The designated operational entity shall:

(a) Prior to the submission of the validation report to the executive board, have received from the project participants written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development;

(b) In accordance with provisions on confidentiality contained in paragraph 27(h) above, make publicly available the project design document;

(c) Receive, within 30 days, comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available;

(d) After the deadline for receipt of comments, make a determination as to whether, on the basis of the information provided and taking into account the comments received, the project activity should be validated;

(e) Inform project participants of its determination on the validation of the project activity. Notification to the project participants will include:

(i) Confirmation of validation and date of submission of the validation report to the executive board; or

(ii) An explanation of reasons for non-acceptance if the project activity, as documented, is judged not to fulfil the requirements for validation;

(f) Submit to the executive board, if it determines the proposed project activity to be valid, a request for registration in the form of a validation report including the project design document, the written approval of the host Party as referred to in subparagraph (a) above, and an explanation of how it has taken due account of comments received;

(g) Make this validation report publicly available upon transmission to the executive board.

41. The registration by the executive board shall be deemed final eight weeks after the date of receipt by the executive board of the request for registration, unless a Party involved in the project activity or at least three members of the executive board request a review of the proposed CDM project activity. The review by the executive board shall be made in accordance with the following provisions:

(a) It shall be related to issues associated with the validation requirements;

(b) It shall be finalized no later than at the second meeting following the request for review, with the decision and the reasons for it being communicated to the project participants and the public.

42. A proposed project activity that is not accepted may be reconsidered for validation and subsequent registration, after appropriate revisions, provided that it follows the procedures and meets the requirements for validation and registration, including those related to public comments.

43. A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.

44. The baseline for a CDM project activity is the scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity. A baseline shall cover emissions from all gases, sectors and source categories listed in Annex A within the project boundary. A baseline shall be deemed to reasonably represent the anthropogenic emissions by sources that would occur in the absence of the proposed project activity if it is derived using a baseline methodology referred to in paragraphs 37 and 38 above.

45. A baseline shall be established:

(a) By project participants in accordance with provisions for the use of approved and new methodologies, contained in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(b) In a transparent and conservative manner regarding the choice of approaches, assumptions, methodologies, parameters, data sources, key factors and additionality, and taking into account uncertainty;

(c) On a project-specific basis;

(d) In the case of small-scale CDM project activities which meet the criteria specified in decision 17/CP.7 and relevant decisions by the COP/MOP, in accordance with simplified procedures developed for such activities;

(e) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.

46. The baseline may include a scenario where future anthropogenic emissions by sources are projected to rise above current levels, due to the specific circumstances of the host Party.

47. The baseline shall be defined in a way that CERs cannot be earned for decreases in activity levels outside the project activity or due to force majeure.

48. In choosing a baseline methodology for a project activity, project participants shall select from among the following approaches the one deemed most appropriate for the project activity, taking into account any guidance by the executive board, and justify the appropriateness of their choice:

- (a) Existing actual or historical emissions, as applicable; or
- (b) Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment; or
- (c) The average emissions of similar project activities undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category.

49. Project participants shall select a crediting period for a proposed project activity from one of the following alternative approaches:

- (a) A maximum of seven years which may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the executive board that the original project baseline is still valid or has been updated taking account of new data where applicable; or
- (b) A maximum of ten years with no option of renewal.

50. Reductions in anthropogenic emissions by sources shall be adjusted for leakage in accordance with the monitoring and verification provisions in paragraphs 59 and 62(f) below, respectively.

51. Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity.

52. The project boundary shall encompass all anthropogenic emissions by sources of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the CDM project activity.

## **H. Monitoring**

53. Project participants shall include, as part of the project design document, a monitoring plan that provides for:

- (a) The collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources of greenhouse gases occurring within the project boundary during the crediting period;
- (b) The collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources of greenhouse gases within the project boundary during the crediting period;
- (c) The identification of all potential sources of, and the collection and archiving of data on, increased anthropogenic emissions by sources of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project activity during the crediting period;
- (d) The collection and archiving of information relevant to the provisions in paragraph 37(c) above;
- (e) Quality assurance and control procedures for the monitoring process;

(f) Procedures for the periodic calculation of the reductions of anthropogenic emissions by sources by the proposed CDM project activity, and for leakage effects;

(g) Documentation of all steps involved in the calculations referred to in paragraph 53(c) and (f) above.

54. A monitoring plan for a proposed project activity shall be based on a previously approved monitoring methodology or a new methodology, in accordance with paragraphs 37 and 38 above, that:

(a) Is determined by the designated operational entity as appropriate to the circumstances of the proposed project activity and has been successfully applied elsewhere;

(b) Reflects good monitoring practice appropriate to the type of project activity.

55. For small-scale CDM project activities meeting the criteria specified in decision 17/CP.7 and relevant decisions by the COP/MOP, project participants may use simplified modalities and procedures for small-scale projects.

56. Project participants shall implement the monitoring plan contained in the registered project design document.

57. Revisions, if any, to the monitoring plan to improve its accuracy and/or completeness of information shall be justified by project participants and shall be submitted for validation to a designated operational entity.

58. The implementation of the registered monitoring plan and its revisions, as applicable, shall be a condition for verification, certification and the issuance of CERs.

59. Subsequent to the monitoring and reporting of reductions in anthropogenic emissions, CERs resulting from a CDM project activity during a specified time period shall be calculated, applying the registered methodology, by subtracting the actual anthropogenic emissions by sources from baseline emissions and adjusting for leakage.

60. The project participants shall provide to the designated operational entity, contracted by the project participants to perform the verification, a monitoring report in accordance with the registered monitoring plan set out in paragraph 53 above for the purpose of verification and certification.

