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Agenda item 9 (a)

## METHODOLOGICAL ISSUES

### LAND-USE, LAND-USE CHANGE AND FORESTRY

#### Note by the secretariat

#### Addendum

In addition to the submissions already received and contained in document FCCC/SBSTA/2000/MISC.8 and Add.1, the secretariat has received a further submission.\* In accordance with the procedure for miscellaneous documents, this submission is attached and reproduced in the language in which it was received and without formal editing.

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**FCCC/SBSTA/2000/MISC.8/Add.2**

GE.00-64111

SUBMISSION BY COLOMBIA

**METHODOLOGICAL ISSUES**

**LAND-USE, LAND-USE CHANGE AND FORESTRY**

*Draft decision -/CP.6*

*FCCC/SBSTA/2000/12*

**1. Chapeau of principles**

Colombia agrees with the inclusion of principles as a Chapeau, in order to focus the methodological issues regarding LULUCF. Colombia also recognizes that this chapeau should also apply for the inclusion of LULUCF activities of the CDM, acknowledging that the integrity of the protocol must not be defied.

**2. Definitions**

2.1 Defining a forest

The industrialized countries (Annex I) will include the afforestation, reforestation and deforestation activities (Art 3.3 of the KP) in order to meet their commitments. Afforestation and Reforestation activities will give credits that will allow them to increase fossil fuel emissions while deforestation will increase their reduction effort.

In this context, defining forests will have consequences at two different levels:

1. Resolution of types of lands that will enter into the accounting system of the Annex I Parties. In other words, the definition of a forest will filter which lands will be accounted for, and which not. The consequences of a limited forest definition (a short list of specified biomes or low thresholds) on the one hand will not include emissions from deforestation of areas that are not considered forest; on the other hand countries will be limited to Afforestation and Reforestation activities restricted to the type of forest that is included in the definition.
2. To the extent that the definition of forests affects the definitions of afforestation, reforestation and deforestation; it will have also consequences in the amount of captures or emissions that Annex I countries will account on their inventory in order to meet commitments.

**Principles**

*The reglementation of the Kyoto Protocol should strive to be comprehensive in the inclusion of both activities that affect climate change and activities that contribute to mitigate it. Special attention should be devoted to comprehensive inclusion of activities that emit GHG.*

*The definition of a forest should be flexible enough to take into account regional and social differences throughout countries, while avoiding gaming.*

## **Proposal**

Unique threshold for defining forest

### Add option 1(a)

(Chapeau: A forest is a dynamic complex of plant and animal communities, composed by trees and its associated vegetation and biogeophysical fluxes, interacting as a functional unit with highly diverse characteristics depending on the biophysical attributes or features of every ecosystem and biome.)

For the purpose of applying Art 3 of the Kyoto Protocol, the definition of a forest is: an ecosystem with an above ground stocking level of more than [IPCC to select a unique threshold based on the maximum stocking level that can reach through agricultural transitory crops] per hectare and an area of more than [COP to select a threshold of between 0.5 and 1 to be applied by all parties] hectares (ha). Young natural stands and all plantations established for forestry projects which have yet to reach such threshold are included under forest, as are areas normally forming part of a forest area which are temporarily unstocked as a result of direct human intervention or natural causes but which are expected to revert to forest.

### *Rationale*

The purpose of defining a forest in the Kyoto Protocol context is to determine the resolution level, in terms of which ecosystem to include and which not, for the report of Annex I Parties ARD activities.

Intuitively we would expect that forest ecosystems have more carbon content than any agricultural crop. Recognizing that the Kyoto protocol is particularly interested in the changes of carbon content of forests because of their impact or contribution to the carbon cycle, it is reasonable to focus on ecosystems with high carbon contents.

Therefore, defining forest based on the maximum carbon content of an agricultural crop implies that the KP will concentrate (account for) in dealing with ecosystems that can sequester (or emit) more carbon than any agricultural crop, and therefore Art. 3.3 will be devoted to ecosystems with significant carbon contents.

Also the proposed definition eases cumbersome procedures which will not add value to the discussion but are time consuming.

## 2.2 Defining afforestation, reforestation and deforestation

### Option 1(c)

‘Reforestation’ is the **direct human induced** conversion of non-forest to forest on land that ~~historically~~ **within [COP to select a specific number] years was forested**, but that has been changed to non-forest, **whenever this conversion happened since 1<sup>st</sup> of January 1990**. Re-establishment of the forest through planting, seeding and regeneration following harvesting will not be considered reforestation.

