

**Mr. Jose Domingos Miguez**  
Chairperson  
The CDM Executive Board

**Mr. Hans Jurgen Stehr**  
Vice Chair  
The CDM Executive Board

The Members of the CDM Executive Board

c/o UNFCCC Secretariat  
P.O. Box 260124  
D-53153 Bonn  
Germany

**Subject:** Input on procedures to address “leakage” in small scale CDM biomass project activities

Dear Mr. Miguez,  
Dear Mr. Stehr,  
Honorable Members of the CDM Executive Board,

We would like to express our appreciation for the opportunity to submit our views on procedures to address “leakage” in small scale CDM biomass project activities. We hope that the Board will find a workable solution to the leakage problem in these types of projects. We would, of course, be happy to provide any further clarifications, respond to questions and/or provide additional input if it is deemed useful to Members of the Executive Board and the Small Scale Working Group.

The approach taken to leakage in the small scale CDM simplified modalities and procedures is that controlling for leakage should be kept simple and that leakage could be safely ignored in most case. The justification for this approach is the same one as that for the overall approach to small scale CDM projects: these projects are small and inherently environmentally benign so leakage effects are supposed to be positive rather than negative; the leakage effects will be relatively minor given that the projects are small; and, finally, the projects cannot absorb expensive leakage requirements as they are unable to absorb high transaction costs.

The rules on leakage calculation for small scale projects have been simple, in most cases limited to concerns regarding the physical relocation of equipment, as illustrated by the table presented below (Table 1).

Type	Leakage
AMS I. A	If the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.

<b>AMS I.B</b>	If the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS I.C</b>	If the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS I.D</b>	If the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.A</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.B</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.C</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.D</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.E</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS II.F</b>	If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.
<b>AMS III.A</b>	-
<b>AMS III.B</b>	No leakage calculation is required.
<b>AMS III.C</b>	No leakage calculation is required.
<b>AMS III.D</b>	No leakage calculation is required.
<b>AMS III.E</b>	If the controlled combustion technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects at the site of the other activity are to be considered.
<b>AMS III.F</b>	If the composting technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects are to be considered.
<b>AMS III.G</b>	If the methane recovery technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects are to be considered.
<b>AMS III.H</b>	If the used technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects at the site of the other activity are to be considered.
<b>AMS III.I</b>	If the aerobic treatment technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects at the site of the other activity are to be considered.

While observing this principle, the Carbon Finance Unit at the World Bank has proposed a methodology for determining non-renewable biomass and for an operationalization of this methodology. The methodology is presented in Annex VIII of the PDD Biogas Support Program – Nepal (BSP – Nepal), which has been registered by the CDM EB on December 27, 2005. The methodology is reproduced below, for the consideration by the CDM EB, and is operationalized in that PDD as well.

We realize that the CDM Executive Board at its 23<sup>rd</sup> meeting discussed leakage issues in relation to the methodologies on non-renewable biomass proposed by the small scale working group. In this regard it is our understanding that the Board's concerns regarding leakage in the proposed methodologies deal with the following three situations:

*(i) How to protect non-renewable biomass that will not be used due to the project from any use by project participants or others during the crediting period or at a later time?*

The risk of this type of leakage is considered low. It is not clear why users of biomass would continue to extract non-renewable biomass in a situation where their demand for firewood and heating is already met by non-renewable biomass or renewable biomass provided by the project. This type of leakage may therefore only occur in situations

where the project creates additional demand such that consumers would use both the renewable and non-renewable biomass to meet their needs. This situation is considered unlikely. This type of leakage should therefore not be considered in the proposed methodologies. However, if this type of leakage is deemed relevant project participants should be required to justify why this leakage can be disregarded and/or alternatively they should explain how the area from which the non-renewable biomass is extracted in the baseline scenario would be protected from further exploitation.