## **I. Verification and certification**

61. Verification is the periodic independent review and ex post determination by the designated operational entity of the monitored reductions in anthropogenic emissions by sources of greenhouse gases that have occurred as a result of a registered CDM project activity during the verification period. Certification is the written assurance by the designated operational entity that, during a specified time period, a project activity achieved the reductions in anthropogenic emissions by sources of greenhouse gases as verified.

62. In accordance with the provisions on confidentiality in paragraph 27(h) above, the designated operational entity contracted by the project participants to perform the verification shall make the monitoring report publicly available, and shall:

(a) Determine whether the project documentation provided is in accordance with the requirements of the registered project design document and relevant provisions of decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(b) Conduct on-site inspections, as appropriate, that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observation of established practices and testing of the accuracy of monitoring equipment;

- (c) If appropriate, use additional data from other sources;
- (d) Review monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent;
- (e) Recommend to the project participants appropriate changes to the monitoring methodology for any future crediting period, if necessary;
- (f) Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information derived under subparagraph (a) above and obtained under subparagraph (b) and/or (c) above, as appropriate, using calculation procedures consistent with those contained in the registered project design document and in the monitoring plan;
- (g) Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project design document. Project participants shall address the concerns and supply relevant additional information;
- (h) Provide a verification report to the project participants, the Parties involved and the executive board. The report shall be made publicly available.

63. The designated operational entity shall, based on its verification report, certify in writing that, during the specified time period, the project activity achieved the verified amount of reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity. It shall inform the project participants, Parties involved and the executive board of its certification decision in writing immediately upon completion of the certification process and make the certification report publicly available.

#### **J. Issuance of certified emission reductions**

64. The certification report shall constitute a request for issuance to the executive board of CERs equal to the verified amount of reductions of anthropogenic emissions by sources of greenhouse gases.

65. The issuance shall be considered final 15 days after the date of receipt of the request for issuance, unless a Party involved in the project activity or at least three members of the executive board request a review of the proposed issuance of CERs. Such a review shall be limited to issues of fraud, malfeasance or incompetence of the designated operational entities and be conducted as follows:

- (a) Upon receipt of a request for such a review, the executive board, at its next meeting, shall decide on its course of action. If it decides that the request has merit it shall perform a review and decide whether the proposed issuance of CERs should be approved;
- (b) The executive board shall complete its review within 30 days following its decision to perform the review;
- (c) The executive board shall inform the project participants of the outcome of the review, and make public its decision regarding the approval of the proposed issuance of CERs and the reasons for it.

66. Upon being instructed by the executive board to issue CERs for a CDM project activity, the CDM registry administrator, working under the authority of the executive board, shall, promptly, issue the specified quantity of CERs into the pending account of the executive board in the CDM registry, in accordance with Appendix D below. Upon such issuance, the CDM registry administrator shall promptly:

(a) Forward the quantity of CERs corresponding to the share of proceeds to cover administrative expenses and to assist in meeting costs of adaptation, respectively, in accordance with Article 12, paragraph 8, to the appropriate accounts in the CDM registry for the management of the share of proceeds;

(b) Forward the remaining CERs to the registry accounts of Parties and project participants involved, in accordance with their request.

## **APPENDIX A**

### **Standards for the accreditation of operational entities**

1. An operational entity shall:

(a) Be a legal entity (either a domestic legal entity or an international organization) and provide documentation of this status;

(b) Employ a sufficient number of persons having the necessary competence to perform validation, verification and certification functions relating to the type, range and volume of work performed, under a responsible senior executive;

(c) Have the financial stability, insurance coverage and resources required for its activities;

(d) Have sufficient arrangements to cover legal and financial liabilities arising from its activities;

(e) Have documented internal procedures for carrying out its functions including, among others, procedures for the allocation of responsibility within the organization and for handling complaints. These procedures shall be made publicly available;

(f) Have, or have access to, the necessary expertise to carry out the functions specified in modalities and procedures of the CDM and relevant decisions by the COP/MOP, in particular knowledge and understanding of:

(i) The modalities and procedures and guidelines for the operation of the CDM, relevant decisions of the COP/MOP and of the executive board;

(ii) Issues, in particular environmental, relevant to validation, verification and certification of CDM project activities, as appropriate;

(iii) The technical aspects of CDM project activities relevant to environmental issues, including expertise in the setting of baselines and monitoring of emissions;

(iv) Relevant environmental auditing requirements and methodologies;

(v) Methodologies for accounting of anthropogenic emissions by sources;

(vi) Regional and sectoral aspects;

(g) Have a management structure that has overall responsibility for performance and implementation of the entity's functions, including quality assurance procedures, and all relevant decisions relating to validation, verification and certification. The applicant operational entity shall make available:

(i) The names, qualifications, experience and terms of reference of senior management personnel such as the senior executive, board members, senior officers and other relevant personnel;

(ii) An organizational chart showing lines of authority, responsibility and allocation of functions stemming from senior management;

- (iii) Its quality assurance policy and procedures;
- (iv) Administrative procedures, including document control;
- (v) Its policy and procedures for the recruitment and training of operational entity personnel, for ensuring their competence for all necessary functions for validation, verification and certification functions, and for monitoring their performance;
- (vi) Its procedures for handling complaints, appeals and disputes;
- (h) Not have pending any judicial process for malpractice, fraud and/or other activity incompatible with its functions as a designated operational entity.