### Option 1(d)

**“Deforestation” is the activity which leads to the loss of [X] percent of the carbon content that a given ecosystem had, prior to that activity and it is not immediately followed by the establishment of the same forest biome on the same area.**

### Add option 1(e)

A prevention of deforestation project consists of all direct human induced activities pursuant to diminish or eliminate proven deforestation emissions on a given unit of land.

## 2.3 Defining additional activities that should be included under Article 3.4

### **Context of the problem**

Why is important to define which activities will be accounted for and how in article 3.4?

The industrialized countries (Annex I) will add or subtract from their assigned amount based on the decision upon modalities, guidelines and rules by the first COP/MOP of additional human induced activities related to changes in the agricultural soil and the land use change and forestry categories (Art 3.4 of the KP). This decision shall apply to the second and subsequent commitment periods, unless a party chooses to apply such a decision for its first commitment period, provided that these activities have taken place since 1990. The decision of the COP/MOP in this regard will be used either to increase or decrease the assigned amount, in other words, the level of its commitments.

Because art. 3.4 gives the Annex I party the option to decide to include or not in the first commitment additional activities; a problem has appeared regarding that some parties could choose only those activities that represent a net removal while excluding important emitting activities. The so-called “pick and choose” problem might increase the assigned amount of parties and therefore decrease their commitments.

## **3. Eligibility**

### **Principle**

*The regulation of other activities included in 3.4 should avoid the ‘pick and choose’ problem, which may permit annex 1 countries to select those activities that result only in high captures while leaving out important sources of emissions. The objective of the protocol in annex 1 countries shall be kept as the net effect resulting from emissions by sources minus removals by sinks within LULUCF activities*

*The reglamentation of the Kyoto Protocol should strive to be comprehensive in the inclusion of both activities that affect climate change and activities that contribute to mitigate it. Special attention should be devoted to comprehensive inclusion of activities that emit GHG.*

## **Proposals**

Colombia proposes the establishment of a procedure to identify all emitting and sequestering activities to be accounted for during the first and subsequent commitment periods. Colombia considers that the process of establishing a list might encounter some difficulties with respect to leaving out important sources of emissions. The procedure, instead of identifying activities, will seek for lands in which land use and land use changes occur. For the purpose of the reglamentation of the Kyoto Protocol, the lands which will be considered Kyoto lands for article 3.4 are those ones in which land use and land use change activities occur and do not meet the definitions of afforestation, deforestation and reforestation.

### Add Option 17

For article 3.4, eligible land units for accounting procedures, will be those which are under any land use activity which do not meet the definition of afforestation, reforestation and deforestation and have taken place on or since 1990.

### Add Option 18

For the purpose of defining Kyoto lands on which article 3.4 activities will be accounted for, Kyoto lands are: areas which are subject to land use or land use change, and contain a stock of carbon of more than [x] tons of carbon per hectare and do not meet the definition of forest.

Colombia proposes an alternative option which modifies para 23 in order to solve the pick and choose problem by allowing parties to choose **all or none** of the selected art. 3.4 activities which include both emitting and sequestering activities. The proposal is as follows:

### Add Option 9

During the first commitment period, Parties may choose to account for net changes in GHG emissions in all identified Kyoto Lands as defined in option 8 above. In the second and subsequent commitment periods, Parties shall account for net changes in GHG emissions in all identified Kyoto Lands as defined in option 8 above.

## **4. Accounting**

### D. General accounting

#### Add Option 15

To address measurement uncertainty, the COP will select an acceptable confidence interval, which will be applied to all measurement changes on carbon pools accounted under articles 3.3 and 3.4.

The amount of capture that will be added to the assigned amount of the Party will be equal to the mean of measurement according to para 26 above, minus [x] standard deviation. The amount of emissions that will be subtracted from the assigned amount of the Party will be equal to the mean of measurement according to para 26 above, plus [y] standard deviation.

For the purpose of regulated the proposal cited above in options 7 and 8, the following accounting rules should be implemented:

Add section D: Accounting for land units included in article 3.4

Add option 10

When a land unit is identified as a Kyoto Land, the party should account for emissions or captures due to **direct human induced** activities measures as verifiable changes on carbon pools.

Add option 11

Parties will subtract from or add to its assigned amount, the net emissions or captures resulting from 3.4 activities on identified Kyoto lands.

Add Option 12

When a land unit is identified as a Kyoto land, it should be subject to monitoring for changes on its carbon stocks for the first and all subsequent commitment periods.

Add Option 13

A party shall account for all negative changes in carbon pools and may select to account or not for positive ones.

**5. Other**

**General statements and regulations on Methodological Issues on Land Use, Land Use Change and Forestry, should include a specific section related to project based activities, and explicitly, on the inclusion of LULUCF activities on the CDM. The section shall make specific references to eligibility, accounting procedures and measuring and reporting issues.**

**Addition Section H**

Methodological issues related to LULUCF project based activities in the CDM mechanisms.