*(ii) How to prevent that the same non-renewable biomass is used to justify other CDM projects in addition to the one project for which it is the baseline?*

The risk of this type of leakage is considered low. It is not clear why communities would shift their harvesting of non-renewable biomass to areas in which harvesting has been stopped or reduced due to the project. Shifting of harvesting activities would normally require longer access ways to the new resource and costlier transportation of the non-renewable biomass. Such a shift would therefore only occur over time and when traditional resources are depleted. This type of leakage should therefore not be considered in the proposed methodologies. However, if this type of leakage is deemed relevant project participants should be required to justify why this leakage can be disregarded and/or alternatively they should explain how the area from which the non-renewable biomass is extracted in the baseline scenario would be protected from further exploitation.

*(iii) How to safeguard against the incentive to start using non-renewable biomass (deforestation) in order to “create” a baseline for a small scale non-renewable biomass project?*

The risk of this type of leakage is considered low: The “creation” of a non-renewable biomass baseline would require the switching from fossil fuels or renewable biomass to non-renewable biomass. While this is a theoretical possibility, it seems not very likely to occur for small-scale operations, which do not involve a large profit potential. This type of leakage should therefore not be considered in the proposed methodologies. However, if this type of leakage is deemed relevant, project participants should be required to justify why this type of leakage can be disregarded. Alternatively, situations in which non-renewable biomass was not traditionally used for at least three years prior to project start should not be eligible to use the proposed methodologies.

## ANNEX III

### Methodology to claim non-renewable biomass as a source of emission reductions following Appendix B of the Small Scale CDM Guidelines

This methodology operationalizes on article 15 of Category I-C “Thermal energy by the user” of Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM Project Activities. Article 15 states that “*renewable energy technologies that supply individual households or users with thermal energy that displaces .... non-renewable sources of biomass*” can claim emission reductions from such sources. The guideline does not provide further guidance on how a project should demonstrate that the biomass source is non-renewable.

This methodology provides a step-by-step approach on how to operationalise the concept of “non-renewable” in the context of household energy technologies that reduce non-renewable sources of fuel wood. The notion of non-renewable in the context of fuel wood consumption is understood as fuel wood consumption that contributes to deforestation or forest degradation. The critical factor is whether the consumption is greater than the increase in sustainable biomass growth. Biomass would be reduced in absolute terms beginning at the point where the consumption of biomass exceeds the rate of growth, as illustrated by this simple equation:

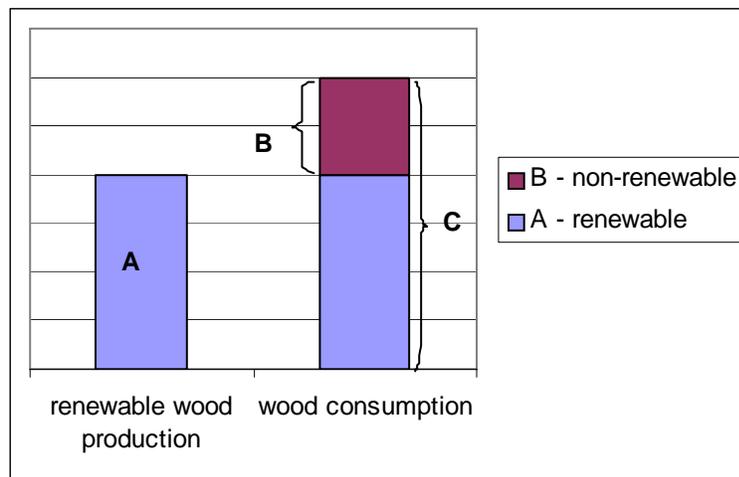
$$Gb/Db < 1$$

Where

Gb = growth in biomass

Db = use of biomass.

To make this concept operational non-renewable fuel wood consumption (B) is defined as any wood consumption (C) beyond the level of renewable wood production (A). See figure below.



The methodology is defined as three conditions which the project has to meet in order to claim emission reductions from non-renewable sources of wood:

- 1) In the project area the consumption of wood exceeds the renewable wood production.
- 2) Fuel wood consumption by households constitutes a significant share of total wood consumption;
- 3) The emission reductions can only be claimed in proportion to the reduction of non-renewable biomass.