2. An applicant operational entity shall meet the following operational requirements:

(a) Work in a credible, independent, non-discriminatory and transparent manner, complying with applicable national law and meeting, in particular, the following requirements:

(i) An applicant operational entity shall have a documented structure, which safeguards impartiality, including provisions to ensure impartiality of its operations;

(ii) If it is part of a larger organization, and where parts of that organization are, or may become, involved in the identification, development or financing of any CDM project activity, the applicant operational entity shall:

- Make a declaration of all the organization's actual and planned involvement in CDM project activities, if any, indicating which part of the organization is involved and in which particular CDM project activities;

- Clearly define the links with other parts of the organization, demonstrating that no conflicts of interest exist;

- Demonstrate that no conflict of interest exists between its functions as an operational entity and any other functions that it may have, and demonstrate how business is managed to minimize any identified risk to impartiality. The demonstration shall cover all sources of conflict of interest, whether they arise from within the applicant operational entity or from the activities of related bodies;

- Demonstrate that it, together with its senior management and staff, is not involved in any commercial, financial or other processes which might influence its judgement or endanger trust in its independence of judgement and integrity in relation to its activities, and that it complies with any rules applicable in this respect;

(b) Have adequate arrangements to safeguard confidentiality of the information obtained from CDM project participants in accordance with provisions contained in the present annex.

## **APPENDIX B**

### **Project design document**

1. The provisions of this appendix shall be interpreted in accordance with the annex above on modalities and procedures for a CDM.

2. The purpose of this appendix is to outline the information required in the project design document. A project activity shall be described in detail taking into account the provisions of the annex on modalities and procedures for a CDM, in particular, section G on validation and registration and section H on monitoring, in a project design document which shall include the following:

- (a) A description of the project comprising the project purpose, a technical description of the project, including how technology will be transferred, if any, and a description and justification of the project boundary;
- (b) A proposed baseline methodology in accordance with the annex on modalities and procedures for a CDM including, in the case of the:
- (i) Application of an approved methodology:
    - Statement of which approved methodology has been selected;
    - Description of how the approved methodology will be applied in the context of the project;
  - (ii) Application of a new methodology:
    - Description of the baseline methodology and justification of choice, including an assessment of strengths and weaknesses of the methodology;
    - Description of key parameters, data sources and assumptions used in the baseline estimate, and assessment of uncertainties;
    - Projections of baseline emissions;
    - Description of how the baseline methodology addresses potential leakage;
  - (iii) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account and an explanation of how the baseline was established in a transparent and conservative manner;
- (c) Statement of the estimated operational lifetime of the project and which crediting period was selected;
- (d) Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity;
- (e) Environmental impacts:
- (i) Documentation on the analysis of the environmental impacts, including transboundary impacts;
  - (ii) If impacts are considered significant by the project participants or the host Party: conclusions and all references to support documentation of an environmental impact assessment that has been undertaken in accordance with the procedures as required by the host Party;
- (f) Information on sources of public funding for the project activity from Parties included in Annex I which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties;
- (g) Stakeholder comments, including a brief description of the process, a summary of the comments received, and a report on how due account was taken of any comments received;
- (h) Monitoring plan:
- (i) Identification of data needs and data quality with regard to accuracy, comparability, completeness and validity;

- (ii) Methodologies to be used for data collection and monitoring including quality assurance and quality control provisions for monitoring, collecting and reporting;
- (iii) In the case of a new monitoring methodology, provide a description of the methodology, including an assessment of strengths and weaknesses of the methodology and whether or not it has been applied successfully elsewhere;
- (i) Calculations:
  - (i) Description of formulae used to calculate and estimate anthropogenic emissions by sources of greenhouse gases of the CDM project activity within the project boundary;
  - (ii) Description of formulae used to calculate and to project leakage, defined as: the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the CDM project activity boundary, and that is measurable and attributable to the CDM project activity;
  - (iii) The sum of (i) and (ii) above representing the CDM project activity emissions;
  - (iv) Description of formulae used to calculate and to project the anthropogenic emissions by sources of greenhouse gases of the baseline;
  - (v) Description of formulae used to calculate and to project leakage;
  - (vi) The sum of (iv) and (v) above representing the baseline emissions;
  - (vii) Difference between (vi) and (iii) above representing the emission reductions of the CDM project activity;
- (j) References to support the above, if any.

## **APPENDIX C**

### **Terms of reference for establishing guidelines on baselines and monitoring methodologies**

The executive board, drawing on experts in accordance with the modalities and procedures for a CDM, shall develop and recommend to the COP/MOP, inter alia:

- (a) General guidance on methodologies relating to baselines and monitoring consistent with the principles set out in those modalities and procedures in order to:
  - (i) Elaborate the provisions relating to baseline and monitoring methodologies contained in decision 17/CP.7, the annex above and relevant decisions of the COP/MOP;
  - (ii) Promote consistency, transparency and predictability;
  - (iii) Provide rigour to ensure that net reductions in anthropogenic emissions are real and measurable, and an accurate reflection of what has occurred within the project boundary;
  - (iv) Ensure applicability in different geographical regions and to those project categories which are eligible in accordance with decision 17/CP.7 and relevant decisions of the COP/MOP;
  - (v) Address the additionality requirement of Article 12, paragraph 5(c), and paragraph 43 of the above annex;
- (b) Specific guidance in the following areas:

- (i) Definition of project categories (e.g. based on sector, subsector, project type, technology, geographic area) that show common methodological characteristics for baseline setting, and/or monitoring, including guidance on the level of geographic aggregation, taking into account data availability;
  - (ii) Baseline methodologies deemed to reasonably represent what would have occurred in the absence of a project activity;
  - (iii) Monitoring methodologies that provide an accurate measure of actual reductions in anthropogenic emissions as a result of the project activity, taking into account the need for consistency and cost-effectiveness;
  - (iv) Decision trees and other methodological tools, where appropriate, to guide choices in order to ensure that the most appropriate methodologies are selected, taking into account relevant circumstances;
  - (v) The appropriate level of standardization of methodologies to allow a reasonable estimation of what would have occurred in the absence of a project activity wherever possible and appropriate. Standardization should be conservative in order to prevent any overestimation of reductions in anthropogenic emissions;
  - (vi) Determination of project boundaries including accounting for all greenhouse gases that should be included as a part of the baseline, and monitoring. Relevance of leakage and recommendations for establishing appropriate project boundaries and methods for the ex post evaluation of the level of leakage;
  - (vii) Accounting for applicable national policies and specific national or regional circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the sector relevant to the project activity;
  - (viii) The breadth of the baseline, e.g. how the baseline makes comparisons between the technology/fuel used and other technologies/fuels in the sector;
- (c) In developing the guidance in (a) and (b) above, the executive board shall take into account:
- (i) Current practices in the host country or an appropriate region, and observed trends;
  - (ii) Least cost technology for the activity or project category.