Eligibility

Add Option 26

Eligible LULUCF activities under the CDM are those who meet requirement in this decision and that have taken place since the 1<sup>st</sup> of January 2000.

Add Option 27

Eligible LULUCF activities under the CDM shall include:

- a) Afforestation and reforestation as defined in this decision
- b) Projects activities occurring within Kyoto Lands as defined in this decision
- c) Prevention of deforestation projects as defines in this decision

### Add Option 28

LULUCF CDM project shall comply with all requirements *mutatis mutandi* for CDM projects as established in Decision X/CP.6 [mechanisms contact group].

### Accounting

#### Add Option 29

For the purpose of estimating the total net capture of a given CDM project, measurements shall include all the emitting carbon pools and selected capturing ones.

#### Add Option 30

To address measurement uncertainty, the COP will select an acceptable confidence interval, which will be applied to all measurement changes on carbon pools accounted for the project.

#### Add Option 31

The amount of capture that will be credited will be equal to the mean of measurement minus [x] standard deviation. The amount of emissions that will be subtracted from the credited amount of the project will be equal to the mean of measurement plus [y] standard deviation.

### Addressing Permanence

*Text to be added to the consolidated text of the contact group considering articles 5, 7 & 8*

Add para XX. The CERs generated from sequestering and conservation LULUCF CDM projects will be temporarily added to the acquiring party's assigned amount. The same amount will be subtracted from the assigned amount after a period of time established in the expiry time of the corresponding CERs.

*Text to be added to the consolidated text of the contact group considering article 12*

For the purpose of establishing the expiry time of temporary CERs, we propose discrete expiry periods of multiples of five years, given that the commitment period are established for five-year periods; this scheme assures that acquiring parties will buy time for at least one commitment period. In this sense, generated CERs will have durations of 5, 10, 15 and so on, depending on the lifetime of the project.

Add para XX. The expiry time of a generated CER from a capturing or conservation LULUCF CDM project will be set according to the following formula:

$$\text{Expiry time} = [\text{Int} (N-t/5)]*5$$

Where:

Int (x): refers to the inferior integer of the x.

N = is the end year of the project set in the validated design project document.

t = the year in which the CERs are certified.

Add para XX. Expiring CERs will only apply for projects, which capture carbon or prevent deforestation. LULUCF projects intended to replace fossil fuel emissions with biomass will be considered emissions reduction projects with permanent generated CERs.

Rationale:

This proposal solves various problems: 1. Creating huge amounts of “kinds” of CERs that will have different values and will difficult transactions 2. The perverse incentive to parties acquiring short expiring CERs ( or short term projects) in order to comply with its commitment during the last year of the commitment period. 3. Guarantees a minimum period of time (10 years) for a project to generate significant social and atmospheric benefits. 4. It creates incentives for project proponents to extend the lifetime of the projects, given that the CERs generated during the halfway of the project (time in which the highest number CERs are generated) will have a higher value as the lifetime of the project is extended.

Liability

Add Option 32

The project proponent will be fully liable for the duration of the capture of the already certified CERs during the remaining lifetime of the project. In the case, a certified capture is released, the project proponent shall replace them with equivalent CERs.



## **ELIGIBILITY CRITERIA FOR FOREST CONSERVATION UNDER THE CDM**

### **INTRODUCTION**

According to the Special IPCC report on land use, land use change and forestry, emissions from land use and land use change throughout the world sum up 1.6 GtC/y. The expansion of the agricultural frontier has caused more than 121 GtC being emitted over the last 140 years. The scenario in the late 1980s has shown that almost 90 percent of carbon emitted in the LULUCF sector to the atmosphere was caused by deforestation in the tropics.

These facts show that deforestation is an important source of GHG emissions, especially in developing countries. It is undeniable that reducing the rate of deforestation in the tropics will contribute to the objectives of the Convention and the Protocol as it can both reduce carbon loose from terrestrial ecosystems and global carbon emissions into the atmosphere. In this sense, ecosystem conservation (as prevention of deforestation) can be considered as avoiding emissions from proven additional projects.

Therefore, projects for “slowing the rate” or preventing deforestation (specifically, conservation of areas that are threatened to be cleared) theoretically are similar to emissions reduction projects, as they decrease the amount of GHG gases that will be emitted into the atmosphere in the future.

On the other hand, the potential of forest conservation as CDM projects could bring a wide range of environmental, social and economic benefits to both Annex-I parties and developing countries. Among the many of benefits derived from forest conservation, environmental benefits include a wide range of positive collateral effects such as biodiversity conservation, emissions reductions, soil and watershed protection and others.