**Condition 1: In the project area the amount of sustainable wood that is available is less than the consumption of wood**

This condition is an operationalisation of the concept of non-renewable fuel wood. Sustainable forest growth is defined as the annual increment of reachable forest areas. Consumption of wood is defined as the sum of timber and fuel wood consumption. If relevant the project should also try to quantify other sources of wood consumption and adjust for import and export out of the region.

This condition is met if:

$$\text{Annual increment (A)} < \text{Total annual wood consumption (C)}$$

Calculation guidance:

$$\text{A: Annual increment (tons/year)} = \text{reachable forest area (in ha)} * \text{mean annual increment/ha (m}^3\text{/ha/year)} * \text{average density of forests (tons/m}^3\text{)}$$

$$\text{C: Total wood consumption (tons/year)} = \text{timber wood consumption (x)} + \text{industrial fuel wood consumption (y)} + \text{household fuel wood consumption (z)}$$

**Condition 2: Fuel wood consumption by households has a significant share in total wood consumption**

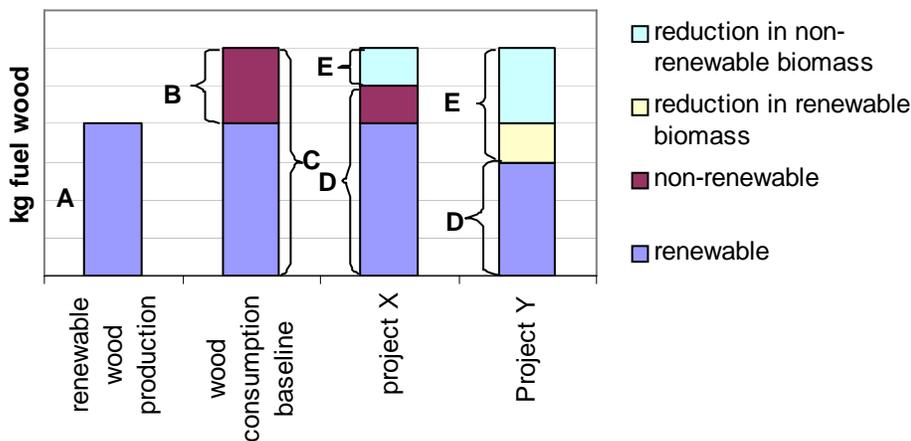
This condition has to be met in order to demonstrate that household consumption is indeed a driver in significant deforestation / forest degradation and there are no other factors causing the degradation. The project can demonstrate that a household has a significant share if it meets one of the following criteria:

- Household fuel wood consumption (c) > Annual Increment (A)

- Household fuel wood consumption (c) is the largest wood consumption sector; (z) > (x) and (c) > (y)
- Share of household fuel wood consumption (c/C) > 35%

**Condition 3:** The emission reductions can only be claimed in proportion to the reduction of non-renewable biomass but the **maximum emission reductions to be claimed cannot be more than the total emission reductions from non-renewable biomass**

The project can only claim emission reduction insofar it leads to a reduction in the unsustainable use of biomass. This is illustrated in the figure below using two project examples. Project X can claim all emission reductions related to reduction in fuel wood consumption, because all reductions in wood consumption are reductions in non-renewable sources of wood. Project Y, instead, can claim only 67% of its emission reductions, since the total reduction in fuel wood of the Project is larger than the amount of non-renewable fuel wood consumption in the baseline. That means that also a part (33%) of the renewable fuel wood consumption has been reduced. For this latter part it cannot claim emission reductions.



The project can claim emission reductions if it follows the following criteria:

- The project can claim all emission reductions from its fuel wood savings if:
  - the projected fuel wood consumption after project (D) > Annual Increment (A); or
  - the projected fuel wood reduction (E) < non-renewable fuel wood consumption in the baseline (B)
- The project can claim emission reductions in proportion to the share of reduction in non-renewable fuel wood as part of the total fuel wood reductions (B/E) if:  
The projected fuel wood consumption after project (D) < Annual Increment (A) [or E > B].

However, the project can only claim emission reductions related to fuel wood reduction up to the point where total fuel wood reduction of the project (E) is equal to the non-renewable fuel wood in the baseline (B) [E=B]