## **APPENDIX D**

### **Clean development mechanism registry requirements**

1. The executive board shall establish and maintain a CDM registry to ensure the accurate accounting of the issuance, holding, transfer and acquisition of CERs by Parties not included in Annex I. The executive board shall identify a registry administrator to maintain the registry under its authority.
2. The CDM registry shall be in the form of a standardized electronic database which contains, inter alia, common data elements relevant to the issuance, holding, transfer and acquisition of CERs. The structure and data formats of the CDM registry shall conform to technical standards to be adopted by the COP/MOP for the purpose of ensuring the accurate, transparent and efficient exchange of data between national registries, the CDM registry and the independent transaction log.
3. The CDM registry shall have the following accounts:
  - (a) One pending account for the executive board, into which CERs are issued before being transferred to other accounts;

(b) At least one holding account for each Party not included in Annex I hosting a CDM project activity or requesting an account;

(c) At least one account for the purpose of cancelling ERUs, CERs, AAUs and RMUs equal to excess CERs issued, as determined by the executive board, where the accreditation of a designated operational entity has been withdrawn or suspended;

(d) At least one account for the purpose of holding and transferring CERs corresponding to the share of proceeds to cover administrative expenses and to assist in meeting costs of adaptation in accordance with Article 12, paragraph 8. Such an account may not otherwise acquire CERs.

4. Each CER shall be held in only one account in one registry at a given time.

5. Each account within the CDM registry shall have a unique account number comprising the following elements:

(a) Party/organization identifier: the Party for which the account is maintained, using the two-letter country code defined by the International Organization for Standardization (ISO 3166), or, in the cases of the pending account and an account for managing the CERs corresponding to the share of proceeds, the executive board or another appropriate organization;

(b) A unique number: a number unique to that account for the Party or organization for which the account is maintained.

6. Upon being instructed by the executive board to issue CERs for a CDM project activity, the registry administrator shall, in accordance with the transaction procedures set out in decision -/CMP.1 (Modalities for the accounting of assigned amounts):

(a) Issue the specified quantity of CERs into a pending account of the executive board;

(b) Forward the quantity of CERs corresponding to the share of proceeds to cover administrative expenses and to assist in meeting costs of adaptation, in accordance with Article 12, paragraph 8, to the appropriate accounts in the CDM registry for holding and transferring such CERs;

(c) Forward the remaining CERs to the registry accounts of project participants and Parties involved, as specified by their distribution agreement.

7. Each CER shall have a unique serial number comprising the following elements:

(a) Commitment period: the commitment period for which the CER is issued;

(b) Party of origin: the Party which hosted the CDM project activity, using the two-letter country code defined by ISO 3166;

(c) Type: this shall identify the unit as a CER;

(d) Unit: a number unique to the CER for the identified commitment period and Party of origin;

(e) Project identifier: a number unique to the CDM project activity for the Party of origin.

8. Where the accreditation of a designated operational entity has been withdrawn or suspended, ERUs, CERs, AAUs and/or RMUs equal to the excess CERs issued, as determined by the executive board, shall be transferred to a cancellation account in the CDM registry. Such ERUs, CERs, AAUs and RMUs may not be further transferred or used for the purpose of demonstrating the compliance of a Party with its commitment under Article 3, paragraph 1.

9. The CDM registry shall make non-confidential information publicly available and provide a publicly accessible user interface through the Internet that allows interested persons to query and view it.

10. The information referred to in paragraph 9 above shall include up-to-date information, for each account number in the registry, on the following:

- (a) Account name: the holder of the account;
- (b) Representative identifier: the representative of the account holder, using the Party/organization identifier (the two-letter country code defined by ISO 3166) and a number unique to that representative for that Party or organization;
- (c) Representative name and contact information: the full name, mailing address, telephone number, facsimile number and e-mail address of the representative of the account holder.

11. The information referred to in paragraph 9 above shall include the following CDM project activity information, for each project identifier against which the CERs have been issued:

- (a) Project name: a unique name for the CDM project activity;
- (b) Project location: the Party and town or region in which the CDM project activity is located;
- (c) Years of CER issuance: the years in which CERs have been issued as a result of the CDM project activity;
- (d) Operational entities: the operational entities involved in the validation, verification and certification of the CDM project activity;
- (e) Reports: downloadable electronic versions of documentation to be made publicly available in accordance with the provisions of the present annex.

12. The information referred to in paragraph 9 above shall include the following holding and transaction information relevant to the CDM registry, by serial number, for each calendar year (defined according to Greenwich Mean Time):

- (a) The total quantity of CERs in each account at the beginning of the year;
- (b) The total quantity of CERs issued;
- (c) The total quantity of CERs transferred and the identity of the acquiring accounts and registries;
- (d) The total quantity of ERUs, CERs, AAUs and RMUs cancelled in accordance with paragraph 8 above;
- (e) Current holdings of CERs in each account.

