

11. Carbon Financing (English)



Background

- In 1992 over 180 countries at the “Earth Summit” in Rio de Janeiro adopted the United Nations Framework Convention on Climate Change (UNFCCC)
- UNFCCC enables member parties to start stabilizing the greenhouse gases (GHGs) in the atmosphere

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Background....

- At the COP3 in 1997, the parties adopted the Kyoto Protocol
- Kyoto Protocol set legally binding GHG reductions for industrialized countries (Annex I)
- Kyoto Protocol enters into force when ratified by at least 55 countries, representing 55% of the Annex I Parties.

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Background....

- Most GHG reduction occurs in the Annex I countries
- Kyoto Protocol identifies 3 mechanisms by which Annex I countries can get credit for GHG reduction
- Clean Development Mechanism (CDM) involves GHG reduction credit by investing in non-Annex I countries

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Background....

- Joint Implementation (JI) involves GHG reduction Credit for investing in other developed countries
- Emission Trading; emitters can buy credits as a market commodity

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What Are CDM Projects

- GHGs mix uniformly in the atmosphere; it is 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

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CDM Projects Goals

- Goals set by Kyoto Protocol:
- To help mitigate climate change;
- To help Annex I Countries attain their emission reduction commitment; and,
- To help non-Annex I countries achieve sustainable development.

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CDM Projects

- CDM projects benefit both the investor and host countries
- CDM allows industrialized countries with greenhouse gas reduction commitment to invest in emission reducing projects in developing countries as an alternative to what is generally considered more costly emissions reductions in their own countries and take advantage of the lower marginal cost in non-Annex I countries

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Criteria for CDM Projects

- To be qualified as a CDM Project, it must meet the following criteria:
- Project must be voluntary;
- Project must be able to show long-term climate change mitigation benefits; and,
- Project must contribute to emission reduction above and beyond business as usual (additionality); requires the estimation of measurement of "baseline emissions"..

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Criteria for CDM Projects

- CDM project activities must result in reducing or absorbing (sequestering) GHGs that are *real and measurable* and *would not have occurred in the absence of the proposed project activity (additionality)* (UNFCCC 2001b, 20).
- In other words, to qualify for credits, a project activity must demonstrate that GHG emissions were reduced against the "baseline scenario," a representation of GHG emissions under normal circumstances.

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Certified Emission Reduction (CER)

- CDM projects involve the reduction of certain emissions for which in return CERs (Certified Emissions Reduction) certificates are issued.
- Each ton of CO₂ equivalent reduced (not released into the atmosphere or sequestered into the soil) is equivalent to 1 CER.

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Greenhouse Gas Analogy

Greenhouse gas Global warming potential

| | |
|--|-------------|
| ▪ Carbon dioxide (CO ₂) | 1 |
| ▪ Methane (CH ₄) | 21 |
| ▪ Nitrous oxide (N ₂ O) | 310 |
| ▪ Hydrofluorocarbons (HFCs) | 140–11,700 |
| ▪ Perfluorocarbons (PFCs) | 6,500–9,200 |
| ▪ Sulfur hexafluoride (SF ₆) | 23,900 |

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How is Money Invested through CDM?

- These CERs can then be sold to Annex I countries to enable them to reach their emissions reduction targets.
- The price of CER varies according to the market, presently the price of a CER stands at around ?? euros

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How is Money Invested through CDM?

- CERs are standardized commodity and can be bought, sold on the global market or banked for future use
- 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 to reduce GHG

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What is the Procedure of CDM?

PIN (Project Idea Note)

- Is the first step in the development of a CDM project.
- It is a short 5 to 10 page document developed to give a general idea of the type of project to be undertaken to the entities concerned.

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What is the Procedure of CDM?

PDD (Project Design Document)

- Most important document in CDM process
- A standardized document format developed and adapted by the CDM Executive Board to be used for submitting CDM proposals
- Varies from around 30-80 pages depending on the project

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What is the Procedure of CDM?

PDD (Project Design Document)

Includes:

- Project Description
- Additionality and eligibility criteria
- Choice of methodology
- Description of baseline
- Calculation of emission reductions
- Monitoring plan
- Crediting period
- Analysis of environmental and social impacts
- Local stakeholder comments

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What is the Procedure of CDM?

Project Validation

- The PPD needs to be reviewed by a **DOE** (Designated Operational Entity) to make sure that the information and the calculations are correct and a validation report is issued.

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What is the Procedure of CDM?

Project Registration

- The PPD is sent to the EB board and if it is accepted it is registered.

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What is the Procedure of CDM?

Project Verification and CER issuance

- The project has to be reviewed a second time by an entity which is different than that which carried out the validation, to verify that everything is as it should be and the validation was carried out fairly and correctly.
- Once this verification is complete the CERs can be issued and these can be sold.

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Funding Mechanisms

- Governmental financial budget, which has been put for the municipal refuse management;
- Bilateral assistance or Overseas Development Agency (ODA) financial support;
- GEF, WB and other international financial agencies;
- China Development Bank (CDB);
- Commercial banks; and
- Private investment.

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