



## FOREST RESOURCES DIVISION

### FACT SHEET

#### **Afforestation and Reforestation Projects under the Clean Development Mechanism of the Kyoto Protocol**

The Clean Development Mechanism (CDM) of the Kyoto Protocol allows industrialized member countries to meet a part of their greenhouse gas reduction obligations through offset projects in developing countries. CDM-projects must also promote sustainable development in host countries through investment, as well as through knowledge- and technology transfer<sup>1</sup>.

The CDM is a market-based mechanism, driven by demand for credits - certified emission reductions - from private or public entities in developed countries, and by supply from offset projects in host countries. CDM projects which *reduce* emissions from sources can be carried out in many sectors, particularly energy, including wood energy. However, only afforestation and reforestation (A&R) qualify as CDM projects which *remove* carbon from the atmosphere. Carbon sequestration in agricultural crops and soils is not eligible under the CDM in the first commitment period 2008-2012. Special small-scale A&R projects with simplified rules meet the needs of low-income communities and individuals.

#### **Prerequisites:**

**Host country:** Countries must have ratified the Protocol and have established a Designated National Authority - a national institution overseeing CDM.

**Prior land use:** Proof must be given that the land being utilized was not forested for at least 50 years ("afforestation") or was converted to other uses before 31.12.1989 ("reforestation").

**Definitions:** Under the CDM, "forests" consist of trees with at least a height of between 2-5 m, crown density between 10-30%, and area between 0.05-1 ha. Countries must choose values for these parameters and determine a minimum width of a "forest". Since the Protocol does not define "tree"<sup>2</sup>; fruit trees, bamboos, and palms may qualify. A&R can consist of assisted natural succession to trees, productive and protective plantations, agroforestry, and urban forests. For purposes of CDM, trees in a landscape may or may not reach the chosen threshold for crown density of a "forest", depending on crown cover and project boundaries. Enrichment planting in degraded forests or forest rehabilitation does not qualify as "reforestation".

**Additionality:** Carbon sequestration via A&R must be additional to what would have occurred without the project. The Executive Board, a supervisory body for the CDM, applies a stringent additionality test to project proposals. A project is not additional, if it is the most financially attractive among feasible options. It may be additional if it overcomes barriers related to investments, technology or prevailing practice.

#### **Rules and modalities:**

**Baseline:** A baseline for the A&R project is calculated based on the changes in carbon stocks in above- and below ground biomass, litter, soils, and deadwood that would have reasonably occurred without the project. To define a baseline, project proponents must use an approved methodology or propose a new one to which the Executive Board must agree.

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<sup>1</sup> Unilateral CDM projects in the host country and subsequent sale of credits are also feasible.

<sup>2</sup> Tree according to FAO-GFRA 2000: A woody perennial with a single main stem, or in the case of coppice with several stems, having a more or less definite crown". "Woody" is used although some monocotyledons do not contain "wood".



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**Leakage:** Any increase in greenhouse gas emissions which occurs outside the project area and is measurable and attributable to the project must be minimized, monitored and subtracted from project carbon sequestration.

**Credits:** Two types of credits take into account the possibility that forests may eventually release carbon.

*Temporary credits* expire at the end of the *commitment period* following that in which they were issued, and must be replaced by the holder to ensure continuing carbon storage. This type of credit commands a relatively low price but the producer does not pay back if carbon is lost as a result of calamities or harvest. *Long-term credits* expire at the end of the project's *crediting period*, a time span of up to 60 years. Prices tend to be higher and the holder must replace any that have been lost due to premature carbon release.

**Contribution to sustainable development:** The host country decides if a proposed project contributes to sustainable development.

**Environmental impacts:** Project participants must submit an analysis of expected environmental impacts to the Designated Operational Entity, a private-sector, accredited certifying organization. If participants or the host country consider impacts to be significant, an environmental impact assessment must be undertaken and remedial measures carried out. Host country regulations apply.

**Use of Official Development Assistance:** When public funding from a developed country is used, the source must be revealed and the country must affirm that it is not diverting regular development assistance.

### **Stages of an A&R project:**

All project participants including local stakeholders must be involved in the project design. To assist with this task, a template for the project design document is available on the UNFCCC website. Public comments on the document are solicited. The Designated National Authority confirms that the host country is participating voluntarily and that the project will contribute to sustainable development. The Designated Operational Entity checks that the project conforms to prerequisites and rules, requests approval of the baseline and monitoring methods and seeks project registration. If the Executive Board approves, the project is implemented and monitored. A second Entity verifies and certifies sequestration and requests issuance of credits.

### **Quantifying the offset**

Credits are calculated in terms of *net greenhouse gas removal* in tons carbon, i.e., *actual net greenhouse gas removal* minus *baseline net greenhouse gas removal*<sup>3</sup>, minus leakage. Credits may be transferred to the investor or sold via emission trading<sup>4</sup>.

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<sup>3</sup> *Actual net greenhouse gas removal* is the change in carbon stocks within the project boundaries, minus any emissions of other greenhouse gases due to the project.

*Baseline net greenhouse gas removal* is the sum of changes in carbon stocks within the project boundary that would have occurred without the A&R project.

<sup>4</sup> Approximate price for carbon credits: US \$15-25 per ton of carbon. Prices for temporary or long-term credits have not yet been established. While private installations in the EU covered by the Emission Trading Directive may currently not use credits from A&R projects, governments may acquire them.