## **Appendix B: The Kyoto Protocol: Article 12**

1. A clean development mechanism is hereby defined.
2. The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3.
3. Under the clean development mechanism: (a) Parties not included in Annex I will benefit from project activities resulting in certified emission reductions; and (b) Parties included in Annex I may use the certified emission reductions accruing from such project activities to contribute to compliance with part of their quantified emission limitation and reduction commitments under Article 3, as determined by the Conference of the Parties serving as the meeting of the Parties to this Protocol.
4. The clean development mechanism shall be subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Protocol and be supervised by an executive board of the clean development mechanism.
5. Emission reductions resulting from each project activity shall be certified by operational entities to be designated by the Conference of the Parties serving as the meeting of the Parties to this Protocol, on the basis of: (a) Voluntary participation approved by each Party involved; (b) Real, measurable, and long-term benefits related to the mitigation of climate change; and FCCC/CP/1997/L.7/Add.1 English Page 14 (c) Reductions in emissions that are additional to any that would occur in the absence of the certified project activity.
6. The clean development mechanism shall assist in arranging funding of certified project activities as necessary.
7. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall, at its first session, elaborate modalities and procedures with the objective of ensuring transparency, efficiency and accountability through independent auditing and verification of project activities.
8. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.
9. Participation under the clean development mechanism, including in activities mentioned in paragraph 3(a) above and acquisition of certified emission reductions, may involve private and/or public entities, and is to be subject to whatever guidance may be provided by the executive board of the clean development mechanism.
10. Certified emission reductions obtained during the period from the year 2000 up to the beginning of the first commitment period can be used to assist in achieving compliance in the first commitment period.

## **Appendix C: Dutch CDM Baseline Template**

The following template was developed by the Ministry of Housing, Spatial Planning and the Environment of the Netherlands in October 2001 as a guide for CDM project developers. The full document can be accessed at:

[http://www.senter.nl/sites/erupt/contents/i000008/baselinescdm\\_volume\\_2a.doc](http://www.senter.nl/sites/erupt/contents/i000008/baselinescdm_volume_2a.doc)

For methodologies for specific projects go to:

[http://www.senter.nl/sites/erupt/contents/i000008/baselinescdm\\_volume\\_2b.doc](http://www.senter.nl/sites/erupt/contents/i000008/baselinescdm_volume_2b.doc)

For more information about Dutch CDM guidelines go to:

<http://www.senter.nl/asp/page.asp?id=i000008&alias=erupt>

### **Template 1: Dutch Baseline Template**

---

## **REPORTING FORM FOR BASELINE STUDY**

The following tables are provided as general guidance, and should only be filled in when they apply to project specific situations

### **1 PROJECT INFORMATION**

(This is information that may largely be copied from the CERUPT Expression of Interest)

Project characteristics  
Supplier's name and address  
Company name  
Address  
Zip code + city address  
Postal address  
Zip code + city postal address  
Country  
Contact person  
Job title  
Telephone number  
Fax number  
E-mail address  
Date of registration

The same information for:

- Local contact
- Other parties involved (co-investor, owner, operator, user etc.)

**Project Abstract**

- Project Title (maximum 40 positions)
- Abstract (maximum 100 words, most important features of the project)
- Project location
- Project starting date
- Construction starting date
- Construction finishing date

**Background and justification**

Describe the background of your project, the history and the problems that this project has to solve. Describe core business of the project partners and the relation between them, how long contacts have been going on and what activities have been carried out so far. Describe related financial commitments.

**Intervention (maximum 2 pages A4)**

- Describe the GOALS of the project: these refer to sustainable development (In the host country) and other long term strategic objectives to which this project has to contribute. What social, commercial and other spin-offs do you expect in the long term?
- Describe the PURPOSE of the project: what is the one reason you are carrying out the project for? What effect must have been realized when the project is finished? Ideally, a project has one purpose only;
- Describe the RESULTS of the project: what are the concrete outputs produced by the project for it to achieve the purpose?
- Describe ACTIVITIES of the project: which activities are you going to carry out in order to realize the results?

**2 GHG SOURCES AND SINKS AND PROJECT BOUNDARIES**

*See section 2.2, p. 6.*

List the GHG emission sources and sinks due to the project and give a brief description
Direct on-site emissions
Direct off-site emissions
Indirect on-site emissions
Indirect off-site emissions

Draw a flow chart of the project with its main components and connections.

Draw the project boundaries in the flowchart excluding processes beyond control or influence of the project, but include the relevant beyond control processes to generate secondary energy carriers (*e.g.* electricity and heat).

Indicate which components in the flowchart will be added, removed or refurbished by the project compared to the existing situation:

General comments on flow chart and project boundaries:

**3 DESCRIPTION OF THE CURRENT DELIVERY SYSTEM**  
*See section 2.3, p.10.*

Draw a flow chart of the current delivery system with its main components and connections.

Give information about status and adequacy of the current delivery system.

Give information about the operation modes of the current delivery system.

#### **4 KEY FACTORS INFLUENCING THE BASELINE AND THE PROJECT**

*See section 2.4, p.10.*

List all legal, economic, political, socio-demographic, environmental and technical factors that will influence:

- Baseline development
- The project's activity level and GHG emissions
- Risks for the project

Legal

Economic

Political

Socio-demographic

Environmental

Technical

Describe what is most likely to happen to these external key factors. Give also ranges for these as applicable, and provide supporting information.

#### **5 IDENTIFICATION OF THE MOST LIKELY BASELINE AND THE ASSOCIATED GHG EMISSIONS**

*See section 2.5, p. 12.*

<p>To select your baseline reference scenario, use the baseline selection methods. The table (refer to 5.2.1 page 13) to select baselines may be used. If applicable, argue and substantiate the use of a different baseline methodology to prepare for the selection of the baseline. Present the results of the selected baseline methods.</p>
<p>Select a conservative and the most appropriate baseline and justify the choice.</p>
<p>Vary the key factors identified in A.4 to get more insight in the robustness and likeliness of the baseline that is finally selected.</p>
<p>Carry out sensitivity analysis to substantiate the baseline selection process, given the credible ranges of the key factor parameter values.</p>
<p>Indicate clearly what the on-site and off-site GHG emissions implications of the baseline choice are. Use the expected activity level of the proposed project as a base for determining the emissions associated with the baseline case. Give the baseline emission figures for all years from the start of the project until the end of the crediting time.</p>
<p>On-site emissions</p>
<p>Off-site emissions</p>
<p>Total baseline emissions (aggregate of on-site and off-site emissions)</p>

## **6 ESTIMATION OF PROJECT EMISSIONS**

*See section 2.6, p.14.*

### **6.1 Description of key factors used for estimation of project emissions**

Provide information on the kind of product(s) or service(s) that are output of the project. Give activity levels for all years from the start of the project until the end of the crediting time.