### **Actual scenario**

Conservation projects as an important component of LULUCF activities intended to reduce emissions, has been widely criticized for many reasons. In practice, the most important arguments against conservation projects in the CDM are:

1. The projection of the baseline scenario is highly uncertain, given that the causes of deforestation are complex and are subject to changes in social, economic and political national issues.
2. The uncertainty and difficulty of projecting the baseline scenario can produce “gaming” behavior to exaggerate it, and claim a higher amount of credits.
3. The fact that the deforestation is linked with human behavior could produce perverse incentive to “blackmailing” or threatening actual forest for economic compensation.
4. The amount of carbon that is actually captured by standing forest is very high, and its potential for generating “hotair” credits will destroy the environmental integrity of the Kyoto Protocol.

Considering the issues cited above as main concerns, unless clear proposals to solve them are stated, it seems very unlikely that conservation projects will enter as part of CDM projects.

Likewise, intents to rigorously and objectively propose alternatives to solve all the problems listed above, are needed to make conservation alternatives viable and benefit from its use.

The present proposal aims to address some of these concerns, by designing viable real and sound conservation projects that will reduce the high amounts of GHG gases that annually are emitted to the atmosphere due to deforestation.

### **The Proposal**

For the purpose of illustrating the proposal, lets imagine the case where an annex I party which has ratified the Kyoto Protocol has only emissions due to deforestation and hence, its assigned amount would be based on the emissions from deforestation in 1990 minus 5 %. This hypothetical country for meeting its Kyoto commitments should reduce the rate of deforestation (i.e. promoting forest conservation on threatened areas) in order to reach the levels of 1990 minus 5%, between 2008-2012.

If the country reduces **all** its emissions, those extra reductions will be considered as credits and therefore, could be sold under the emissions trading mechanism or Joint Implementation (Art 17 or Art 6).

The trade of the generated extra credits will happen regardless of baseline scenarios, uncertainty and future Business as Usual scenario, given the provisions established in the Kyoto protocol.

Likewise, a project can be treated as this hypothetical Annex I country by committing itself to reduce emissions from deforestation, given an historical deforestation rate..

The main assumption for both cases is an increasing, or at least stable, rate of emissions in the future (or rate of deforestation in this case). This assumption is valid on the one hand for the Annex I party, as it justifies the commitments under the Kyoto protocol. On the other hand, the assumption shall hold in the case of the project, as it will be a requirement for additionality. For both cases, the assumption can be supported by the historical figures of deforestation on each case.

### *Scheme*

The scheme works in the following way:

- The project boundaries should be clearly defined according to rules that will be explained below.
- The Project has to demonstrate positive historical deforestation on the project area between period 1990 – 1995.
- The project commits itself to stop any emissions from deforestation during, at least, the years 2008-2013.
- The project can claim emissions reductions (CERs) equivalent to its demonstrated historical emissions minus 5%.
- The Project has to comply with all the requirements of traditional CDM projects:
  - Baseline projection
  - Additionality

- Monitoring (the standing capture)
- Leakage control
- Contribution to sustainable development

Defining the boundaries of the project is a critical step as it can address leakage of emissions. The principles for establishing the boundaries should concentrate on analyzing the actual, future and potential influence area of the driving force that causes deforestation. Nevertheless, the project formulator should observe the following two criteria:

1. The project boundary shall include the total area that was deforested historically.
2. The project boundary shall include a standing forest at least [x] times the amount that was deforested historically.

### *Analysis*

The following lines will analyze the proposed scheme in the context of the concerns listed at the beginning of the paper.

With respect to the first two concerns (uncertainty with respect to baseline, and gaming), the projection of a baseline scenario would not be necessary because the credits are calculated based on demonstrated historical emissions trends as it is done in the Kyoto Protocol. Similarly, there is no perverse incentive to threaten new forests because there is no actual behavior that can change what has happened in the past. Of course it is still the incentive to inflate or distort the past figures, but this incentive is minimized with an independent review process.

Last, the concerns raised with respect to the scale of generating 'hot air credits', is addressed. On the one hand, only those lands, which can demonstrate historical deforestation trends, will be eligible as conservation projects. On the other hand, the quantity of emitted certificates will be capped to the carbon emissions level of 1990 to 1995 minus 5%.

In conclusion, the implementation of projects with proven emissions reductions, as established by this proposal, can bring from the point of view of the atmosphere, benefits in terms of CO<sub>2</sub> concentration. Moreover, non-annex I countries would be able to reduce the deforestation through conservation projects and gain all the collateral benefits derived from it.