<ul style="list-style-type: none"> <li>• Characteristics</li> <li>• Expected annual production</li> </ul> <p>Expected range in annual production</p>
<p>Provide evidence why the annual production (activity level) is expected at this level</p>
<p>Unless clearly not feasible, give a 95% confidence interval range for the activity level during the project lifetime</p>

### 6.2 Calculation of direct project emissions

<p>Calculate in a transparent manner the direct on-site and off-site GHG emissions from the project within the project boundaries. Use the expected activity level as a starting point. Give emission figures for all years from the start of the project until the end of the crediting time.</p>
<p>Direct on-site emissions</p>
<p>Direct off-site emissions</p>

### 6.3 Calculation of indirect project emission effects (leakage)

<p>Estimate the indirect on-site and off-site GHG emission effects (leakage) from the project. This estimate should in any case cover the full spectrum of the project boundary. If leakage effects outside the project boundaries are disregarded, a clear motivation why is required. Use the expected activity level as a starting point. Give figures on leakage for all years from the start of the project until the end of the crediting time.</p>
<p>Indirect on-site emissions</p>
<p>Indirect off-site emissions</p>

#### 6.4 Calculation of total project emissions

Calculate the total project emissions by adding all direct emissions and all indirect emission effects caused by the project. Give emission figures for all years from the start of the project until the end of the crediting time.

### 7 CREDITING TIME

*See section 2.7, p. 17.*

Start date of the project	
Life time of the project	
Crediting time of the project (only relevant if the project crediting time will end before 2012)	

### 8 ESTIMATION OF EMISSION REDUCTION

*See section 2.8, p. 18.*

Calculate the emission reduction from the project by subtracting the total project emissions (as calculated under A.6.4) from the baseline emissions (as calculated under A.5.2). Give emission reduction figures for all years from the start of the project until the end of the crediting time.

---

Source: MHSPE (3) 2001.

## **Appendix D: The World Bank's Prototype Carbon Fund (PCF)**

The World Bank's PCF program developed the following Project Idea Note (PIN) template. The template facilitates the organization of the CDM project design information to be submitted for validation.

This template is available online at:

<http://prototypecarbonfund.org/router.cfm?Page=DocLib&Dtype=2>

For more information about the PCF visit <http://www.prototypecarbonfund.org>

### **Template 2: The Prototype Carbon Fund's Project Idea Note**

#### **Project Idea Note or PIN**

#### **Description of size and quality expected of a PIN**

Basically a PIN will consist of approximately 5 pages providing indicative information on:

- the type and size of the project
- its location
- the anticipated total amount of GHG reduction compared to the “business-as-usual” scenario (which will be elaborated in the baseline later on at PDD level)
- the suggested crediting life time
- the suggested CER price in US\$/ton CO<sub>2</sub>eq reduced
- the financial structuring (indicating which parties are expected to provide the project's financing)
- the project's other socio- or environmental effects / benefits

**While every effort should be made to provide as complete and extensive information as possible, it is recognised that full information on every item listed in the template will not be available at all times for every project.**

#### **Template for PINs**

#### **PROJECT IDEA NOTE**

##### **A. Project description, type, location and schedule**

**Technical summary of the project**      **Date submitted:** \_\_\_\_\_

<b>Objective of the project</b>	<i>Describe in less than 5 lines</i>
<b>Project description and proposed activities (including a technical description of the project)</b>	<i>About ½ A4</i>
<b>Technology to be employed</b>	<i>Describe in less than 5 lines. Please note that support can only be provided to projects that employ commercially</i>

	available technology. It will be useful to provide a few examples of where the proposed technology has been employed.
--	---

<b>Project developer</b>	
Name of the project developer	
Organizational category	Government / Government agency / Municipality / Private company / Non Governmental Organization <i>(mention what is applicable)</i>
Other function(s) of the project developer in the project	Sponsor / Operational entity / Intermediary / Technical advisor / <i>(mention what is applicable)</i>
Summary of the relevant experience of the project developer	Describe in less than 5 lines
Address	Address, PO Box, City, Country
Contact person	Name of the Project Development Manager
Telephone / fax	
E-mail and web address, if any	
<b>Project sponsors</b>	
<i>(List and provide the following information for all project sponsors)</i>	
Name of the project sponsor	
Organizational category	Government / Government agency / Municipality / Private company / Non Governmental Organization / <i>(mention what is applicable)</i>
Address (include web address, if any)	Address, PO Box, City, Country
Main activities	<i>Not more than 5 lines</i>
Summary of the financials	<i>Summarize the financials (total assets, revenues, profit, etc.) in less than 5 lines.</i>
<b>Type of the project</b>	
Greenhouse gases targeted	CO <sub>2</sub> / CH <sub>4</sub> / N <sub>2</sub> O / HFCs / PCFs / SF <sub>6</sub> <i>(mention what is applicable)</i>
Type of activities	Abatement / CO <sub>2</sub> Sequestration
Field of the activities	
a. Energy supply	Renewable energy, excluding biomass / biomass / cogeneration / improving energy efficiency by replacing existing equipment / minimisation of transport and distribution / fuel switch (e.g. switch coal to biomass) <i>(mention what is applicable)</i>
b. Energy demand	Replacement of existing "household equipment" / improvement of energy efficiency of existing production equipment <i>(mention what is applicable)</i>
c. Transport	More efficient engines for transport / modal shift / fuel switch (e.g. public transport buses fuelled by natural gas) <i>(mention what is applicable)</i>
d. Waste management	Capture of landfill methane emissions / utilization of waste and wastewater emissions <i>(mention what is applicable)</i>
<b>Location of the project</b>	

Region	East Asia & Pacific / South Asia / Central Asia / Middle East / North Africa / Subsaharan Africa / Southern Africa / Central America & the Caribbean / South America <i>(mention what is applicable)</i>
Country	
City	
Brief description of the location of the plant	<i>No more than 3 - 5 lines</i>
<b>Expected schedule</b>	
Earliest project start date	Year in which the plant will be operational
Estimate of time required before becoming operational after approval of the PIN by VROM	Time required for financial commitments: xx months Time required for legal matters: xx months Time required for negotiations: xx months Time required for construction: xx months
Expected first year of CER delivery	Year
Project lifetime	Number of years
Current status or phase of the project	Identification and pre-selection phase / opportunity study finished / pre-feasibility study finished / feasibility study finished / negotiations phase / contracting phase / etc. <i>(mention what is applicable and indicate the documentation [ e.g. the feasibility study] available)</i>
Current status of the acceptance of the Host Country	Letter of No-objection is available / Letter of Endorsement is under discussion or available / Letter of Approval is under discussion or available / Host Country Agreement is under discussion or signed / Memorandum of Understanding is under discussion or available / etc. <i>(mention what is applicable)</i>
<b>The position of the Host Country with regard to the Kyoto Protocol</b>	The Host Country <ol style="list-style-type: none"> <li>signed, signed and ratified, accepted, approved or acceded to the Kyoto Protocol or</li> <li>signed and have demonstrated a clear interest in becoming a party in due time (e.g. countries which have already started or are on the verge of starting the national ratification, acceptance or approval process) or</li> <li>have already started or are on the verge of starting the national accession process</li> <li>other.</li> </ol> <i>(mention what is applicable)</i>

**B. Expected environmental benefits**

<b>Estimate of Greenhouse Gases abated / CO<sub>2</sub> Sequestered (in metric tonnes of CO<sub>2</sub>-equivalent)</b>	Annual: Up to and including 2012: xx tCO <sub>2</sub> -equivalent Up to a period of 10 years: xx tCO <sub>2</sub> -equivalent Up to a period of 7 years: xx tCO <sub>2</sub> -equivalent Up to a period of 14 years: xx tCO <sub>2</sub> -equivalent
<b>Baseline scenario</b>	CDM projects must result in GHG emissions being lower

	<p>than “business-as-usual” in the Host Country. At the PIN-stage questions to be answered are at least:</p> <ul style="list-style-type: none"> <li>· What is the proposed CDM project displacing?</li> <li>· What would the future look like without the proposed CDM-project?</li> <li>· What would the estimated total GHG reduction be?</li> </ul> <p><i>(About ¼ - ½ page A4)</i></p>
<b>Specific global &amp; local environmental benefits</b>	<i>(In total about ¼ page A4)</i>
Which guidelines will be applied?	Name and, if possible, the website-location
Local benefits	Just mention the benefits
Global benefits	Just mention the benefits
<b>Socio-economic aspects</b>	<i>(In total about ¼ page A4)</i>
What social and economic effects can be attributed to the project and which would not have occurred in a comparable situation without that project?	
Which guidelines will be applied?	Name and, if possible, the website-location
What are the possible direct effects (e.g. employment creation, capital required, foreign exchange effects)?	Just mention the possible direct effects
What are the possible other effects? For example: <ul style="list-style-type: none"> <li>· training/education associated with the introduction of new processes, technologies and products and/or</li> <li>· the effects of a project on other industries</li> </ul>	Just mention the possible other effects
<b>Environmental strategy/priorities of the Host Country</b>	<p>A brief description of the relationship of the consistency of the project with environmental strategy and priorities of the Host Country</p> <p><i>(Not more than ¼ page A4)</i></p>

**C. Finance**

<b>Total project cost estimate</b>	
Development costs	xx EURO million
Installed costs	xx EURO million
Other costs	xx EURO million
Total project costs	xx EURO million
<b>Sources of finance to be sought or already identified</b>	
Equity	Name of the organizations and finance in xx EURO million)
Debt – Long-term	Name of the organizations and finance in xx EURO million)
Debt - Short term	Name of the organizations and finance in xx EURO million)
Not identified	xx EURO million

CDM contribution sought	xx EURO million
CDM contribution in advance payments	xx EURO million and a brief clarification ( <i>not more than 5 lines</i> )
<b>Indicative CER Price (subject to negotiation and financial due diligence)</b>	
<b>Total ERPA Value</b>	
A period until 2012 (end of the first budget period)	xx EURO
A period of 10 years	xx EURO
A period of 7 years	xx EURO
A period of 14 years (2 * 7 years)	xx EURO
If financial analysis is available for the proposed CDM activity, provide the forecast financial internal rate of return for the project with and without the CER revenues. Provide the financial rate of return at the expected CER price above and at EURO equiv. of 3/ tCO <sub>2</sub> e.	

---

Source: PCF 2002.

### **Sources**

Aukland, Louise, Pedro Moura Costa, Stephen Bass, Saleemul Huq, Natasha Landell-Mills, Richard Tipper and Rebecca Carr, "Laying the Foundations for Clean Development: Preparing the Land Use Sector. A quick guide to the Clean Development Mechanism," March 2002, available at: [www.cdmcapacity.org](http://www.cdmcapacity.org)

Austin, Duncan and Paul Faeth, "How much sustainable development can we expect from the Clean Development Mechanism?" World Resources Institute, available at: <http://www.wri.org/cdm/cdm-note.html>

Baumert, Kevin A. and Elena Petkova, "How will the Clean Development Mechanism ensure transparency, public engagement, and accountability?" World Resources Institute, available at: <http://www.wri.org/cdm/public.html>

Baumert, Kevin A., Nancy Kete, and Christiana Figueres, "Designing the Clean Development Mechanism to meet the needs of a broad range of interests," World Resources Institute, available at: <http://www.wri.org/cdm/cdm-note2.html>

Baumert, Kevin and Nancy Kete, "Designing the Clean Development Mechanism: Operational and Institutional Issues," World Resources Institute, available at: [http://www.wri.org/pdf/oced\\_cdm.pdf](http://www.wri.org/pdf/oced_cdm.pdf)

Howard, Andrew, "Modalities for the accounting of assigned amounts under Article 7.4 of the Kyoto Protocol," presentation at COP 7, Marrakech, Morocco, 30 October 2001.

IPCC (Intergovernmental Panel on Climate Change), "Climate Change 2001: Mitigation," World Meteorological Organization and the United Nations Environment Programme, 2001.

Kete, Nancy, Ruchi Bhandari, and Kevin A. Baumert, "Should Development Aid Be Used to Finance The Clean Development Mechanism?" World Resources Institute, Climate Note, April 2001, available at: <http://wri.org/wri/>

Lawson, Karen, Jia Li, and Cathleen Kelly, "Identifying Investment Opportunities for the Clean Development Mechanism (CDM) in Brazil's Industrial Sector," Center for Clean Air Policy, August 2001.

MHSPE (1) (Ministry of Housing, Spatial Planning and the Environment of the Netherlands), "Standardized Baselines and Streamlined Monitoring for Selected Small-Scale Clean Development Mechanism Development Activities," Volume 2c: Baseline studies for small-scale project activities, A guide for project developers Version 1.0, December 2001.

- MHSPE (2) (Ministry of Housing, Spatial Planning and the Environment of the Netherlands), "Operational Guidelines for Baseline Studies, Validation, Monitoring and Verification of Clean Development Mechanism Project Activities," Volume 1: Introduction: A guide for project developers and validation/verification bodies, Version 1.0, October 2001.
- MHSPE (3) (Ministry of Housing, Spatial Planning and the Environment of the Netherlands), "Operational Guidelines for Baseline Studies, Validation, Monitoring and Verification of Clean Development Mechanism Project Activities," Volume 2a: Baseline Studies, Monitoring and Reporting: A guide for project developers, Version 1.0, October 2001.
- MHSPE (4) (Ministry of Housing, Spatial Planning and the Environment of the Netherlands), "Operational Guidelines for Baseline Studies, Validation, Monitoring and Verification of Clean Development Mechanism Project Activities," Volume 2b: Baseline studies for specific project categories, *A guide for project developers*, Version 1.0, October 2001.
- MHSPE (5) (Ministry of Housing, Spatial Planning and the Environment of the Netherlands), "Baselines for CDM: Suggested Approaches," September 2001.
- PCF (Prototype Carbon Fund), "Project Idea Note or PIN," World Bank, 8 May 2002, available at:  
<http://prototypecarbonfund.org/router.cfm?Page=DocLib&Dtype=2>
- Pembina Institute (Pembina Institute for Appropriate Development), "A User's Guide to the Clean Development Mechanism (CDM)," June 2002, available at:  
[http://www.pembina.org/publications\\_item.asp?id=130](http://www.pembina.org/publications_item.asp?id=130)
- Pew Center on Global Climate Change, "Summary of the Marrakech Accords on Climate Change," available at:  
[http://www.pewclimate.org/cop7/update\\_110901.cfm](http://www.pewclimate.org/cop7/update_110901.cfm)
- Pew Center on Global Climate Change, "Policymaker's Guide," available at:  
<http://www.pewclimate.org/policyguide>
- Pew Center on Global Climate Change, "Climate Change Glossary," available at:  
<http://www.pewclimate.org/policyguide>
- Rosenzweig, Richard, Mathew Varilek and Josef Janssen, "The Emerging International Greenhouse Gas Market," Pew Center on Global Climate Change, March 2002.
- Senter International, "Cerupt: CDM projects in developing countries," available at: <http://www.senter.nl/asp/page.asp?id=i001236&alias=erupt>

Seroa da Motta, Ronaldo, Claudio Ferraz, and Carlos E. R. Young, "Brazil: CDM Opportunities and Benefits," in Austin and Faeth, "Financing Sustainable Development with the Clean Development Mechanism," World Resources Institute, 2000.

Sokona, Youba and Djimingué Nanasta, "The Clean Development Mechanism: An African Delusion?" *Change*, N. 54, October-November 2000: 8-11.

Stewart, Richard, "The Clean Development Mechanism: Building International Public-Private Partnerships," UNCTAD document number UNCTAD/GDS/GFSB/Misc.7, 1999.

UNFCCC (1) (United Nations Framework Convention on Climate Change), Clean Development Mechanism website, available at: <http://unfccc.int/cdm/>

UNFCCC (2) (United Nations Framework Convention on Climate Change), "Glossary of climate change acronyms and jargon," available at: <http://unfccc.int/siteinfo/glossary.html>

UNFCCC (3) (United Nations Framework Convention on Climate Change), "A Guide to the Climate Change Convention and It's Kyoto Protocol," 2002, available at: <http://unfccc.int>

UNFCCC (4) (United Nations Framework Convention on Climate Change), "A Guide to the Climate Change Convention and It's Kyoto Protocol, 2<sup>nd</sup> edition," 2002, available at: <http://unfccc.int>

UNFCCC (5) (United Nations Framework Convention on Climate Change), "The Kyoto Protocol to the United Nations Framework Convention on Climate Change," available at: <http://cop3.unfccc.int/>

UNFCCC (United Nations Framework Convention on Climate Change) and UNEP (United Nations Environment Programme), "Understanding Climate Change: A Beginner's Guide to the UN Framework Convention and its Kyoto Protocol," 1999.